



# Great Bay Community College

Great Bay Community College  
2018-2019 College Catalog

# COLLEGE MISSION and VISION

## **Mission**

Great Bay Community College expands intellectual and economic opportunity by providing affordable higher education in an environment that embodies excellence, innovation, and collaboration.

## **Vision**

Great Bay Community College will emphasize student learning and support, and nurture an innovative spirit to be a leading academic institution in New England.

## **Core Values**

**Success for Our Students** – We are committed to the success of our students by adhering to the highest levels of academic and professional standards.

**Teaching Excellence** – We are committed to academic rigor and integrity that assures students a high-quality education that fosters personal and intellectual growth for productive careers and meaningful lives.

**Workplace Culture** – We create an environment that continually builds an exceptional community college through shared governance, cross-divisional collaboration, and a commitment to stand together as one college in delivery of our mission.

**Creativity and Inquisitiveness** – We strive to be a creative and inquisitive community based on the pursuit of knowledge, wisdom, and discovery.

**Community Engagement** – We meet our mission and improve as an organization through engagement with others in our broader community.

**Civic Engagement** - We promote volunteerism and service learning to foster engaged citizenship by integrating classroom learning with community involvement.

**Diversity** – We recognize and value diversity in its many forms as a representation of the richness of the human experience.

**Citizenship and Sustainability** – We pledge to be socially responsible citizens by adopting best practices that lessen our environmental footprint and lead to a healthier environment for all.

## **Code of Ethics**

Our college policies, procedures, decisions and actions are based on the following ethical principles:

Responsibility – We accept responsibility for our actions.

Fairness – We maintain balance and fairness and ensure equitable treatment.

Honesty – We build trusting relationships by being honest and truthful.

Mutual Respect – We accept each other regardless of our differences.

Integrity – We maintain integrity by being incorruptible.

# CORE ATTRIBUTES

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**Institutional Objective:** This institution holds the belief that the academic program of each student (in completion of the requirements of the major and the general education requirements) provides the opportunity to develop core attributes that support both personal and professional growth and goal achievement.

- **Communication Skills:** The ability to express ideas, collaborate, and articulate knowledge in a clear, focused, and organized manner.
- **Creativity:** The ability to conceive and express original ideas, perspectives, and solutions.
- **Critical Thinking:** The ability to analyze, synthesize, and evaluate information in a logical manner.
- **Diverse Perspectives:** The ability to examine a concept in contexts and from historical and diverse perspectives other than one's own, and appreciate diversity required for personal and professional interaction.
- **Information Literacy:** The ability to recognize when information is needed and have the ability to locate, evaluate, and use the needed information in an ethical, effective manner (ALA).
- **Quantitative Reasoning:** The application of computational methods and numerical data interpretation to solve problems.
- **Scientific Processes:** The application of scientific methods to gain knowledge and examine the laws, theories, and processes of physical, biological, or social phenomena.
- **Specialized Skills:** The theoretical, ethical, technological, and applied knowledge for career entry and continued professional development.

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# 2018-2019 Academic Calendar

## Fall 2018 Parts of Term

11 Full Term (16-wks)	6/27-12/14
12 1 <sup>st</sup> Half (8-wks)	8/27-10/19
1L Late Start (12-wks)	9/24-12/14
13 2 <sup>nd</sup> Half (8-wks)	10/22-12/14
15S ACM and Automotive Fifteen weeks Sept start	9/4-12/14
1G9 Aviation Nine weeks Aug start	8/27-10/26
107 Aviation Seven weeks Oct start	10/29-12/14
13H Motorcycle (13-weeks)	9/17-12/14
13X Welding (13-weeks)	9/17-12/14

<b>2018</b>	
Friday, August 10, 2018	180- and 216-Day Staff Return
Monday, August 13	10-Month and 11-Month Faculty Return
Thursday, August 16	System Symposium at NHTI
Monday, August 27	<b>Fall Semester Classes Begin:</b> 11 Full Term (16-wks) 12 1 <sup>st</sup> Half (8-wks) 1G9 Aviation Nine weeks Aug start
Thursday, August 30	<b>Last Day to Add a Course without Instructor Permission:</b> 12 1 <sup>st</sup> Half (8-wks)
Friday, August 31	<b>Last Day to Add a Course without Instructor Permission:</b> 1G9 Aviation Nine weeks Aug start
Monday, September 3	Labor Day Holiday – No Classes and Offices Closed
Tuesday, September 4	<b>Fall Semester Classes Begin:</b> 15S ACM and Automotive Fifteen weeks Sept start <b>Last Day to Add a Course without Instructor Permission:</b> 11 Full Term (16-wks) <b>Last Day to Drop with Full Refund:</b> 12 1 <sup>st</sup> Half (8-wks) 1G9 Aviation Nine weeks Aug start
Tuesday, September 7	<b>Last Day to Add a Course with Instructor Permission:</b> 12 1 <sup>st</sup> Half (8-wks) 1G9 Aviation Nine weeks Aug start
Monday, September 10	<b>Last Day to Drop with Full Refund:</b> 11 Full Term (16-wks) <b>Last Day to Add a Course without Instructor Permission:</b>

	15S ACM and Automotive Fifteen weeks Sept start
Friday, September 14	<b>Last Day to Resolve "I" Grades from Summer 2018</b> <b>Last Day to Add a Course with Instructor Permission:</b> 11 Full Term (16-wks)
Monday, September 17	<b>Fall Semester Classes Begin:</b> 13H Motorcycle (13-weeks) 13X Welding (13-weeks) <b>Last Day to Drop with Full Refund:</b> 15S ACM and Automotive Fifteen weeks Sept start
Friday, September 21	<b>Last Day to Add a Course with Instructor Permission:</b> 15S ACM and Automotive Fifteen weeks Sept start <b>Last Day to Add a Course without Instructor Permission:</b> 13H Motorcycle (13-weeks) 13X Welding (13-weeks)
Monday, September 24	<b>Fall Semester Classes Begin:</b> 1L Late Start (12-wks) <b>Last Day to Drop with Full Refund:</b> 13H Motorcycle (13-weeks) 13X Welding (13-weeks)
Thursday, September 27	<b>Last Day to Withdraw with "W" Grade (60% point):</b> 12 1 <sup>st</sup> Half (8-wks)
Friday, September 28	<b>Last Day to Add a Course with Instructor Permission:</b> 13H Motorcycle (13-weeks) 13X Welding (13-weeks) <b>Last Day to Add a Course without Instructor Permission:</b> 1L Late Start (12-wks)
Monday, October 1	<b>Last Day to Drop with Full Refund:</b> 1L Late Start (12-wks)
Tuesday, October 2	<b>Last Day to Withdraw with "W" Grade (60% point):</b> 1G9 Aviation Nine weeks Aug start
Friday, October 5	<b>Last Day to Add a Course with Instructor Permission:</b> 1L Late Start (12-wks) <b>Last Day to Withdraw with "WP/WF" Grade (Instructor signature required):</b> 12 1 <sup>st</sup> Half (8-wks)
Friday, October 12	<b>Last Day to Withdraw with "WP/WF" Grade (Instructor signature required):</b> 1G9 Aviation Nine weeks Aug start
Monday, October 22	<b>Fall Semester Classes Begin:</b> 13 2 <sup>nd</sup> Half (8-wks)
Thursday, October 25	<b>Last Day to Add a Course without Instructor Permission:</b> 13 2 <sup>nd</sup> Half (8-wks)
Monday, October 29	<b>Fall Semester Classes Begin:</b> 107 Aviation Seven weeks Oct start <b>Last Day to Drop with Full Refund:</b> 13 2 <sup>nd</sup> Half (8-wks)
Thursday, November 1	<b>Last Day to Add a Course without Instructor Permission:</b> 107 Aviation Seven weeks Oct start <b>Last Day to Withdraw with "W" Grade (60% point):</b>

	11 Full Term (16-wks)
Friday, November 2	<b>Last Day to Add a Course with Instructor Permission:</b> 13 2 <sup>nd</sup> Half (8-wks) <b>Last Day to Withdraw with “W” Grade (60% point):</b> 15S ACM and Automotive Fifteen weeks Sept start
Monday, November 5	<b>Last Day to Drop with Full Refund:</b> 107 Aviation Seven weeks Oct start
Thursday, November 8	<b>Last Day to Withdraw with “W” Grade (60% point):</b> 13H Motorcycle (13-weeks) 13X Welding (13-weeks)
Friday, November 9	<b>Last Day to Add a Course with Instructor Permission:</b> 107 Aviation Seven weeks Oct start
Monday, November 12	Veterans’ Day Holiday Observed – No Classes and Offices Closed
Tuesday, November 13	<b>Registration Opens for 2019 Spring Semester</b> <b>Last Day to Withdraw with “W” Grade (60% point):</b> 1L Late Start (12-wks)
Wednesday, November 21	<b>Last Day to Withdraw with “W” Grade (60% point):</b> 13 2 <sup>nd</sup> Half (8-wks)
Thursday, November 22 -- Friday, November 23	Thanksgiving Holiday – No Classes and Offices Closed
Monday November 26	<b>Last Day to Withdraw with “W” Grade (60% point):</b> 107 Aviation Seven weeks Oct start
Friday, November 30	<b>Last Day to Withdraw with “WP/WF” Grade</b> (Instructor signature required): 11 Full Term (16-wks) 1L Late Start (12-wks) 13 2 <sup>nd</sup> Half (8-wks) 15S ACM and Automotive Fifteen weeks Sept start 107 Aviation Seven weeks Oct start 13H Motorcycle (13-weeks) 13X Welding (13-weeks)
Friday, December 14	Last Day of Classes for Fall Semester
Monday, December 17	Grades Due/Last Day of Responsibility for 10-Month and 11-Month Faculty for Fall Semester
Wednesday, December 19	Last Day of Responsibility for 180- and 216-Day Staff for Fall Semester
Monday, December 24	Chancellor’s Day Holiday – Offices Closed
Tuesday, December 25	Christmas Day Holiday – Offices Closed



**Spring 2019 Parts of Term (Tentative)**

1P2 Pre semester (2-wks)	1/7-1/18
11 Full Term (15-wks)	1/22-5/10
12 1 <sup>st</sup> Half (8-wks)	1/22-3/15
1L Late Start (11-wks)	2/19-5/10
13 2 <sup>nd</sup> Half (7-wks)	3/25-5/10
ACM	TBD
Automotive	TBD
12H Motorcycle	TBD
12W Welding	TBD

**Summer 2019 Parts of Term (Tentative)**

1P2 Pre semester (2-wks)	5/13-5/24
11 Full Term (11-wks)	5/28-8/9
12 1 <sup>st</sup> Half (6-wks)	5/28-7/5
13 2 <sup>nd</sup> Half (6-wks)	7/8-8/9
1F Front Part (8-wks)	5/28-7/19
ACM	TBD
Automotive	TBD
Nursing	TBD
Welding	TBD

<b>2019</b>	
Tuesday, January 1, 2019	New Year's Day Holiday – Offices Closed
Monday, January 7	180- and 216-Day Staff Return <b>Spring Semester Classes Begin, Last Day to Add a Course without Instructor Permission, and Last Day to Drop with Full Refund:</b> 1P2 Pre semester (2-wks)
Tuesday, January 8	<b>Last Day to Add a Course with Instructor Permission:</b> 1P2 Pre semester (2-wks)
Wednesday, January 9	10-Month and 11-Month Faculty Return
Monday, January 14	<b>Last Day to Withdraw with "W" Grade (60% point):</b> 1P2 Pre semester (2-wks)
Thursday, January 17	<b>Last Day to Withdraw with "WP/WF" Grade</b> (Instructor signature required): 1P2 Pre semester (2-wks)
Monday, January 21	Martin Luther King Jr./Civil Rights Day Holiday - Offices Closed
Tuesday, January 22	<b>Spring Semester Classes Begin:</b>

	11 Full Term (15-wks) 12 1 <sup>st</sup> Half (8-wks)
Friday, January 25	<b>Last Day to Add a Course without Instructor Permission:</b> 12 1 <sup>st</sup> Half (8-wks)
Monday, January 28	<b>Last Day to Add a Course without Instructor Permission:</b> 11 Full Term (15-wks) <b>Last Day to Drop with Full Refund:</b> 12 1 <sup>st</sup> Half (8-wks)
Friday, February 1	<b>Last Day to Add a Course with Instructor Permission:</b> 12 1 <sup>st</sup> Half (8-wks)
Monday, February 4	<b>Last Day to Drop with Full Refund:</b> 11 Full Term (15-wks)
Friday, February 8	<b>Last Day to Resolve "I" Grades from Fall 2018</b> <b>Last Day to Add a Course with Instructor Permission:</b> 11 Full Term (15-wks)
Monday, February 18	Presidents' Day Holiday – No Classes and Offices Closed
Tuesday, February 19	<b>Spring Semester Classes Begin:</b> 1L Late Start (11-wks)
Thursday, February 21	<b>Last Day to Withdraw with "W" Grade (60% point):</b> 12 1 <sup>st</sup> Half (8-wks)
Friday, February 22	<b>Last Day to Add a Course without Instructor Permission:</b> 1L Late Start (11-wks)
Monday, February 25	<b>Last Day to Drop with Full Refund:</b> 1L Late Start (11-wks)
Friday, March 1	<b>Last Day to Add a Course with Instructor Permission:</b> 1L Late Start (11-wks)
Friday, March 8	<b>Last Day to Withdraw with "WP/WF" Grade</b> (Instructor signature required): 12 1 <sup>st</sup> Half (8-wks)
Monday, March 18 – Friday, March 22	Spring Break – No Classes
Monday, March 25	<b>Registration Opens for 2019 Summer and Fall Semesters</b> <b>Spring Semester Classes Begin:</b> 13 2 <sup>nd</sup> Half (7-wks)
Tuesday, March 26	<b>Last Day to Withdraw with "W" Grade (60% point):</b> 11 Full Term (15-wks)
Thursday, March 28	<b>Last Day to Add a Course without Instructor Permission:</b> 13 2 <sup>nd</sup> Half (7-wks)
Monday, April 1	<b>Last Day to Drop with Full Refund:</b> 13 2 <sup>nd</sup> Half (7-wks)
Friday, April 5	<b>Last Day to Add a Course with Instructor Permission:</b> 13 2 <sup>nd</sup> Half (7-wks)
Wednesday, April 10	<b>Last Day to Withdraw with "W" Grade (60% point):</b> 1L Late Start (11-wks)
Monday, April 22	<b>Last Day to Withdraw with "W" Grade (60% point):</b> 13 2 <sup>nd</sup> Half (7-wks)
Friday, April 26	<b>Last Day to Withdraw with "WP/WF" Grade</b> (Instructor signature required):

	11 Full Term (15-wks) 1L Late Start (11-wks) 13 2 <sup>nd</sup> Half (7-wks)
Friday, May 10	Last Day of Classes for Spring Semester
Monday, May 13	Grades Due <b>Summer Semester Classes Begin, Last Day to Add a Course without Instructor Permission, and Last Day to Drop with Full Refund:</b> 1P2 Pre semester (2-wks)
Tuesday, May 14	<b>Last Day to Add a Course with Instructor Permission:</b> 1P2 Pre semester (2-wks)
Saturday, May 18	Commencement (Tentative)
Monday, May 20	Last Day of Responsibility for 10-Month Faculty for Spring Semester (except for Commencement and Commencement Activities) <b>Last Day to Withdraw with “W” Grade (60% point):</b> 1P2 Pre semester (2-wks)
Tuesday, May 21	Last Day of Responsibility for 180-Day Staff for Spring Semester, as determined by assigned Commencement duties
Thursday, May 23	<b>Last Day to Withdraw with “WP/WF” Grade</b> (Instructor signature required): 1P2 Pre semester (2-wks)
Monday, May 27	Memorial Day Holiday – Offices Closed
Tuesday, May 28	<b>Summer Semester Classes Begin:</b> 11 Full Term (11-wks) 12 1 <sup>st</sup> Half (6-wks) 1F Front Part (8-wks)
Thursday, May 30	<b>Last Day to Add a Course without Instructor Permission:</b> 12 1 <sup>st</sup> Half (6-wks)
Friday, May 31	<b>Last Day to Add a Course without Instructor Permission:</b> 1F Front Part (8-wks)
Monday, June 3	<b>Last Day to Add a Course without Instructor Permission:</b> 11 Full Term (11-wks) <b>Last Day to Drop with Full Refund:</b> 11 Full Term (11-wks) 12 1 <sup>st</sup> Half (6-wks) 1F Front Part (8-wks)
Friday, June 7	<b>Last Day to Add a Course with Instructor Permission:</b> 11 Full Term (11-wks) 12 1 <sup>st</sup> Half (6-wks) 1F Front Part (8-wks)
Wednesday, June 19	<b>Last Day to Withdraw with “W” Grade (60% point):</b> 12 1 <sup>st</sup> Half (6-wks)
Friday, June 21	<b>Last Day to Resolve “I” Grades from Spring 2019</b> <b>Last Day to Withdraw with “WP/WF” Grade</b> (Instructor signature required): 12 1 <sup>st</sup> Half (6-wks)
Thursday, June 27	<b>Last Day to Withdraw with “W” Grade (60% point):</b> 1F Front Part (8-wks)

Thursday, July 4	Independence Day Holiday – Offices Closed
Friday, July 5	<b>Last Day to Withdraw with “WP/WF” Grade</b> (Instructor signature required): 1F Front Part (8-wks)
Monday, July 8	<b>Summer Semester Classes Begin:</b> 13 2 <sup>nd</sup> Half (6-wks)
Wednesday, July 10	<b>Last Day to Add a Course without Instructor Permission:</b> 13 2 <sup>nd</sup> Half (6-wks) <b>Last Day to Withdraw with “W” Grade (60% point):</b> 11 Full Term (11-wks)
Friday, July 12	Last Day of Responsibility for 11-Month Faculty and 216-Day Staff for the Academic Year
Monday, July 15	<b>Last Day to Drop with Full Refund:</b> 13 2 <sup>nd</sup> Half (6-wks)
Friday, July 19	<b>Last Day to Add a Course with Instructor Permission:</b> 13 2 <sup>nd</sup> Half (6-wks)
Friday, July 26	<b>Last Day to Withdraw with “WP/WF” Grade</b> (Instructor signature required): 11 Full Term (11-wks)
Wednesday, July 31	<b>Last Day to Withdraw with “W” Grade (60% point):</b> 13 2 <sup>nd</sup> Half (6-wks)
Friday, August 2	<b>Last Day to Withdraw with “WP/WF” Grade</b> (Instructor signature required): 13 2 <sup>nd</sup> Half (6-wks)
Thursday, August 16	Last Day of 2018-2019 Academic Year

## **DISCLAIMER**

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Great Bay Community College provides its website, catalog, handbooks, and other printed materials or electronic media for your general guidance. The College does not guarantee that the information contained within them, including, but not limited to, the contents of any page that resides under the Domain Name System (DNS) registration of [greatbay.edu](http://greatbay.edu) is up-to-date, complete and accurate. Individuals assume any risks associated with relying upon information without checking other with credible sources, such as a student's academic advisor. In addition, a students or prospective student's reliance upon information contained on the College's website, or within catalogs or handbooks, when making academic decisions does not constitute, and should not be construed as, a contract with the College. Furthermore, the College reserves the right to make changes to any provision or requirement within these sources, as well as changes to any curriculum or program, whether during a student's enrollment or otherwise.

## **NOTICE OF NONDISCRIMINATION**

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Great Bay Community College does not discriminate in the administration of its admissions and educational programs, activities, or employment practices on the basis of race, color, religion, national origin, age, sex, disability, genetic information, veteran status, sexual orientation, political affiliation or marital status. This statement is a reflection of the mission of the Community College System and Great Bay Community College and refers to, but is not limited to, the provisions of the following laws: Title VI and Title VII of the Civil Rights Act of 1964, as amended; The Age Discrimination Act of 1967 (ADEA); Title IX of the Education Amendment of 1972; Section 504 of the Rehabilitation Act of 1973; The Americans with Disabilities Act of 1990 (ADA); Section 402 of the Vietnam Era Veterans' Readjustment Assistance Act of 1974; NH Law Against Discrimination RSA 354-A; Genetic Information Nondiscrimination Act of 2008. Inquiries regarding discrimination may be directed to Fran Chickering, Title IX Coordinator, Great Bay Community College-603-427-7629, [fchickering@ccsnh.edu](mailto:fchickering@ccsnh.edu), or to Community College System personnel at 26 College Drive, Concord, NH 03301: Sara Sawyer, Director of Human Resources, 603-230-3503 or William Thomas, Title IX Coordinator, 603-230-3516. Inquiries may also be directed to the US Department of Education, Office of Civil Rights, 5 Post Office Square, Boston, MA 02109-3921, 617-289-0111, Fax: 617-289-0150, TDD: 800-877-8339, or email: [OCR.Boston@ed.gov](mailto:OCR.Boston@ed.gov); the New Hampshire Commission for Human Rights, 2 Industrial Park, Concord, NH 03301, 603-271-2767, Fax: 603-271-6339; and/or the Equal Employment Opportunity Commission, 475 Government Center, Boston, MA 02203, 1-800-669-4000, Fax: 617-565-3196, TTY: 1-800-669-6820.

## **ACCREDITATION STATEMENT**

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Great Bay Community College is accredited by the New England Association of Schools and Colleges, through its Commission on Institutions of Higher Education.

NEASC is an independent, voluntary, nonprofit membership organization which connects and serves colleges and universities in New England. A globally recognized standard of excellence, NEASC Accreditation attests to a college's high quality and integrity. An accredited college is one which has available the necessary resources to achieve its stated purposes through appropriate educational programs, is substantially doing so, and gives reasonable evidence that it will continue to do so in the foreseeable future.

# MESSAGE FROM THE PRESIDENT

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Welcome to Great Bay Community College. We are pleased to partner with you as you work toward your individual educational goal — whether it is taking one course or completing a certificate or degree program.

GBCC values our partnerships with business and industry because our partnerships are your partnerships. Through our collaborations with employers in the community, we have learned what it takes to help you prepare for a satisfying career. We have also nurtured opportunities for your personal and professional growth in partnership with area employers like Safran

Manufacturing and Exeter Hospital (just to name a couple)!

GBCC is also focused on your prospects for transfer to earn your bachelor's degree. Through articulation agreements with colleges and universities throughout the country, as well as dual enrollment programs with UNH and others, GBCC will help you forge the path to your next college.

Please be an active participant in this process, whatever your goal. Join all of us —faculty, staff, administration, and your classmates—in pursuit of your success.

Best wishes for an invigorating year,  
Susan D. Huard  
Interim President

# ADMISSION REQUIREMENTS

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## Admissions Policy

Admission to the College is based on a number of considerations; no one of which is the determining factor of acceptance. Applicants will not be barred from admission because of race, age, sexual orientation, gender, handicap, religion, or national origin.

## Application Procedures

The following procedure is to be followed by each applicant for all degree and certificate programs. It is the applicant's responsibility to ensure that all required documents, including official transcripts, are received by the Office of Admissions on or before the established deadline (when applicable). Incomplete files will not be reviewed for admission. Documents should be mailed to:

Great Bay Community College  
College Services One Stop  
320 Corporate Drive  
Portsmouth, NH 03801

In most cases, applicants will be notified of admission status by mail shortly after the college receives all necessary admissions documents. Certain programs however, have specific admissions processing deadlines and procedures. Please refer to the Programs of Study section for further information.

Program	Deadline
Nursing	February 28th
Surgical Technology	April 1st
Veterinary Technology	April 30th

## General Application Procedures

Students seeking matriculation into a degree or certificate program at Great Bay Community College must complete the following:

1. An application for admission with a non-refundable \$20.00 application fee. Applications can be submitted in person, via mail, or online at [www.greatbay.edu](http://www.greatbay.edu).  
\*Former Running Start students who apply may waive the \$20.00 application fee, please contact the Office of Admissions for more information.
2. Documentation of High School graduation or equivalent. Completion of high school, or equivalent, may be documented by producing one of the following documents:
  - Official High School diploma/transcript with a date of graduation.
  - Original Foreign High School diploma/transcript with a date of graduation translated, if not in English.
  - Official High school equivalency certificate, HiSet or GED, including scores.
3. Documentation of satisfactory completion of high school course requirements as noted under Admissions Requirements for a specific program of study.
4. For certain programs, applicants must perform satisfactorily on entrance or placement exams, or provide evidence of transfer credit equivalence, or documentation of waivers, as required by academic programs to which admission is desired.
5. Arrange for a personal interview as required by certain academic programs.
6. Submit recommendations from school personnel, employers, or other professionals, if required.

7. Permanent Residents must submit proof of resident status: temporary evidence or actual Alien Registration Receipt Card (I-551 or I-151).

### **Homeschooled Applicants**

Great Bay Community College encourages applications from students who are home-schooled. Homeschooled applicants are expected to meet the same general and specific admission requirements (or their equivalent) as other applicants. Documentation of academic work completed must be submitted and may include the following:

- A letter, or other documentation, from the student's local school district stating that the student has completed a homeschool program at the high school level.
- A list of courses taken and grades earned, and/or portfolio of work accomplished with completion/graduation date indicated.
- GED or other testing, if applicable.

Contact the Admissions Department with any questions.

### **Transfer Students**

Applicants who wish to have prior college coursework evaluated for transferability should furnish official transcripts from post-secondary institutions previously attended. Course descriptions may be requested if necessary for the determination of transfer credit, which is explained on page 46.

### **Readmission to the College**

A student who has withdrawn from the College, has been suspended, or has not registered for three consecutive semesters must reapply through the Office of Admissions. Students are advised that they will have to abide by any new admission requirements for specific programs. Students should also note that there is no guarantee of readmission, as courses or programs with limited enrollments may not be available.

### **Change of Major**

A currently enrolled student who wishes to change their major is not required to complete a new application for admission, but does need to complete a Change of Major form. Students wishing to change their major will be evaluated for all admissions requirements for the requested program prior to approval by the Admissions Office. Students currently enrolled who wish to be considered for admission for Advanced Composites Manufacturing, Nursing, Massage Therapy, Surgical Technology, or Veterinary Technology Associate Degree Programs and the Veterinary Practice Management Certificate Program, are required to submit a new application for admission.

### **Non-Matriculated Students**

Non-matriculating students are individuals interested in taking credit, or non-credit, courses without pursuing a degree or certificate program. Students who do not plan to matriculate into the institution do not need to submit an application for admission. Non-matriculated students are not eligible for financial aid. Those interested in registering for coursework as a non-matriculating student must:

- Complete a registration form
- Meet with a counselor in the Advising Center to provide proof of successful prerequisite completion as determined by college catalog course description.
- Turn in form with appropriate signatures at College Services One Stop



## **Eligible Non-Citizens**

Students who are not Citizens or Permanent Residents of the United States but who are in process of obtaining residency may matriculate once Legal Documentation of their pending status (letter from court with pending court date, I797-C form, etc.) documentation is provided.

## **INTERNATIONAL STUDENT APPLICANTS**

Great Bay Community College is authorized under Federal law to enroll non-immigrant students. High demand programs with limited enrollment may not be available to international students. We recommend confirming that the program is open to international students prior to applying. In addition to the regular admission application process, International applicants seeking a Certificate of Eligibility (I-20) for F-1 status must submit the following documentation at least thirty days in advance of the beginning of the semester.

1. International students pay a non-refundable International Admission Fee of \$100.00
2. Applicants must submit official secondary and post-secondary school transcripts, translated into English, listing all courses taken, grading system, and grades earned.
3. Applicants whose native language is not English must take the Test of English as a Foreign Language (TOEFL) and earn a paper-based score of 520 or better, a computerized test score of 190 or an Internet based score of 61 or better. If the student is currently in the United States, Accuplacer scores that are comparable to the TOEFL may be used to determine English proficiency. A student must place on the Accuplacer into English 099 or higher. For information regarding the test contact: TOEFL, Educational Testing Service, Rosedale Road, Princeton, NJ 08541 USA, (609) 921-9000, [www.toefl.org](http://www.toefl.org) .
4. Letter from the financial institution that holds the funds of the person financially responsible for the student's educational and living expenses. The statement must be on official letterhead, listing the sponsor's name and the amount of money available for the student. The document must be in English, and if the currency held is not in US dollars, the exchange rate must be listed.
5. Affidavit or letter of support from the person who will be financially responsible for the student. This letter should include the student's name and his/her intent to attend Great Bay Community College, as well as the amount of money available for the student's education and living expenses. The letter must be signed by the sponsor and must be in English.
6. The student must submit copies of current passport and immigration documents including Visa and Duration of Status (D/S) stamp on I-20. We will also need his/her address in the country that s/he plans to return to once s/he graduates from this College.
7. Applicants (or their spouses) must have enough money available in an account to cover a minimum of one year of expenses that include: out-of-state tuition, fees, living expenses, and books. All of the above documentation must be submitted and the student offered admission before a Certificate of Eligibility (I-20) for an F-1 Visa will be issued. All F-1 students must be full-time (12 credit hours or more) each semester (except summer) in order to maintain their visa status. International students must meet with the Diversity Programming Coordinator in the Center for Academic Planning and Support (CAPS) before or during the first week of class.
8. F-1 students are not eligible for in-state or New England Regional tuition rates for day courses at any time while enrolled.
9. Health care in the United States is expensive; international students are required to obtain health insurance coverage prior to the first week of classes and maintain it during their

studies. Information on health insurance is available through the Diversity Programming Coordinator.

## **FOREIGN TRANSCRIPTS**

1. Students with foreign transcripts seeking admission to the college must submit an Original College Transcript (not Diploma), translated if not in English, which lists all courses taken, grading system, and grades earned.
2. Students with foreign transcripts seeking transfer credits must provide both of the following for transfer credit review: Original College Transcript (not Diploma), translated if not in English, which lists all courses taken, grading system, and grades earned.

## **AND**

Official Course-by-Course Evaluation by a third party agency. Example agencies include, but are not limited to:

- World Education Services (WES) [www.wes.org](http://www.wes.org)
- Center for Educational Documentation (CED) [www.cedevaluations.com](http://www.cedevaluations.com)
- Educational Credential Evaluators (ECE) [www.ece.org](http://www.ece.org)

## **STUDENTS WITH DISABILITIES ADMISSIONS POLICY**

The college shall not discriminate against any otherwise qualified person with disabilities solely by reason of his/her disability. This policy extends to persons with identified specific learning disabilities and other disabilities under provision of Section 504 of the Rehabilitation Act of 1973 and the Americans with Disabilities Act of 1990. An "otherwise qualified" person is one who is able to meet all program requirements in spite of his/her disabilities. Students with diagnosed disabilities are encouraged to self-disclose their disability to be eligible for reasonable classroom accommodations. These students should provide the Coordinator of Disability Services with documentation of their disability, including the most recent psychological, medical, and/or academic testing within three years. The Center for Academic Planning and Support provides training and access to a variety of assistive technology, as well as tutors and academic coaching for learning and study strategies, note-taking and organizational skills. For more information, contact Karen Frisbie at 603-427-7625 or [kfrisbie@ccsnh.edu](mailto:kfrisbie@ccsnh.edu)

## **RESIDENCY**

A student's permanent home of record determines residency for tuition purposes. This is the location (town, city, state) at which the student resides at the time of application. The determining factor is the official address listed on federal tax forms.

The following rules will guide the admission to the college:

- First priority for admission shall be given to residents of New Hampshire.
- Second priority shall be given to students qualifying under the New England Regional Student Program.
- Third priority shall be given to students not qualifying under the New England Regional Student Program or those not domiciled in the state.

However, in highly competitive programs with limited enrollment, the Office of Admissions, while working as much as possible within the above parameters, may exercise discretion in admitting those applicants who best fit the needs and expectations of the department, the college, and the local community.

### **In-State Status**

Students qualify for in-state tuition rate only after twelve consecutive months of domicile in New Hampshire, i.e. purchasing/renting property, obtaining a NH driver's license, vehicle registration and/or voter registration. Students requesting a change of residency status must complete the college form. This form must be received in the Admissions Office prior to September 1 for the Fall semester, January 1 for the Spring semester, or June 1 for the Summer semester.

A member of the Armed forces of the United States stationed in this state under military orders, or stationed in a contiguous state but temporarily living in New Hampshire, shall be entitled to classification for himself/herself, spouse and dependent children as in-state for tuition purposes, so long as said orders remain in effect and residence in New Hampshire is continued. Furthermore, military personnel who are residents of another state but choose New Hampshire as their residence within 90 days of being discharged from the military will be considered New Hampshire residents and charged in-state tuition.

### **Out-of-State Status**

The determination of residency is made by the Admissions Office at the time of admission. Students who wish to appeal residency may request detailed information from the Admissions Office.

### **New England Regional Student Program**

The New England Regional Student Program (NERSP) enables residents of Connecticut, New Hampshire, Maine, Massachusetts, Rhode Island, and Vermont to enroll in out-of-state public colleges and universities in the six-state region at reduced tuition rates (50 percent above in-state tuition, rather than full out-of-state tuition). Certain eligibility requirements apply; see admissions for more information.

### **PLACEMENT TESTING & ADVISING**

Prior to registering for courses, students matriculating to an associate degree or certificate program must complete a placement test in required areas, which may include Reading, Math, Writing, and Computer Skills. This assessment will be used to place the student in the appropriate college or foundation course(s). Placement tests are also required for admittance to certain courses and programs. The Academic Placement Policy is described on page 41 of this catalog.

After completing the placement tests, students will schedule an advising session to develop an academic plan for the semester. Students who are eligible to waive all placement testing requirements should contact the advising center to schedule an appointment. Included in this advising session are instructions on how to use the Student Information System (SIS) to look up courses, how to fill out a registration form, and information on college programs and services.

### **Waiving Placement Testing**

Great Bay Community College's placement test sections may be waived, in full or part, for those individuals who have the minimum scores identified in the Academic Placement Policy on page 41 of this catalog. Contact Admissions or the Center for Academic Planning and Support (CAPS) for more information.

### **TUITION DEPOSIT**

Students admitted into a Nursing, Surgical Technology, Veterinary Technology, or Welding degree or certificate program are required to submit a non-refundable advanced tuition deposit of \$100 within thirty days of acceptance or prior to term start. This deposit is applied toward tuition charges. The deposit confirms that the student has accepted the college's offer of enrollment in the chosen program. Registrations are processed in the order in which they are received until seats are filled. Your deposit is not a guarantee of enrollment in specific courses.

**CLASS SCHEDULES**

Class schedules noting specific times and days, are developed on a semester-by-semester basis and are published in the Semester Course Schedule. Classes are held during the day, evening, weekend, and online. Students completing program requirements may need to take classes at any of those times.

# FINANCIAL AID

The Financial Aid Office at Great Bay Community College is on the first floor of the Portsmouth campus in the College Services One Stop suite. The mailing address is: Financial Aid Office - Great Bay Community College - 320 Corporate Drive - Portsmouth NH 03801. Phone: (603) 427-7610 - Fax: (603) 334-6308 - Email: [gbfinaid@ccsnh.edu](mailto:gbfinaid@ccsnh.edu)- Website: <http://greatbay.edu/admissions-aid/financial-aid>

## DISCLAIMER

All financial aid information and policies are subject to change at any time.

## OVERVIEW

Financial aid provides funds to eligible students for their direct college expenses (tuition and fees) and indirect college expenses (books, supplies, equipment, and a reasonable allowance for living expenses and transportation.) The funds come in three forms: grants, which do not have to be repaid; loans, which must be repaid; and part-time jobs from which the student earns an hourly wage. Students awarded financial aid may receive any or all of these forms of aid.

A student starts the financial aid application process by completing the **Free Application for Federal Student Aid (FAFSA)** online at [www.fafsa.ed.gov](http://www.fafsa.ed.gov) . The Great Bay Community College school code is **002583**.

The 2018-2019 FAFSA is the application for aid for Summer 2018, Fall 2018, and Spring 2019.

The 2019-2020 FAFSA is the application for aid for Summer 2019, Fall 2019, and Spring 2020.

A new FAFSA must be filed each year. The financial aid year begins with the summer term at Great Bay Community College. The preferred filing date is March 15 for the upcoming financial aid year. Students who meet this filing date will be considered for all institutional funds. Students who file after this date will be considered on a funds-available basis. If you are unable to meet the preferred deadline, filing by these dates will help to have your financial aid in place before you begin classes:

<b>Begin Enrollment</b>	<b>FAFSA</b>	<b>Best to File By</b>
Summer 2018	2018-2019	March 15, 2018
Fall 2018	2018-2019	June 1, 2018
Spring 2019	2018-2019	October 1, 2018
Summer 2019	2019-2020	March 15, 2019
Fall 2019	2019-2020	June 1, 2019
Spring 2020	2019-2020	October 1, 2019

## ELIGIBILITY REQUIREMENTS

To receive federal, state, or institutional financial aid funds administered by the Great Bay Community College, a student must:

- Be admitted to a degree-granting or an eligible certificate-granting program (16 credit hours or more) at Great Bay Community College
- Be a U.S. citizen or an eligible non-citizen
- Be enrolled for a minimum of six eligible credits for student loans, Supplemental Educational Opportunity Grants, and Federal Work-Study employment.
- Be enrolled for a minimum of one eligible credit for Pell Grants.
- Be meeting the Satisfactory Academic Progress for Financial Aid standards, as defined by the Financial Aid Office (see below)

- Be registered with Selective Service (male students only)
- Not be in default on a student loan
- Not owe a refund on any federal (Title IV) financial aid
- Not have aid eligibility suspended or terminated due to a drug-related conviction that occurred while receiving Title IV assistance
- Not be receiving federal or state financial aid from another institution for the same enrollment period
- For Pell Grants and Supplemental Educational Opportunity Grants, not have a prior baccalaureate degree

All students who meet the eligibility requirements listed above, and who complete and file a valid FAFSA, qualify for federal Direct Student loans, regardless of financial need. For grant programs, Perkins Loans, Federal Work-Study and for subsidized Direct Loans, a student must have financial need, as determined by the federal need analysis calculation, based on the information provided on the FAFSA.

For some grants and most loans, a student must be enrolled at least half-time (6 credits).

Students who accept loans must complete loan counseling and sign a promissory note.

To receive aid in future semesters, a student must meet qualitative and quantitative standards for Satisfactory Academic Progress for Financial Aid (SAPFA). These standards are described below and in the College's Financial Aid policy page, available online: <http://greatbay.edu/admissions-aid/financial-aid/policies>.

## **SOURCES OF FINANCIAL AID**

The **Pell Grant** is a federal grant for students who demonstrate exceptional financial need. The Pell Grant does not have to be paid back. Awards range from \$593 to \$5920 per year in 2018-2019. To receive a Pell Grant, the student must meet all the eligibility requirements listed above, and must be an undergraduate who has not earned a bachelor's degree. If a student receiving a Pell Grant withdraws from college before completing the semester, the student may be responsible for repaying monies to the College and/or the Federal Government. Pell Grants are prorated, based on a student's actual enrollment each semester. Pell Grants are subject to a Lifetime Eligibility limit of the equivalent of twelve (12) full-time semesters. Students who have met or exceeded this limit are not eligible for additional Pell Grants.

**The Supplemental Educational Opportunity Grant (SEOG)** is for students who demonstrate exceptional financial need. The SEOG does not have to be paid back. To receive an SEOG, a student must meet all the eligibility requirements listed above, and be an undergraduate who has not earned a bachelor's degree. Limited funds are available and are awarded on a first-come, first-served basis to students enrolled at least half-time (6 credits). Awards range from \$100 to \$500 per year. If a student receiving a SEOG withdraws from college before completing the semester, the student may be responsible for repaying monies to The College and/or the Federal Government.

**The Unique Scholarship** is a State of New Hampshire grant for students who are New Hampshire residents and who demonstrate exceptional financial need. To receive a Unique Scholarship, the student must meet all the requirements listed above, must be a New Hampshire resident for at least one year, and must file the FAFSA by December 31 of the current award year. In 2017-2018, Unique Scholarships are \$800 for full-time students (12 or more credits), and \$400 for part-time students (6 to 11 credits.)

**Federal Work-Study Program (FWSP)** gives students an opportunity to earn money for educational expenses by working at a part-time job at the College. Students typically work as lab, library, and office aides, under the supervision of a faculty or staff member. Off-campus positions in community service agencies are also available. Students are paid at least the current federal minimum wage and are required to sign a confidentiality agreement and to perform assigned work in a responsible and professional manner. Students must meet their course requirements prior to working a work-study job. In most cases, work-study hours are limited to 8-10 hours per week. Work-study recipients must meet all the eligibility requirements listed above, demonstrate financial need, and be enrolled at least half-time (6 eligible credits per semester).

**William D. Ford Federal Direct Student Loans**, also known as Stafford Loans, are low-interest loans (4.45% for 2017-2018) made to students by the United States Department of Education. First year students (31 or fewer credits earned) may borrow up to \$5,500 (\$9500 for independent students) per financial aid year. Second year students (32 or more credits earned) may borrow up to \$6,500 (\$10,500 for independent students) per financial aid year. Repayment begins six months after the borrower is no longer at least a half-time student.

- **Direct Subsidized Loans** do not accrue interest while the student attends college. Interest (4.45% for loans disbursed in the 2017-2018 financial aid year) begins to accrue after the borrower is no longer at least a half-time student.
- **Direct Unsubsidized Loans** accrue interest (4.45% for loans disbursed in the 2017-2018 financial aid year) while the student attends college, and until the loan is fully repaid.

All Direct Loan borrowers must meet all the eligibility requirements listed above, be enrolled at least half-time (6 eligible credits per semester) complete Entrance Loan Counseling, and sign a Master Promissory Note. Subsidized Direct Loans are only awarded to students demonstrating financial need on the FAFSA. Unsubsidized Direct Loans are offered regardless of financial need. If a student receiving a Direct Loan withdraws from school before the semester is completed, the student may be required to repay monies to the Department of Education.

Additional information, including current interest rates, Master Promissory Notes and Loan Entrance Counseling, is available at <https://studentloans.gov>.

**The Federal Parent Loans for Undergraduate Students (PLUS)** program provides funds for educational purposes to the parents of dependent students. The PLUS loan is available to the parents of dependent students with and without financial need, however the student is required to file FAFSA. Parents may borrow up to the student's cost of attendance, less any financial aid. The student who is a dependent of the borrower must meet all the eligibility requirements listed above and must be enrolled at least half-time (6 credits per semester). The borrower will be required to sign a Promissory Note. The 2017-2018 interest rate for PLUS loans is 7.00%

Additional information, including applications, current interest rates, and Master Promissory Notes, is available at <https://studentloans.gov>.

**Alternative Loans** are student loans made by private lending institutions. Alternative loans are made to the student, but a cosigner is frequently required. The student applies directly to a lender. The lender will perform a credit check and inform the student if the loan is approved, if a cosigner is required, the interest rate of the loan, and any origination fees. Like other student loans, alternative loans must be repaid. A list of alternative lenders is available at [www.Elmsselect.com](http://www.Elmsselect.com).

For a complete list of financial aid policies, as well as information about scholarships and other funding sources, visit the financial aid section of our website at <http://greatbay.edu/admissions-aid/financial-aid>.

## IMPORTANT FINANCIAL AID POLICIES

- **Returns of Federal Title IV Funds:** Returns of Federal Title IV Funds for financial aid students who withdraw, officially or unofficially, from all of their courses in a semester prior to the end of the semester, are guided by special return policies formulated by the United States Department of Education. The exact amount required to be returned will vary depending on the amount of grant and loan funds the student received and at what point in the semester the student withdrew. In addition, the student will be liable for the balance owed the College for tuition and fees.
- **Courses Covered:** Financial aid is available only for courses within a student’s current eligible program of study.
- **Repeating Courses:** For one time only, financial aid will cover a repeated course that has been previously passed. For this purpose, passed means any grade higher than an “F,” regardless of any school or program requiring a higher qualitative grade or measure to have been considered to have passed the course. A student may be repeatedly paid for failing/withdrawing from a course. However, if a student passed a course once, then is repaid for taking it, and fails or withdraws the second time, that failure counts as their paid retake, and the student may not be paid for retaking the course a third time. If a program of study requires students to retake all of the coursework for a term in which a student fails a course, any courses retaken that were previously passed in this case are not eligible for Title IV aid.
- **Satisfactory Academic Progress for Financial Aid (SAPFA):** Financial Aid recipients must make Satisfactory Academic Progress for Financial Aid to retain financial aid eligibility. The standards for Satisfactory Academic Progress for Financial Aid are specific to the financial aid program, and are both qualitative and quantitative. The standards measure a student’s cumulative grade point average (CGPA) and his/her “incremental” progress in terms of completing a minimum amount of work at stated intervals. When a student is reviewed for SAPFA, all credits in all the student’s enrollment periods at Great Bay Community College are included in the review. This includes enrollment periods during which the student did not receive financial aid and enrollment periods during which the student did receive financial aid, and enrollment periods during which the student was matriculated and enrollment periods during which the student was not matriculated. Approval under the college’s academic amnesty policy does not remove that academic history from the SAPFA review. All academic history at Great Bay is included in this review. SAPFA is reviewed by the Financial Aid Office at the end of each semester.

### Qualitative Standard:

Cumulative Grade Point Average (CGPA) Component

A student must maintain a minimum cumulative grade point average as noted below to be considered making Satisfactory Academic Progress for Financial Aid (SAPFA):

Credits earned	Certificate or Diploma Program Minimum CGPA	Associate Degree Program Minimum CGPA
0-13	1.50	1.50



14-27	2.0	1.70
28-40	2.0	1.80
41+	2.0	2.0

**Quantitative Standard:**

**A student must successfully complete at least two-thirds (66.67%) of the total credits he or she attempts throughout his/her academic career at The College.** All attempted credits resulting in either an academic grade or administrative transcript notation will be included in the quantitative calculation. For example, a student who has enrolled in 36 credits throughout his or her academic career at The College must pass at least 24 credits in order to be making Satisfactory Academic Progress for Financial Aid.

**Maximum Timeframe Component:**

**A student may receive student federal aid for any attempted credits towards his or her program of study as long as his or her total attempted credits do not exceed 150% of the published length of the student’s program of study.**

For example, a student enrolled in an eligible 24-credit certificate program may receive financial aid if he or she has not attempted more than 36 credits. A student enrolled in a program of study that requires 64 credits to earn the degree may receive financial aid. If he or she has not attempted more than 96 credits.

<i>Completion Rate Component</i>	<b>Must complete at least 66.67% of the credits attempted</b>
<i>Maximum Timeframe Component</i>	<b>May receive financial aid for up to 150% of the number of credits required for the degree or certificate</b>

**Review Schedule:**

The qualitative and quantitative components of the SAPFA policy will be reviewed at the end of each semester of the student’s program of study.

**Academic Periods Included in the Review:**

In general, all coursework at Great Bay Community College is taken into account when reviewing an academic record for Satisfactory Academic Progress for Financial Aid. This includes periods when the student did not receive financial aid funds, periods for which the student has received academic amnesty, and periods in which the student is taking courses as a non-matriculated student.

*There are some exceptions. Please refer to the table below for a breakdown of how each type of course or credit is treated in the review.*

	<b>Cumulative GPA Component</b>	<b>Completion Rate Component</b>	<b>Maximum Timeframe Component</b>
Regular courses in your program of study	Yes	Yes	Yes
Running Start/ eStart Courses	Yes	Yes	Yes
Repeat Courses	Yes	Yes	Yes
Transfer Credits	No	Yes	Yes
Consortium Credits	No	Yes	Yes
Developmental/Remedial/ESL	Yes	Yes	Yes
Incompletes	Yes	Yes	Yes
Audit Courses	No	No	No
Credit by Examination/Credit for Prior Learning	No	No	Yes

Nonpunitive Grades	No	Yes	Yes
Pass/Fail Grades	No	Yes	Yes
Withdrawals	No	Yes	Yes

**Students Making Satisfactory Academic Progress for Financial Aid:**

Students who meet SAPFA standards are making Satisfactory Academic Progress for Financial Aid and retain eligibility for student financial aid for the following semester.

**Students on SAPFA warning:**

**Students who do not meet SAPFA standards will be placed on SAPFA warning for one semester. Students on SAPFA warning will retain their eligibility for student financial aid for one warning semester.**

At the end of the warning semester, the student’s record will be reviewed. If the student meets SAPFA standards, the student will once again be making Satisfactory Academic Progress for Financial Aid, and will be eligible for student financial aid for the following semester.

If the student is still unable to meet SAPFA standards, he or she will be ineligible to receive financial aid.

**Appeals**

The student may appeal an ineligible decision by submitting the Appeal and Academic Plan form, carefully following the instructions on the form to include the following information:

- Student name and ID#
- Circumstances which prevented the student from making Satisfactory Progress for Financial Aid in the past
- An Academic Plan which describes how the student will regain Satisfactory Academic Progress for Financial Aid in the future, and complete his or her academic program within the maximum timeframe component (see above),
- Financial Aid Appeal/Academic Plan forms are available at the College Services One Stop counter, from the Financial Aid Office, online at <http://greatbay.edu/admissions-aid/financial-aid/policies> and by email request to [gbfinaid@ccsnh.edu](mailto:gbfinaid@ccsnh.edu)

If the appeal is granted, the student will be eligible for student financial aid for the following semester, but will be on SAPFA probation.

**Students on SAPFA Probation:**

At the end of the probationary period, the student’s record will be reviewed again. Students meeting SAPFA standards will be eligible for student financial aid for the following semester.

**Students not meeting the standards for SAPFA will be ineligible for student financial aid at Great Bay Community College.** Financial aid eligibility may be regained by meeting the published SAPFA standards.

# TUITION RATES AND FEES

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## **IN-STATE STUDENTS (New Hampshire Residents)**

\*210.00 per credit

A member of the Armed Forces of the United States stationed in this state under military orders, or stationed in a contiguous state but temporarily living in NH, shall be entitled to classification for himself/herself, spouse and dependent children as in-state for tuition purposes so long as said orders remain in effect and residence in New Hampshire is continued. Furthermore, military personnel who are residents of another state but choose NH as their residence within 90 days of being discharged from the military will be considered NH residents and charged in-state tuition.

VA students enrolled under the Veterans Educational Assistant Improvement Acts of 2010 will be charged in-state tuition.

- A veteran, as defined under RSA 21:50, I, or a covered individual, as defined under Chapter 30 or 33 of Title 38 of the United States Code using educational assistance benefits provided under federal law, shall be charged in-state tuition while living in New Hampshire and enrolled.
- A spouse or child using educational assistance benefits provided pursuant to Chapter 30 or 33 of Title 38 of the United States Code shall be charged in-state tuition while living in New Hampshire and enrolled.

Students matriculated in the Aviation Technology Helicopter A.S. Degree will be charged New Hampshire In-State tuition for courses required for the program.

Out-of-State students newly matriculated in the Surgical Technology Degree, who live within a 50 mile radius of the Portsmouth and Rochester campuses, will be charged New Hampshire In-State tuition for courses required for the program beginning in the fall of 2016.

Out-of-State students newly matriculated in the Advanced Composite Manufacturing Certificate program, who live within a 50 mile radius of the Portsmouth and Rochester campuses, will be charged New Hampshire In-State tuition for courses required for the program beginning in the February 2016.

Out-of-State students newly matriculated in the Massage Therapy Certificate program, who live within a 50 mile radius of the Portsmouth and Rochester campuses, will be charged New Hampshire In-State tuition for courses required for the program beginning in the fall of 2016.

## **NEW ENGLAND REGIONAL STUDENTS (CT, MA, ME, RI, VT)**

Students must be matriculated in a program, and must indicate eligibility on the application for admission to the College.

\* \$315.00 per credit

## **OUT OF STATE STUDENTS**

\* \$478.00 per credit

*\*The tuition rate is subject to the approval of the Board of Trustees and is subject to change without notice.*

## **CHANGE OF STATUS**

Any student who has, on his/her first admission to the system, been classified as Out-of-State or New England Regional for tuition purposes, may apply to the college Admissions Office for a change of residency status on or before September 1 for the subsequent Fall semester, on or before January 1 for the subsequent Spring semester, and on or before June 1 for the subsequent summer term provided that the student satisfies NH residency requirements.

**CREDIT BY EXAMINATION:** A fee of \$25.00 per credit, plus all direct costs associated with providing a laboratory portion of an exam, will be charged to a student wishing to receive credit by examination.

**CREDIT FOR PRIOR LEARNING/EXPERIENTIAL LEARNING:** Students will be assessed a fee based on 50% of the current tuition rate on the total credits awarded (e.g., for 12 credits awarded: 0.50 x current tuition rate x 12 credits).

**NURSING CLINICAL SURCHARGE:** All nursing students taking clinical courses will be charged a nursing clinical surcharge of \$350 per semester. This surcharge is designed to assist in covering the expenses associated with clinical classes due to The New Hampshire Board of Nursing requirements of a student/faculty ratio of 8:1. This fee is in addition to the academic instruction fee.

**PROTESTED CHECKS:** A fee of \$35.00 will be charged for any check protested or returned for nonsufficient funds.

**LIBRARY FINES:** Students will be assessed a fine of \$.25 per item/per day for all overdue library materials. The cost of replacement is charged for unreturned materials.

**ACADEMIC INSTRUCTION FEE**

An additional fee will be charged for all Laboratory/Clinical/Practicum or other similar experiences. This fee is calculated by subtracting the number of lecture hours from the number of credit hours and multiplying the remainder by \$110. This fee will be added to the normal tuition charge for that course. (See example.) Fee will be charged to all students with no exceptions.

EXAMPLE	Lec	Lab	Credit
BIOL110G A&P I (4 credits - 3 lecture hours = 1 x 110 = \$110)	3	3	4

**DIRECTED / INDEPENDENT STUDY**

Directed/Independent Study courses follow the same registration and credit fees charges as other courses and will be charged the day rate and based on residency. Lab fees will also be charged, if appropriate.

**COMPREHENSIVE FEE**

\$22 per credit - This fee is charged for every credit in each credit-bearing course regardless of the number of credits taken.

**COLLEGE COSTS/EXPENSES 2018-2019**

<b>Day Tuition Rates</b>	
New Hampshire Resident	\$210.00 per credit
New England Regional Student Program (NERSP)	\$315.00 per credit
Out-of-State or International Students	\$478.00 per credit
<b>Evening/Weekend/100% Online Tuition Rate</b>	
Evening Courses (classes beginning 5pm or later)	\$210.00 per credit
Weekend Courses	\$210.00 per credit
100% Online Courses (does not include Hybrid courses)	\$210.00 per credit
<b>Fees (required)</b>	
Placement Testing (Accuplacer)	\$20.00
Orientation Fee	\$30.00
Application Fee (per application)	\$20.00
International Admissions Fee	\$100.00

Nursing Clinical Surcharge (per semester)	\$350.00
Nursing Clinical Makeup Fee (for missed clinical obligation)	\$40.00
Academic Instruction Fee	See formula above
Student Comprehensive Fee (per credit)	\$22.00
Graduation Fee – Degree	\$100.00
Graduation Fee - Certificate	\$50.00
Transcript Fee	FREE
Deferred Payment Fee – FACTS Payment Plans (per semester)	\$30.00
Late Payment Fee – Students dropped for non-payment who are re-registered	\$50.00
Payment Plan - Missed Scheduled Payment Fee (per semester)	\$50.00
<b>OTHER FEES</b>	
Diploma Replacement Fee	\$20.00
Replacement College ID Card Fee (First card is free)	\$10.00
College Level Examination Program Administrative Fee	\$25.00
Proctor Exam Fee (non-CCSNH students)	\$50.00
Student Accident Insurance (Based on 2015-16 Academic Year prices)	
Student Accident Only Coverage / 12 Months	\$280.00
Student Accident Only Coverage / Spring only	\$186.00
<b>OTHER COSTS (These required costs are estimated and vary depending on program.)</b>	
Textbooks and other Materials – estimated per semester	\$600.00
Criminal Background Check Fee	\$60.00
Adv. Composites Mfg. - ACM110G Introduction to Advanced Composites Materials/Equipment Fee	\$1,000.00
Adv. Composites Mfg. - ACM103G Materials/Equipment Fee	\$327.00
Adv. Composites Mfg. - ACM210G Fundamentals of Composites Manufacturing Materials/Equipment Fee	\$350.00
Adv. Composites Mfg. - ACM215G Materials/Equipment Fee	\$400.00
Adv. Composites Mfg. - ACM250G Paint Operator Materials/Equipment Fee	\$327.00
Adv. Composites Mfg. - ACM251G Weaving Technician and Preform Finishing Materials/Equipment Fee	\$327.00
Adv. Composites Mfg. - ACM252G Resin Transfer Molding Technician Materials/Equipment Fee	\$327.00
Adv. Composites Mfg. - ACM253G Bonding and Finishing Operator Materials/Equipment Fee	\$327.00
Adv. Composites Mfg. - ACM254G Materials/Equipment Fee	\$327.00
Adv. Composites Mfg. - ACM255G Composites CNC Milling and Set-up Operator Materials/Equipment Fee	\$327.00
Adv. Composites Mfg. - ACM256G Composites Repair Technician Materials/Equipment Fee	\$327.00
Adv. Composites Mfg. - ACM265G Multi Axis CNC Milling Materials/Equipment Fee	\$327.00
Adv. Composites Mfg. - ACM257G High Performance Composites Fabrication Materials/Equipment Fee	\$327.00
Intro to Nondestructive Testing (NDT110G) Materials/Equipment Fee	\$500.00
Liquid Penetrant Testing (NDT210G) Materials/Equipment Fee	\$500.00
Ultrasonic Inspection (NDT212G) Materials/Equipment Fee	\$500.00
Radiographic Testing (NDT214G) Materials/Equipment Fee	\$500.00
Topics in Manufacturing (MFG112G) Materials/Equipment Fee	\$500.00
Solid Modeling (MFG225G) Materials/Equipment Fee	\$500.00

Advanced Print Reading and GD&T (MFG260G) Materials/Equipment Fee	\$500.00
CNC Programming (MFG266G) Materials/Equipment Fee	\$500.00
Work Holder and Fixture Design (MFG267G) Materials/Equipment Fee	\$500.00
Automotive Maintenance & Light Repair (AUTO110G) Materials/Equipment Fee	\$300.00
Automotive Engine Mechanical (AUTO120G) Materials/Equipment Fee	\$300.00
Automotive Electronics I (AUTO125G) Materials/Equipment Fee	\$300.00
Automotive Suspension & Steering (AUTO150G) Materials/Equipment Fee	\$300.00
Automotive Electronics II (AUTO130G) Materials/Equipment Fee	\$300.00
Automotive Braking Systems (AUTO140G) Materials/Equipment Fee	\$300.00
MOTR110G Motorcycle Program Materials Fee	\$750.00
MOTR120G Motorcycle Program Materials Fee	\$750.00
MOTR130G Motorcycle Program Materials Fee	\$750.00
MOTR140G Motorcycle Program Materials Fee	\$750.00
MOTR150G Motorcycle Program Materials Fee	\$1,500.00
Helicopter Program Aviation Flight Fees - All students in the Aviation Program are charged at the New Hampshire In-State tuition rate. Tuition and Fees below are for students using both the R22 and R44 helicopters. The VA only pays for the minimum flight hours.	
AVTN150G Private Pilot I Ground	\$1,178.00
AVTN151G Private Pilot I Flight	\$14,320.00
AVTN160G Private Pilot II Ground	\$1,178.00
AVTN161G Private Pilot II Flight	\$16,672.00
AVTN170G Instrument Pilot Ground	\$1,758.00
AVTN171G Instrument Pilot Flight	\$24,016.00
AVTN250G Commercial Pilot Ground	\$1,506.00
AVTN251G Commercial Pilot Flight	\$26,394.00
AVTN252G Certified Flight Instructor Ground	\$1,131.00
AVTN253G Certified Flight Instructor Flight	\$11,280.00
AVTN254G Certified Flight Instructor Instrument Ground	\$1,131.00
AVTN255G Certified Flight Instructor Instrument Flight	\$6,996.00
Helicopter Program Aviation Flight Fees - All students in the Aviation Program are charged at the New Hampshire In-State tuition rate. Tuition and Fees below are for students using the R44 helicopters only. The VA only pays for the minimum flight hours.	
AVTN150G Private Pilot I Ground	\$1,178.00
AVTN151G Private Pilot I Flight	\$19,276.00
AVTN160G Private Pilot II Ground	\$1,178.00
AVTN161G Private Pilot II Flight	\$22,636.00
AVTN170G Instrument Pilot Ground	\$1,758.00
AVTN171G Instrument Pilot Flight	\$24,016.00
AVTN250G Commercial Pilot Ground	\$1,506.00
AVTN251G Commercial Pilot Flight	\$35,074.00
AVTN252G Certified Flight Instructor Ground	\$1,131.00
AVTN253G Certified Flight Instructor Flight	\$15,060.00
AVTN254G Certified Flight Instructor Instrument Ground	\$1,131.00
AVTN255G Certified Flight Instructor Instrument Flight	\$6,996.00
Helicopter - Other out-of-pocket expenses: Second-class Medical Certificate (required annually)	\$120.00

Helicopter - Other out-of-pocket expenses: Miscellaneous Expenses	\$3,000.00
Helicopter - Other out-of-pocket expenses: FAA Certification Exam Fees	\$3,990.00
Hospitality - Intro to Hospitality (HOSP110G) Travel Fee)	\$60.00
Hospitality – Restaurant Week Fee(HOSP230G)	\$50.00
Liberal Arts Class – ARTS103G and ARTS203G Theatre Fee	\$50.00
Massage Therapy - Student Liability Insurance	\$ 20.00
Massage Therapy - Supplies - Portable Table, Uniform, Sheets, Lotions, etc.	\$ 800.00
Massage Therapy - Massage Therapy State Licensing Exam	\$ 125.00
Massage Therapy - Massage Therapy National Exam (NCETMB)	\$ 225.00
Nursing - Preadmission RN Examination	\$100.00
Nursing - Nursing Uniforms, Accessories, Supplies	\$ 150.00
Nursing - Nursing Lab Pack	\$ 125.00
Nursing - Student Liability Insurance (per semester)	\$ 20.00
Nursing – NH Board of Nursing Initial Application for RN License by Examination	\$120.00
Nursing - ATI Nursing Testing (\$195.00/per semester)	\$ 390.00
Nursing - ATI Comprehensive RN Review Course (Fourth Semester)	\$349.00
Nursing – Registration Fee for NCLEX-RN Exam	\$200.00
Surgical Technology - Student Liability Insurance	\$ 20.00
Surgical Technology - Surgical Technology Tool Kit /per semester	\$ 125.00
Surgical Technology - National Board of Surgical Technologist and Surgical Assisting - CST Examination	\$ 190.00
Surgical Technology Clinical Surcharge SURG123G,SURG215G,SURG225G	\$350.00
Veterinary Technology - Radiation Badge Fee	\$ 50.00
Lost Badge Fee	\$ 10.00
Veterinary Technology - - Student Liability Insurance	\$ 20.00
Veterinary Technology - Rabies Vaccine (variable based on availability)	\$ 1,025.00
Welding - Weld100G Materials/Equipment Fee	\$800.00
Welding - Weld150G Materials/Equipment Fee	\$800.00
Welding - Weld200G Materials/Equipment Fee	\$800.00

### Intent to Graduate

Matriculated candidates for graduation from all programs need to complete an Intent to Graduate form and submit the form to the College Services One Stop with payment of the graduation fee. Each student will be charged a graduation fee of \$100.00 for degree candidates and \$50 for certificate candidates. The fee covers the academic year (fall, spring, summer). Degree or certificates earned in subsequent years are subject to another graduation fee. Students are charged only one fee for dual majors: \$100 if one or both of the degrees is an associate degree and \$50 if both are certificates. The fee will be used to cover the costs associated with program completion and will be assessed to all students who have completed their program requirements, regardless of participation in the commencement ceremony. The fee will be charged also to individuals who have 8 or fewer credits in not more than two course remaining, and to whom the College has given permission to participate in the spring commencement ceremony. This fee is non-refundable, unless students scheduled to graduate, including students eligible under the eight-credit rule, fail to meet mandatory requirements at the time of commencement. However, a student eligible under the eight-credit rule who participates in the commencement ceremony, and who fails to complete program requirements, will not be entitled to a refund.

### **Payment of Tuition Deposit and Orientation Fee**

Applicants accepted as students in Nursing, Surgical Technology, Welding and Veterinary Technology only must pay a non-refundable tuition deposit of \$100 within thirty days of notification of acceptance or prior to term start. The deposit reserves a place for the student and is applied toward the first semester's tuition. An Orientation fee of \$30.00 is required of all students in the semester that the student matriculates.

### **Senior Citizens**

Adult learners aged 65 and over and who are NH residents may enroll in credit courses at a tuition cost of 50% at Great Bay Community College two days prior to the start of classes if space is available. The Academic Instruction Fee and other fees must be paid by the student. Full tuition and other fees will be charged for all noncredit, enrichment, professional development, and recertification classes.

### **Payment of Tuition and Fees**

Billing for tuition and fees is coordinated through the College's Business Office. Reminders are mailed approximately 30 days prior to the beginning of each semester. In addition, electronic billing reminders are periodically emailed to the student's Great Bay Community College email account. Payment or arrangement for payment must be made ten (10) business days before the semester starts to be officially considered registered. For late registration, payment in full must be made upon registration. Discover, Diners Club, JCB, Visa, MasterCard, check, or cash are accepted as payment. Students awaiting scholarships or financial aid awards to cover tuition may request a deferred payment through the Business Office subject to the approval of the President. Payment plans are available at the College Services One Stop through Nelnet/FACTS Tuition Management. If payment or arrangement for payment is not made by the established payment deadline, students are not considered officially registered and will be administratively withdrawn. Students who register after the established payment deadline must make payment or adequate payment arrangements at the time of registration and will remain responsible for tuition and fees. A late payment fee of \$50 may be charged.

### **Collection Clause**

The following clause is included on college forms, with areas for student signature, signifying their understanding of their financial obligations.

*"I agree that by registering for courses within the Community College System of New Hampshire (CCSNH), I am financially obligated for ALL costs related to the registered course(s). Upon a drop or withdrawal, I agree that I will be responsible for all charges as noted in the student catalog and handbook. I further understand that if I do not make payment in full, my account may be reported to the credit bureau and/or turned over to an outside collection agency. I also agree to pay for the fees of any collection agency, which may be based on a percentage of the debt up to a maximum of 35%, and all additional costs and expenses, including any protested check fees, court filing costs and reasonable attorney's fees, which will add significant costs to my account balance."*

### **Veterans**

The Registrar verifies veteran registrations after the Add/Drop period of the semester. Veterans are responsible for payment of tuition and fees pending the receipt of benefits.

## **TUITION REFUND POLICY**

### **Credit and Non-Credit Courses**

All refunds require that the student complete an official withdrawal form. Effective Fall Semester, 2011, students who officially withdraw from the college or an individual course by the end of the fourteenth (14th) calendar day of the semester will receive a 100% refund of tuition, less nonrefundable fees. Students in classes that meet in a format shorter than the traditional semester (15-16 weeks) will have seven (7) calendar days from the designated start of the class to withdraw for a full refund. If the seventh (7th) or fourteenth (14th) calendar day falls on a



weekend or holiday, the drop refund date will be the first business day following the weekend or holiday. Exception: students in courses that meet for two weeks or fewer must drop by the end of the first day of the class in order to get a 100% refund. Students registered for non-credit workshops/ professional training must withdraw in writing at least three business days prior to the first session to receive a full refund of tuition and fees. Refunds take approximately four to six weeks to be processed. If the college cancels a class, tuition and Academic Instruction fees will be refunded.

The College President or designee may grant a tuition refund or tuition credit under extenuating circumstances on a case-by-case basis, such as military activation, administrative error or documented long term illness. In order to receive a tuition credit, supporting information such as physician's note, hospital confirmation, military assignment, etc. must be provided. Students wishing to be considered for an exception must still complete the add/drop form. The complete procedures for students with extenuating circumstances can be obtained in the Office of the Vice President of Student Affairs.

**Return of Title IV Funds: Mandated by Law**

Students who withdraw from school before the 60% point in a semester will have to repay a portion or all of their Federal Pell Grant, Federal SEOG grant, Federal Perkins Loan funds, and Federal Direct loans to the United States Department of Education. The exact amount required to be returned will vary depending on the amount of grant and loan money the student received and at what point in time the student withdraws from the College.

In addition, the student will be liable for the balance owed the College for tuition and fees. The student will receive a revised statement of account for the expenses incurred which will include the reduction and or loss of Federal Title IV funds.

Students who choose to withdraw from the College must complete a College Withdrawal Form. This form must be signed by the student and various campus offices and then be returned to the Registrar's office.

# Academic Policies

## I. STUDENT ACADEMIC CLASSIFICATIONS

**Matriculated student:** A student who has been formally accepted to a certificate or degree program on a full-time or part-time basis. Matriculated status is maintained by taking at least one course per academic year; otherwise, a candidate will be required to reapply for admission and abide by any new academic requirements in effect at that date. Each student is expected to demonstrate orderly progress in completing his or her educational objective at Great Bay.

To help clarify each student's enrollment status at the College, students are assigned to one of the following categories:

1. Full-time student - a person who is enrolled in 12 or more semester credit hours
2. Part-time student - a person who is enrolled in fewer than 12 semester credit hours

**Non-matriculated student:** A student who is taking either credit or noncredit courses, but has not been formally accepted to a certificate or degree program. Non-matriculated students are subject to the same course pre-requisites and co-requisites as matriculated students.

***Requirements for graduation are defined by the program of study to which the student has been admitted at the time of matriculation.***

## II. DEGREE REQUIREMENTS

The College offers Associate in Arts and Associate in Science Degrees. All Associate degree programs require a minimum of 60 credits.

### Associate Degrees

- a. To earn an Associate Degree from the College, a student must:
  - successfully complete at least sixty (60) credits in college-level coursework (*excluding* remedial or developmental coursework/credits – i.e., those identified as being “for institutional credit only”);
  - earn at least fifteen (15) credits in coursework offered by and under the direct control of the college awarding the degree with at least eight (8) of those credits earned in advanced-level courses in the student's major field;
  - achieve a Cumulative Grade Point Average (cGPA) of 2.0 or higher in all courses taken at the college awarding the degree (*including* remedial or developmental coursework/credits);
  - meet all course distribution requirements for the specific type of Associate Degree as described below.
- b. Associate in Science  
In addition to meeting the requirements set forth in Section a. above, a student must meet the following course distribution requirements to earn an Associate in Science or Associate in Applied Science Degree:
  - earn at least 30 credits in program-specific courses in a defined major field;
  - earn at least 20 credits in general education courses, including one course of three (3) credits or more in:
    - English Composition (required);
    - Humanities/Fine Arts/Foreign Language (required);
    - Quantitative Reasoning/Mathematics (required);
    - Science (required)
    - Social Sciences (required);

The remaining general education credits to reach the required total of 20 general education credits may be taken in Humanities/Fine Arts/Foreign Language, Quantitative Reasoning, Science, or Social Sciences.

- The remaining 10 credits to reach the required minimum total of 60 credits may be assigned in any subject area, as deemed by the faculty to be appropriate to the curriculum.

c. Associate in Arts

Students may earn an Associate in Arts degree in Liberal Arts or in a specified major field. In addition to meeting the requirements set forth in Section a above, a student must meet the following course distribution requirements to earn an Associate in Arts degree. Each category below must include at least one course worth at least three (3) credits:

English Composition	3-4 credits
English Literature, Composition (requiring English Composition as a prerequisite), or Communications	3 credits
Quantitative Reasoning/Mathematics	6-8 credits
Natural or Physical Sciences (including at least one lab science)	7-8 credits
Social Sciences	9 credits
Humanities/Fine Arts/Foreign Language	9 credits
<b>AND EITHER</b>	
Electives in Specialized Field	20-24 credits
<b>Minimum 60 credits</b>	
<b>OR (for generic AA in Liberal Arts)</b>	
Liberal Arts Electives (from above list) AND	12-15 credits
Open Electives	9 credits
<b>Minimum 60 credits</b>	

**Additional Associate Degrees**

Students may earn additional Associate degrees or certificates within programs through concurrent completion of requirements for two or more degrees, or by continuing study after the first degree has been completed. The requirements for earning additional degrees are as follows:

1. Complete all requirements of each program of study, including general education requirements; and
2. Earn a minimum of fifteen (15) additional credits at the College, beyond credits required for the first and subsequent degrees, excluding Credit by Examination, Credit for Experiential Learning, College Level Examination Program (CLEP), and Transfer Credit.  
Students must be matriculated into both degree programs or degree/certificate programs.

**Mathematics and English Requirements for Graduation**

To earn an Associate degree, students are required to complete successfully one or more college-level Quantitative Reasoning/Mathematics classes and one or more college-level English courses, as specified by the particular program and curriculum to which the student was accepted. Students lacking basic skills, including arithmetic, algebra, writing, and reading skills, may achieve the competencies through developmental courses offered at the College or Adult Basic Education Centers. See Academic Support Services section of this catalog for placement testing information.

**Elective Course Information**

In addition to the required courses in a student's program, there may be elective options. Each program/discipline offers a different set of electives, so please refer to each individual program for specific options. Please see the General Degree Information section of this catalog for Elective Course Information.

### **III. CERTIFICATE REQUIREMENTS**

#### **Professional Certificates**

To earn a diploma or professional certificate from Great Bay Community College, a student must:

- successfully complete at least thirty (30) credits in college-level coursework designed to meet defined competencies in an occupational field (*excluding* remedial or developmental coursework/credits – i.e., those identified as being “for institutional credit only”); the thirty (30) credits must include ten (10) credits of general education coursework;
- earn at least eight (8) credits or 25% of total program credits, whichever is larger, in coursework offered by and under the direct control of the college awarding the degree;
- achieve a Cumulative Grade Point Average (cGPA) of 2.0 or higher in all courses in the diploma or professional certificate program (only) taken at Great Bay Community College.

#### **Certificates**

To earn a Certificate from Great Bay Community College, a student must:

- successfully complete all program credits in college-level coursework designed to meet defined competencies in an occupational field (*excluding* remedial or developmental coursework/credits – i.e., those identified as being “for institutional credit only”);
- earn at least six (6) credits or 25% of total program credits, whichever is larger, in coursework offered by and under the direct control of the college awarding the degree;
- achieve a Cumulative Grade Point Average (CGPA) of 2.0 or higher in all courses in the Certificate program (only) taken at Great Bay Community College.

### **IV. GRADUATION REQUIREMENTS**

1. Matriculation into the program is required prior to graduation.
2. A minimum cumulative grade point average (CGPA) of 2.0 for degrees. All courses taken at the institution will be used to calculate the CGPA.
3. A minimum grade point average (GPA) of 2.0 of courses required in a certificate program. Only those courses required in the Certificate will be used to calculate the GPA.
4. Complete the program of study as identified by each program.

All outstanding monies owed to the College must be paid before the degree or certificate is released. Students are urged to work closely with their academic advisors to ensure they are making satisfactory progress toward fulfillment of graduation requirements.

### **V. STUDENT RIGHTS**

The College shall provide an environment that fosters academic freedom, ensures the integrity of the academic process, and protects the principle of intellectual diversity. The classroom is a forum for exposing students to scholarly viewpoints. Students will be graded not on the basis of their political, religious or ideological beliefs, but on the basis of their reasoned answers and appropriate knowledge of the subjects and disciplines they study, and in accordance with the academic standards set forth in course syllabi. Please refer to the full policy in the Student Handbook.

### **VI. ACADEMIC RECORDS**

#### **Attendance**

Students at Great Bay Community College are responsible for attending all classes, laboratory sessions, internships and clinical/co-op affiliations. Students must recognize that absences interfere with academic success. The instructor is responsible for informing students of the class attendance policy at the beginning of each course.

#### **Auditing Courses**

A student may enroll on an audit basis, subject to individual course attendance requirements and tuition. The student must receive permission from the Vice President of Academic Affairs and department chair or instructor prior to registration. The decision to audit must be made at the

time of registration and cannot be reversed. Audit courses carry no credit toward graduation requirements.

Under the audit policy, students may enroll in courses to learn more about the challenges of college work, explore disciplines of interest, refresh prior learning, or supplement existing knowledge. Typically, the student attends lectures, seminars, and labs, but does not complete graded assignments. When enrolled as an audit, the student will not receive a final grade, nor will credit towards graduation be given for the course. The student's academic transcript will reflect an AU for the course. Students must pay the full tuition for audited courses. Federal Financial Aid does not cover costs of an audited course.

Not all courses may be taken for audit. A student must complete the course registration as an audit during the first week of classes. Once admitted as an audit, the student may not change to credit status after the designated add period. A student registered for credit may not change to audit status after the designated add period.

The Vice President of Academic Affairs may make exceptions to the above.

### **Change of Program**

Please see Change of Major, page 16.

### **Changing Course Content and Prerequisites**

Students are subject to the program requirements in the catalog for the year of matriculation into the program. The College reviews and upgrades the content of programs regularly to assure that each graduate receives current knowledge and training to perform competently in a chosen field. To accomplish this, the College reserves the right to modify course content and prerequisites based on established educational and professional objectives and the needs of students. Please note that students must follow subsequent changes to course prerequisites independent of year of matriculation.

### **Course Prerequisite Waiver**

Students may not waive courses within their programs of study. A course prerequisite may be waived only by the chair of the department in which the course resides.

### **Course Repeat Policy**

For purposes of calculating the cumulative GPA (CGPA), when a student repeats a course at the same CCSNH institution, the grade achieved in the most recent course will be the grade used in the CGPA calculation. All previous grades will remain on the transcript but not used in the calculation. Therefore, courses repeated at a CCSNH college or at any college other than where the original course was taken will NOT be used in the calculation of the CGPA, but may be used for transfer as appropriate.

Third and subsequent attempts to repeat courses will require the approval of the department chair of the program or discipline in which the course resides, in consultation with the instructor. An attempt is defined as any course in which a final grade is issued excluding "W", "WP", "AU", and "CS".

**IMPORTANT NOTE:** Financial aid will cover only one repeat of a course for which the student has earned a passing grade.

### **Grading**

Students are assigned grades based upon evaluations of assigned coursework. Grades are given at the end of each semester and based on criteria listed on an individual instructor's syllabus, and generally include quizzes, tests, and projects, and participation. Standards for grades are listed below. Clinical grades are recorded on a pass/fail basis.

Letter	Numerical Grade	Quality
A	93.33-100.00	4.0

Letter	Numerical Grade	Quality
P	Passing	0.0

A-	90.00-93.32	3.7
B+	86.67-89.99	3.3
B	83.33-86.66	3.0
B-	80.00-83.32	2.7
C+	76.67-79.99	2.3
C	73.33-76.66	2.0
C-	70.00-73.32	1.7
D+	66.67-69.99	1.3
D	63.33-66.66	1.0
D-	60.00-63.32	0.7
F	Below 60.00	0.0

AF	Administrative Failure	0.0
AU	Audit	0.0
CS	Continuing Study	0.0
I	Incomplete	0.0
W	Withdraw	0.0
WP	Withdraw Passing	0.0
WF	Withdraw Failing	0.0

### Explanation of Grades: P, AF, AU, CS, I, W, WP, WF

**P:** Pass (not calculated into GPA)

**AF:** Instructor- or administrator-initiated withdrawal at any time for reasons other than poor grade performance, including failure to meet attendance requirements, as published in the instructor's syllabus, etc. The AF grade may be issued if a student registered in a clinic, practicum, internship or lab is deemed unsafe or performing in an unsatisfactory manner, as determined by an evaluation by a faculty member or agency supervisor, in accordance with department criteria and procedures. Calculated in GPA as an "F."

**AU:** A course taken as an audit does not earn credit and cannot be used to meet graduation requirements. Not all courses can be taken for audit. Students must enroll in courses as auditing at the time of registration.

**CS:** Continuing Study. Instructor-initiated grade that is intended for students who have demonstrated progress and a commitment to succeeding in the course, but who need more time to achieve competencies. "CS" grades can be applied to courses below the 100 level only. Does not affect GPA and does not fulfill prerequisites for college-level courses. Students must reregister and subsequent tuition costs apply.

**I:** Incomplete grade. Indicates that a student has not completed a major course assignment due to extraordinary circumstances. The "I" grade is not used to give an extension of time for a student delinquent in meeting course responsibilities. The "I" grade is not calculated into the GPA. However, all work must be completed by the end of the third week of the following semester or the grade defaults to an "F." See the full Incomplete Grade Policy at the end of this section.

**W:** Student-initiated withdrawal from a course at any time through the 60 percent point of the course. Does not affect GPA. Can be initiated by the instructor if notified by the student of extenuating circumstances in which the student is unable to initiate the process (e.g., catastrophic illness or injury, job transfer to another state).

**WP:** Student-initiated withdrawal from a course after the 60 percent point of the course, and before the final 10 days of the semester; student has a passing grade at time of withdrawal, as determined by the instructor. Does not affect GPA. Can be initiated by the instructor if notified by the student of extenuating circumstances in which the student is unable to initiate the process (e.g. catastrophic illness or injury, job transfer to another state).

**WF:** Student-initiated withdrawal from a course after the 60 percent point of the course, and before the last 10 days of the semester; student has a failing grade at time of withdrawal, as determined by the instructor. Calculates in GPA as an "F." Can be initiated by the instructor if notified by the student of extenuating circumstances in which the student is unable to initiate the process (e.g. catastrophic illness or injury, job transfer to another state).

### **Grade Point Averages**

Scholastic standing at the end of each semester is determined by the grade point average (GPA) that is computed by dividing total quality points (grade equivalent multiplied by credit hours) by total number credit hours attempted. The cumulative grade point average (CGPA) is determined at the end of the second and subsequent semesters by dividing cumulative points by the total credit hours attempted, taking into account all previous work completed. Refer to the Student Handbook for additional information pertaining to calculating GPAs and CGPAs. Only courses taken at the College will be used to calculate the CGPA.

### **Incomplete Grades**

An Incomplete ("I") grade indicates that a student has not completed a major course assignment (usually a final exam or culminating final assessment) due to extraordinary circumstances, such as serious illness, death in the family, etc. The grade is applied only in those instances where the student has a reasonable chance of passing. It is not used to give extensions of time for students delinquent in meeting course responsibilities.

Course assignments for a grade of Incomplete must be completed by the student through formal arrangement with the instructor no later than:

- The end of the third week in the spring semester for a grade issued in the fall semester
- The end of the third week in the fall semester for a grade issued in the summer term
- Three weeks from the earliest start date of the summer term for a grade issued in the spring semester

Should the student fail to complete assignments within the designated period, the final grade will be changed to "F." Exceptions to the above deadlines may be made by the Vice President of Academic Affairs.

"I" grades will not be included in the computation of grade point average. An "I" grade may affect a student's financial aid. Students should contact the Financial Aid Office on their campus for further information.

## **VII. ADDING/DROPPING COURSES**

Before adding or dropping a class or classes, students should consult their Academic Advisor.

### **"Never Attended" Policy**

Refunds are given only when students complete and submit Add/Drop forms (or when eligible students drop via the Student Information System) in accordance with the refund policy, and within established dates for each semester. As a result, students who are reported by instructors as having "Never Attended," for a class during the first two weeks of a semester (or during a prorated time frame for alternative semesters) are administratively withdrawn. Those students remain financially responsible for the classes in which they were enrolled, but receive no grades.

### **Attendance is defined as:**

- Physical attendance in a live or hybrid class.
- Participation in a class assignment in a 100-percent online or hybrid class.

### **Add Policy**

Students are allowed to add classes up to and including the seventh (7th) calendar day of the semester (prorated for alternative semester lengths - see chart below), if space is available. Students who add classes are subject to the full attendance policy and held responsible for all course materials and assignments. Before adding a class, the student should consult with the instructor to determine the extent of make-up work necessary for success in the course. A course may be added after the seventh calendar day of the semester with the permission of the instructor\*.

<b>Alternative Semester Chart</b> (If Day 2, 3, 4, 5, or 7 falls on a weekend or holiday, that day will be the first business day following the weekend or holiday.)	
<b>Semester Length</b>	<b>Add Period</b>
15-16 weeks	Day 1-7
9-14 weeks	Day 1-5
7-8 weeks	Day 1-4
5-6 weeks	Day 1-3
3-4 weeks	Day 1-2
2 weeks or less	Day 1 only

Example: If class started on Thursday, but the semester started on Monday, Day 1 would be that Monday, not Thursday.

### **Exceptions to Add Policy**

1. 100 percent online classes: If the semester or course has started, a student may add a 100 percent online class with the permission of the instructor\* (and advisor if matriculated).
2. Lab Classes: If the semester has started, a student may add a class with a lab component if the first class has not been missed. Once the first class has been missed, the student may add the course with the permission of the instructor\* (and advisor if matriculated). Examples of lab classes include lab sciences, computer technology, information systems technology, and drawing. Final decisions regarding what is considered a lab class rest with Academic Affairs.

*\*The program chair or program coordinator may sign the add form if the instructor is unavailable.*

### **Drop Policy**

A student who officially withdraws from the College or an individual course by the end of the fourteenth (14th) calendar day of the semester will receive a 100 percent refund of tuition, less non-refundable fees. Non-refundable fees include the advanced tuition deposit, application fee, and orientation fee. Students in classes that meet in a format different than the traditional—15-16 week semester may have seven (7) calendar days from the start of the different semester (not class) to withdraw for a full refund. If the seventh (7th) or fourteenth (14th) calendar day falls on a weekend or holiday, the drop refund date will be the first business day following the weekend or holiday. All refunds require the student to complete an official withdrawal form, unless dropping via SIS within the established due date.

Example: A student in a late-start, 12-week class has seven (7) calendar days from Monday (start of the 12-week semester) to drop with 100 percent refund. Because the seventh (7th) day falls on Sunday, the students may drop with 100 percent refund by the next business day after Sunday.

### **Exception to Drop Policy**

Students in courses that meet for two weeks or fewer must drop by the end of the first day of the course to receive a 100 percent refund.

### **When a student officially drops a class:**

1. Up through the 60 percent point of the course, the student will receive a "W" Withdraw grade on his or her transcript.
2. After the 60 percent point of the course, the student will receive "WP" Withdraw Pass or "WF" Withdraw Fail on his or her transcript. The "WP" is not calculated in the GPA. The "WF" is calculated in the GPA as an "F".



### **Academic Amnesty**

A student who attended Great Bay Community College previously and is admitted at a later time may be eligible for Academic Amnesty, which provides for the following:

- A. All grades taken during the student's previous time at the College will no longer be used to calculate the student's new, cumulative GPA. However, grades of C- and above taken during the student's previous time at college will be used to meet course requirements where appropriate, subject to the approval of the Vice President of Academic Affairs.
- B. Even though previous grades will not be used to calculate the new, cumulative GPA, all previous grades will remain on the student's transcript. To be eligible for Academic Amnesty, a student must meet all of the following conditions:
  1. The student has not taken any courses at the College for a period of at least 3 years from last semester of attendance.
  2. The student applies for Academic Amnesty before the start of his or her second semester after readmission.
  3. The student has never before received Academic Amnesty.
  4. The student achieved a cumulative GPA below 1.7 during previous attendance.

### **Withdrawal from the College**

Any student needing to withdraw from the College should fill out a Drop form from the College Services One Stop and check the box "This is a College Withdrawal." Withdrawing students are required to see the Business Office to settle any unpaid balances or arrange for any refunds.

### **Medical Leave Policy**

A matriculated student who, due to a serious medical condition requiring extended, in-patient treatment in a medical facility or ongoing outpatient medical treatment, becomes unable to complete established, academic requirements, or who becomes unable to meet a program's technical standards, or the requirements of the Student Code of Conduct, may apply for a formal Medical Leave of Absence for up to two consecutive semesters.

Students considering a medical leave of absence should be aware that approval of a medical leave does not release a student from financial responsibility to the College. Any student seeking a medical leave of absence as a financial aid recipient should contact the Financial Aid Office to discuss the leave and any consequences that may result in a change in financial aid eligibility.

Students requesting Medical Leave of Absence must:

1. Provide a letter to the Vice President of Academic Affairs indicating program of study, the medical reason for the request, a proposed date on which the medical leave will begin, and a proposed date for readmission, and;
2. Provide the Vice President of Academic Affairs with documentation of the medical condition from a licensed health care professional directly involved in the treatment of the student's condition. The documentation should be substantial to facilitate the decision-making process.

The Vice President of Academic Affairs will notify the student in writing to approve or deny the request and state the conditions for readmission. Students whose medical leave requests are granted will not be required to reapply for admission at the end of the leave period, provided that all conditions for readmission are met.

## **VIII. ACADEMIC PLACEMENT POLICY**

Any student admitted into a degree program at Great Bay Community College will be required to take placement tests in reading, writing, mathematics, and computer skills. The goal of placement testing is to identify areas of strength and weakness so that students are appropriately placed into math, English, and computer courses. Placement testing may also be required for other courses that are impacted by math, writing, reading, and technology competencies. In some cases, placement testing may determine acceptance into a program.

Students who are applying to a certificate program may have testing requirements specific to that certificate. Testing requirements are located in Admissions, Academic Affairs, and the Center for Academic Planning and Support (CAPS) as well as [http://greatbay.edu/sites/default/files/media/certificate\\_accuplacer\\_requirements.pdf](http://greatbay.edu/sites/default/files/media/certificate_accuplacer_requirements.pdf).

Great Bay Community College's placement policy may be waived, in full or part, for those individuals who have met one or more of the following conditions:

<b>ACCUPLACER SECTION</b>	<b>OLD SAT</b> (within 5 years)	<b>NEW SAT</b>	<b>ACT</b> (within 5 years)	<b>AP</b>	<b>College Credit</b>
<b>Reading Comprehension</b>	550 (Critical Reasoning)	30 (Reading)	24 (Reading)	<b>X</b>	Submit transcript for review
<b>Essay</b> *If a student is waived from this section based on test scores, sentence skills is also waived.	8 (Essay)	6 (Analysis <u>AND</u> Writing)	8 (Essay)	3 (ENGLISH)	C or higher in an approved college composition course
<b>Sentence Skills</b> *If a student is waived from the essay based on test scores, sentence skills is also waived.	550 (Writing)	31 (Writing and Language)	24 (English)	<b>X</b>	C or higher in an approved college composition course
<b>Math</b>	550 (145, 150) 600 (170,210, 215)	570 (145, 150) 620 (170, 210, 215)	23 (145, 150) (Mathematics)	3 (Calculus or Statistics)	Submit transcript for review
<b>Computer Skills</b>	Waived with an Associates or Bachelor's degree from an accredited institution of higher education within 5 years				Submit transcript for review

ACCUPLACER\*\* is a computer-based assessment that is adaptive in nature, selecting questions based on prior responses to get the most information in the least amount of time. College advisors will use placement scores along with other important information to develop an academic schedule that is right for each student.

Any student with a documented disability may request appropriate testing accommodations from the Coordinator for Disability Services. Students who are nonnative speakers of the English language may access a variation of the placement test that will determine course placement based on assessed levels of English proficiency. For more information, contact CAPS at 603-427-7621 or greatbaycaps@ccsnh.edu

*\*\*ACCUPLACER is a product of The College Board, a division of the Educational Testing Service (ETS). Please note, recent changes to Accuplacer and SAT tests may result in changes to the above at any time.*

## **IX. ENGLISH DEPARTMENT POLICIES**

### **DEVELOPMENTAL WRITING**

ENGL099G is the developmental writing course designed to build the requisite skills for success in ENGL110G. The prerequisite for placement in ENGL099G is currently a score of 4 on the

Accuplacer essay. As noted in the Academic Placement Policy above, this may be revised as changes to Accuplacer and SAT tests are assessed.

### **COLLEGE COMPOSITION I POLICY**

Students must pass the research component of ENGL110G College Composition I to pass the course.

## **X. COMPLETION OF COURSE CREDITS**

Only courses taken at the College will be used to calculate the CGPA. A matriculated student who presents evidence supporting education in one or more courses applicable to the student's program of study may request that the credits and experiences be evaluated and applied to graduation requirements. Final determination of transferability rests with the Vice President of Academic Affairs. Methods of gaining advanced standing are as follows:

1. Transfer Credit Policy
2. Awarding college credit for military training, experience and course work
3. College Level Examination Program (CLEP)
4. Credit by Examination (Challenge)
5. Credit for Prior Learning Experience (PLA)
6. Advanced Placement (AP) Credit
7. NOCTI (National Occupational Competency Testing Institute)
8. First Year Seminar Equivalency

### **1. Transfer of Credit from Another Institution**

Students may transfer credits earned at other accredited institutions, including various colleges and universities, the Community College of the Air Force, Armed Services Education Experiences as outlined in the Armed Services Evaluation Guide, and USAFI courses, for major coursework required by programs at Great Bay Community College. It is the student's responsibility to furnish the College with official transcripts of academic courses from any institution attended, and a catalog from each institution attended with course descriptions for which transfer credit is sought. Grades of "C" or better in courses judged by the College to be equivalent in nature and content to Great Bay Community College offerings will be accepted. Final determination of transferability rests with the Vice President of Academic Affairs. Students seeking degrees or certificates at Great Bay Community College must fulfill residency requirements. The student must have a minimum of 60 credits to complete a degree, and must complete all required courses for his or her academic program. A student who transfers in three credit math or science courses or ENGL110 College Composition I may need to take additional elective courses to meet the degree credit minimum.

Students with foreign transcripts must submit the following for transfer credit review:

1. Original College Transcript (not Diploma), translated (if not in English), that lists all courses taken, grading system, and grades earned.  
AND
2. Official Course-by-Course Evaluation by a third party agency. Example agencies include, but are not limited to:
  - World Education Services (WES) [www.wes.org](http://www.wes.org)
  - Center for Educational Documentation (CED) [www.cedevaluations.com](http://www.cedevaluations.com)
  - Educational Credential Evaluators (ECE) [www.ece.org](http://www.ece.org)

### **2. Awarding College Credit for Military Training, Experience and Course Work**

Great Bay Community College values and respects the contributions and sacrifice made by our service men and women. This policy recognizes their service and the knowledge, skills, and experience gained while in service to the nation. This policy outlines the process by which military education and training shall be recognized and appropriate credit awarded:

- College credit will be granted to students with military training, experience, or coursework that is recognized by the American Council on Education (ACE).
- Any student seeking credit for military experience will submit a hardcopy of his or her military transcript as soon as possible to the Admission Office for review and evaluation.
- Great Bay Community College will use the American Council on Education (ACE) Guide to the Evaluation of Educational Experiences in the Armed Services to evaluate and award academic credit for military training, experience, and coursework.
- If the course to which the military training, experience, or coursework is equivalent and fulfills a general education or major course or degree program requirement at the receiving institution, the credit should count towards graduation and meet a requirement accordingly. Otherwise, appropriate course credit, including open elective course credit, will be granted.
- Credits earned via military training, experience, and coursework are transferable among the colleges of CCSNH if they meet the degree requirements of programs at the receiving institutions.

### **3. College Level Examination Program (CLEP)**

Students with previous academic experiences in specific subject areas may choose to earn credits by taking the nationally standardized exam known as CLEP. Great Bay Community College is an approved testing site for CLEP, providing examinations in the areas of Composition and Literature, Foreign Languages, Social Sciences, History, Science, and Mathematics. A complete list of the CLEP exams accepted for credit by the College, along with corresponding course names and credits, is available in CAPS (Center for Academic Planning and Support).

Successful completion of a CLEP exam is treated as a transfer credit. Any student completing a CLEP exam must request that CLEP scores be sent to the College for review. The request is made to the College Board and can be done during or after the exam. Acceptance of CLEP exams for transfer credits will be based on the following criteria:

- The student has earned a passing score as defined by the College Board and Great Bay Community College.
- The student has been accepted into a program at the College.
- There is a course within the student's program of study that is equivalent to the CLEP exam.

Although CLEP credits count towards graduation, CLEP scores are not calculated into a student's GPA or interpreted as a grade. Additionally, CLEP credits may not be applied towards the residency requirement of the College. Students may not transfer CLEP credits for a course they have successfully completed, or that is more advanced than the subject of the exam. Any student who fails a Great Bay course and wishes to take a CLEP exam in lieu of retaking the course must realize that the original grade received will remain on his or her transcript and will be counted in the CGPA. The CLEP exam score does not replace a grade for a course at the College. Any student interested in CLEP should speak with an academic advisor. CLEP exams are administered on the computer (CLEP CBT) through the Center for Academic Planning and Support (CAPS). Individuals needing testing accommodations or optional essays must allow a minimum of two weeks prior to testing to process the requests. For more information, contact CAPS: (603) 427-7621.

### **4. Credit by Examination (Challenge Exam)**

Not all courses are appropriate for credit by examination. Individual departments will be responsible for determining if a course is eligible for credit by examination. Credit by examination may be earned only by a matriculated student who, by study, training or experience outside the CCSNH College has acquired skill or knowledge equivalent to that acquired by a student enrolled in The College. A student is eligible for a maximum of sixteen (16) credits through credit by examination. Students shall pay an examination fee as set by the Board.

If the student passes the exam, using criteria developed by the respective department, appropriate credits shall be applied to the student's academic record, and a notation will be

entered on the student's transcript indicating successful completion. Since a traditional grade (A-F) is not entered, the Credit by Exam is not calculated into the student's GPA. If the student fails to pass the exam, no entry is made on the academic transcript but a record of the unsuccessful completion will be maintained in the student's file. A student who does not pass the Credit by Exam will be ineligible for another Credit by Exam in that course.

The student should complete the form available in Academic Affairs and meet with the chair or coordinator of the program to discuss obtaining credit by examination. Final approval must be provided by the Vice President of Academic Affairs. No exam will be issued until all fees are paid and all approvals have been obtained. The date for the exam will be determined by the instructor administering the exam and will take place within 30 days after the date of the instructor's approval.

### **5. Credit for Prior Learning - Experiential Learning**

Credit for Prior Learning offers students an opportunity to demonstrate knowledge gained through life experiences and apply the knowledge towards credit in a degree or certificate program. To prepare for this option, the student must develop a portfolio to be assessed by appropriate college personnel. A student must be matriculated to be eligible to apply for experiential credit. Not all programs provide the experiential credit option, and students should consult with their program chairs. Students may be awarded a maximum of 24 credits for experiential learning.

A request for Credit by Prior Learning should initiate with the chair or coordinator for program in which the student wishes to receive course credit. After initial discussion, the student should submit the appropriate approval form available in the Academic Affairs Office. Upon approval, the student must develop a portfolio that demonstrates achievement of the course objectives and competencies. The portfolio must contain at minimum a cover letter and resume, extensive work experience explanations, letters from employers, certificates of accomplishment, samples of work, and other information deemed appropriate. The responsibility of proof will be on the student requesting evaluation. The completed portfolio is reviewed by an appropriate faculty member, the department chairperson, and the Vice President of Academic Affairs.

### **6. Advanced Placement (AP) Credit**

Transfer credit may be awarded for appropriate, outstanding secondary school work as demonstrated through Advanced Placement (AP) exams. Any student seeking to receive AP credit must request an official AP grade report be sent to Great Bay Community College for evaluation.

### **7. NOCTI**

Course credits may be completed through National Occupational Competency Testing Institute (NOCTI) Assessments, or certain Licensure or Certification Exams recognized by industry. Industries include fields such as business, health, automotive, etc. Final determination of transferability rests with the Vice President of Academic Affairs.

### **8. First Year Seminar Equivalency**

The College offers a course called the First-Year Seminar that is designed to provide specific skills to students to maximize academic performance. The course is required by several programs of study. Credit for this course may be awarded if:

- The student has previously completed an Associate or Bachelor's degree from an accredited college or university, including Great Bay Community College.
- The student attended an accredited college or university other than Great Bay Community College and completed a minimum of 12 credits (excluding developmental and Pass grades) with at least a 2.7 cumulative grade point average.
- The student has eligible transfer credit.

Please Note: There is no equivalency for FYE150G Essential Skills for College Success, unless the student has eligible transfer credit.

## **9. Independent Study for Matriculated Students**

Opportunities for credit-bearing independent study are available to matriculated students wishing to explore areas of a discipline not covered in the normal curriculum but related to the student's program. Independent study is not available to non-matriculated students. Matriculated students must have a minimum CGPA of 2.0 to be eligible for independent study. Typically undertaken for 1-2 credits, an independent study may not be done in lieu of any course existing in Great Bay Community College's catalog. The final approval rests with the Vice President of Academic Affairs.

## **10. Directed Study for Matriculated Students**

Under certain circumstances, a matriculated student may take a course in a semester during which the course is not offered. A directed study allows a matriculated student to pursue the published learning objectives and outcomes for a course independently under the guidance of a qualified faculty member. A matriculated student must have a minimum CGPA of 2.0 to be eligible for a directed study. The student must demonstrate compelling reasons why the course could not be taken in a subsequent semester or was not taken in the semester when it was originally offered. Barring exceptional circumstances, a directed study will not be granted for a course currently being offered. The final approval rests with the Vice President of Academic Affairs.

*Any student who pursues advanced standing in a program via transfer credit, CLEP, AP, Credit by Examination or Credit for Prior Learning, or a combination thereof, must meet the College's residency requirement.*

## **XI. RESIDENCY REQUIREMENT**

To establish residency in an institution, the following is required:

1. For an Associate Degree, a minimum of sixteen (16) semester credits must be completed either as a full-time student, a continuing education division student, or a combination of each from credit courses offered directly by and under the full control of the institution concerned. At least eight (8) credits must be taken in advanced level courses in the student's major.
2. For a Diploma or Professional Certificate, a student must complete at least nine (9) credits or 25 percent of the credits, whichever is larger, required for the Diploma or Professional Certificate at the institution from which it is awarded. Whichever is larger required for the Certificate at the institution from which it is awarded.
3. For a Certificate, a student must complete at least 6 credits or 25 percent of the credits, whichever is larger, required for the Certificate at the institution from which it is awarded.

## **XII. TRANSFER TO OTHER INSTITUTIONS**

Transfer policies vary from institution to institution. When transfer to another institution is sought, the number of transfer credits granted for courses completed at Great Bay Community College is determined by the institution to which the student transfers.

### **Transcripts**

Requests for transcripts must be made in writing to the college Registrar or made via the Student Information System at the appropriate CCSNH College(s). Transcripts for courses taken among the CCSNH colleges by matriculated students will be sent automatically at the end of each semester to the student's home CCSNH College.

There is no transcript fee or transcript fax fee. No official transcript will be furnished until financial obligations to the appropriate CCSNH College(s) have been satisfied. Students in default of any CCSNH managed student loan payments or students that have a past due balance at any CCSNH College may view the transcript in the Registrar's office on request or may receive an unofficial transcript copy if they are incapable of inspecting the transcript in person.

In accordance with FERPA regulations, if a student has a hold on an account because of outstanding financial obligations, the student will be able to view the final grades at the

conclusion of the semester through the Student Information System (SIS). However, the student will be unable to view his or her entire transcript on SIS, and may view the entire transcript in the Registrar's office on request or request an unofficial transcript. No official transcript will be released until all outstanding financial obligations are resolved.

### XIII. ACADEMIC HONOR CLASSIFICATIONS

**President's List:** Any student enrolled in a degree program carrying a minimum of 12 semester credits and earning a grade point average of 3.70 or higher for a given semester will be placed on the President's List for that semester.

**Vice President's List:** Any student enrolled in a degree program carrying a minimum of 12 semester credits and earning a grade point average of 3.30 – 3.69 for a given semester will be placed on the Vice President's List for that semester.

**Graduation Honor:** Students who graduate within the appropriate range of cumulative grade point averages are designated with the honor list.

3.30 – 3.59	Cum Laude (with Honors)
3.60 – 3.89	Magna Cum Laude (with High Honors)
3.90 – 4.00	Summa Cum Laude (with Highest Honors)

### XIV. ACADEMIC STANDING CLASSIFICATIONS

**Academic Standards:** Students falling below the following standards will be designated as not meeting satisfactory academic progress. Failure to meet satisfactory progress will result in either Academic Probation or Academic Suspension. Calculation of Cumulative Grade Point Average (CGPA) will be based on all courses taken at the institution, including developmental or remedial courses.

Grade	Counts as Accumulated for Academic Standing (Counted in GPA):
Letter Grades A-F	Yes
WF	Yes
AF	Yes

**Academic Probation Definition:** Academic probation is a warning that indicates the student may not be on track to graduate due to poor academic performance. The student may remain in the program, and the student's academic progress will be monitored. Students not meeting the criteria below will be placed on Academic Probation:

0-13 Accumulated GPA credit hours:	1.50 CGPA
14-27 Accumulated GPA credit hours:	1.70 CGPA
28-40 Accumulated GPA credit hours:	1.80 CGPA
41+ Accumulated GPA credit hours:	2.00 CGPA

**Note:** *Financial Aid may be in jeopardy if a student fails to achieve satisfactory academic progress as defined above.*

**Academic Suspension Definition:** Students who remain on Academic Probation for three consecutive semesters will be placed on Academic Suspension.

**or**

Students not meeting the criteria below will be put on Academic Suspension:

0-13 Accumulated GPA credit hours:	0.50 CGPA
14-27 Accumulated GPA credit hours:	1.10 CGPA
28-40 Accumulated GPA credit hours:	1.25 CGPA
41+ Accumulated GPA credit hours:	1.50 CGPA

A student who is placed on Academic Suspension may no longer remain in the program and may not apply for readmission for a minimum of one semester, unless approved through the College Suspension Recovery Program.

### **Suspension Recovery Program**

Any student who receives a letter of Academic Suspension has three options.

1. The student may stop-out (stop attending) the College for one or more semesters and reapply after a minimum of one semester.
2. The student may take Liberal Arts classes as a non-matriculated student (not admitted to a degree or certificate program), and reapply to a program after a minimum of one semester.
3. Students may enroll in the College's Suspension Recovery Program through a Continued Participation Agreement (CPA). The CPA option allows the student to continue matriculation in a degree program on a contractual basis. Enrollment in CPA has no bearing on a student's eligibility for Financial Aid. The process for enrolling in CPA will be outlined in the Academic Suspension letter to the student.

### **Program Suspension**

Some programs have program and grade requirements that supersede academic standing classifications, including: Nursing, Massage Therapy, Surgical Technology, and Veterinary Technology. Failure to achieve program and grade requirements may result in Program Suspension. Each program provides an individual appeal process and has specific policies and procedures for readmission. For more information, please see individual programs. Students suspended from programs are ineligible for the Suspension Recovery Program.

### **Grade Appeal Policy**

Any appeal of a grade must be initiated by the student with the instructor before an ensuing semester has elapsed. In most instances, a grade may be changed only by the instructor of a course. The Vice President for Academic Affairs may alter a student's grade in a case of obvious computational error or blatant abuse of the grading prerogative.\*

Any student who believes he or she has reasonable grounds for a grade appeal must use the following process to submit the appeal:

1. Meet with the instructor. The student shall contact the faculty member and schedule a meeting to discuss the grade appeal and attempt to resolve the conflict. The faculty member and student will meet within the next five (5) work days. \*\*
2. Meet with the program director or department chair. If the issue was not resolved in Step 1, the student has three (3) work days from the date of the faculty member's decision to file a written appeal with the faculty member's program or department chair, or with the Vice President of Academic Affairs (VPAA) if the faculty member is also the department chair or program director. Within three (3) work days the department chair (or VPAA) will mediate the dispute through discussion with the instructor, or with the student in the company of the instructor. If no resolution is reached, proceed to step 3.
3. File a written appeal with the Vice President of Academic Affairs (VPAA). If the issue is not resolved in Step 1, the student has three (3) work days to file a written appeal with the VPAA. The letter of appeal must include the student's name and contact information, the course name and number, the semester in which the course was taken, the student's grade, the name of the instructor issuing the grade, and specific evidence of obvious computational error or blatant abuse of the grading prerogative.\* The VPAA will have ten (10) work days from receipt of the written appeal to render a decision. The decision of the VPAA is final.

*\*Note that "blatant abuse of the grading prerogative" refers to situations in which an instructor has willfully ignored published grading and assessment criteria and/or has exhibited bad faith by acting in violation of published performance/behavior standards for faculty.*



*\*\*There are times, especially during the summer, that the schedules of the faculty member, the department chair, and Vice President are incompatible with the timeframes specified above. A student who has been unsuccessful in attempting to reach the faculty member may contact the Academic Affairs office directly. A representative of the Academic Affairs office will make every attempt to arrange the required meeting with the instructor and department chair within the five (5) days indicated in Step 1. Students are advised, however, that arrangement may not be possible in all cases.*

### **Academic Warning**

The instructor may give a student an academic warning at any time if the student is failing or in danger of failing a course.

## **XV. ACADEMIC HONESTY**

Meaningful learning occurs in an environment of intellectual honesty. As future professionals, students have a responsibility to themselves and society to conduct their academic studies with integrity. Great Bay Community College will not allow plagiarism or cheating, and will create an environment in which intellectual curiosity and honesty are valued.

Refer to the Student Handbook for definitions of cheating and plagiarism. Instructors are empowered to impose sanctions as outlined in the Student Handbook. Violations will be referred to the Academic Affairs office.

## **XVI. ACADEMIC PRIVACY**

All records shall be maintained in accordance with the Family Education Rights and Privacy Act and shall be kept in fireproof files.

**Family Education Rights and Privacy Act (FERPA)** In compliance with the Family Rights and Privacy Act of 1974 (The Buckley Amendment), it is the policy of The College to protect the educational/academic records of its learners, former learners, and alumni. All personally identifiable information in a learner's educational record is considered confidential. FERPA rights apply at the point of matriculation or registration, regardless of minor status. The identifying status is the process which makes the individual a student at this college.

The federal law includes provisions for disclosure of Directory Information by educational institutions. The College considers the following to be Directory Information: Name, address, email address (college), telephone number, major field of study, dates of attendance, enrollment status (e.g. full-time or part-time), and degrees/honors/awards. **IF YOU DO NOT WISH DISCLOSURE OF ANY OR ALL OF THE CATEGORIES OF IDENTIFIABLE DIRECTORY INFORMATION, YOU MUST NOTIFY THE REGISTRAR IN WRITING PRIOR TO THE CLOSE OF THE LAST DAY TO ADD.**

Please consider very carefully the consequences of any decision by you to withhold any category of general Directory Information. Should you decide not to release general Directory Information, any future requests for such information from non-institutional persons or organizations will be refused, except as provided by law.

The College will honor your request to withhold general Directory Information, but cannot assume responsibility to get in touch with you for subsequent permission to release it. Regardless of the effect upon you, The College assumes no liability for honoring your instructions that such information be withheld.

Copies of the Family Educational Rights and Privacy Act of 1974, Part 99 of Title 45, dealing with Privacy Rights of Parents and Students, may be obtained from the Vice President of Student Affairs or the Office of the Vice President of Academic Affairs.

## **Student Records**

- A. Students have the right to review the contents of their records. Students will be given access to their own records within a reasonable period of time, but in no case shall access be withheld for more than 45 days after the request has been made. The Registrar is authorized to release this information. Students wishing access to their records must contact the Registrar personally. In cases involving the possibility of misinterpretation of data, the Vice President of Academic Affairs or his/her qualified designee shall interpret the data to the student.
- B. Students shall have the opportunity for a hearing to challenge the contents of their college records to ensure that they are not inaccurate, misleading, or in violation of their privacy or rights. This challenge must be made in writing to the Vice President of Academic Affairs.
- C. Students may authorize the release of their records to intended persons or institutions by completing the Authorization to Release Records form. No access or release of any personally identifiable records or files on students will be allowed to any individual, agency or organization without prior written consent of the student, except as follows:
  1. To internal and external officials directly involved with a legitimate educational interest.
  2. To authorize Federal and State officers as identified in Section 438 (b) 3) of Public Law 93- 380.

## **XVII. IMMUNIZATION POLICY**

Students, regardless of age, who are accepted into a CCSNH program requiring participation in a clinic, practicum, internship, co-op, or field experience, or students who participate in inter-collegiate athletics, must present documented proof of immunization against measles, mumps, rubella, tuberculin skin infection and tetanus before participation can be approved. Individual colleges may include additional groups or constituencies at their discretion. Records will be maintained by the department requiring immunization documentation, or by another office or individual deemed appropriate by The College. See individual programs requirements.

## **XVIII. INFORMATION TECHNOLOGY ACCEPTABLE USE**

### **I. Policy Statement**

Information technology resources are used by individual employees, students, and other persons affiliated with the Community College System of New Hampshire (CCSNH) and its Colleges. These resources are to be used for educational and business purposes in serving the interests of CCSNH and its Colleges. Misuse of information technology resources poses legal, privacy and security risks and therefore it is important for all users to understand the appropriate and acceptable use of such resources. Effective security and protection is a team effort. It is the responsibility of every user to know this policy, the standards contained herein, and to conduct their activities accordingly.

### **II. Policy Purpose**

This policy establishes the proper use of CCSNH information technology resources and makes IT Users aware of what CCSNH deems as acceptable and unacceptable use.

### **III. Scope of Policy**

This policy applies to employees, students and any other person who has access to CCSNH information technology resources including computers, email, Internet, social media, the network and any other CCSNH information technology or storage system (collectively "IT Users"). All IT Users are responsible for exercising good judgment regarding appropriate use of information, electronic devices, and network resources in accordance with CCSNH policy and standards.

#### **IV. Privacy**

CCSNH reserves the right to monitor, duplicate, record, and/or log all use of CCSNH technology resources with or without notice. This includes, but is not limited to, email, Internet access, file access, logins, and/or changes to access levels. **IT Users shall have no expectation of privacy in the use of CCSNH technology resources.**

#### **V. General Use, Access and Ownership**

5.1 CCSNH Information Assets stored on electronic and computing devices, whether owned or leased by CCSNH, employees, students, or a third-party, remain the property of CCSNH. Computer and telecommunication equipment, software, operating systems, storage media, Intranet, network accounts providing electronic mail, Internet access and browsing, and related network systems, are the property of CCSNH. These systems are to be used for educational and business purposes serving the interests of CCSNH and its Colleges.

##### **Access to CCSNH technology resources is a privilege, not a right.**

5.2 CCSNH technology resources include, but are not limited to, computers, equipment, email, Wifi, Internet access and browsing, Intranet, social media, telecommunications and network services, video network services, web services, software, applications, printing and scanning services, and user and technical support provided by Information Technology Staff. Accepting access to any CCSNH technology resource carries an associated expectation of responsible and acceptable use. Failure to meet the standards set forth herein or constitutes a violation of this policy and may result in disciplinary action up to and including termination or denial of access, termination of employment or, for students, dismissal from the College.

5.3 IT Users may access, use and share CCSNH Information Assets only to the extent and for such purposes that access is authorized. This policy expressly prohibits accessing or attempting to obtain unauthorized access, supplying false or misleading information to access, and circumventing user authentication or security of any host, network or account. IT Users are prohibited from accessing data not intended for the IT User, logging into a server or account without express authorization, and probing the security of systems or networks without express authorization.

5.4 An IT User's access to technology is not transferable. Access privileges may not be shared with any other person.

5.5 IT Users have a responsibility to promptly report the theft, loss or unauthorized disclosure of CCSNH Information Assets.

5.6 CCSNH reserves the right to immediately, and without prior notice, disconnect any system or terminate any user access to protect the security of CCSNH technology resources, CCSNH Information Assets, and CCSNH IT Users.

#### **VI. Password Security and Protection**

6.1 Passwords are a critical component of information security. Passwords serve to protect user accounts; however, a poorly constructed password may result in the compromise of individual systems, data, or the network. CCSNH has established the following standards for password security and protection.

- 6.2 IT Users should create passwords that:
- Contain at least 12 alphanumeric characters.
  - Contain both upper and lower case letters.
  - Contain at least one number (for example, 0-9).
  - Contain at least one special character (for example, !\$%^&\*()\_+|~- =\`{}[]:"';'<>?,/)
- 6.3 IT Users should not create passwords that:
- Contain fewer than eight characters.
  - Can be found in a dictionary, including foreign language, or exist in a language slang, dialect, or jargon.
  - Contain personal information such as birthdates, addresses, phone numbers, or names of family members, pets, friends, and fantasy characters.
  - Contain work-related information such as building names, system commands, sites, companies, hardware, or software.
  - Contain number patterns such as aaabbb, qwerty, zyxwvuts, or 123321.
  - Contain common words spelled backward, or preceded or followed by a number (for example, terces, secret1 or 1secret).
  - Are some version of "Welcome123" "Password123" "Changeme123"
- 6.4 IT Users should not write passwords down or store them anywhere in their office or in a file on a computer system or mobile devices (phone, tablet) without encryption. Instead, IT Users should create passwords that can be remembered easily. One way to do this is to create a password based on a song title, affirmation, or other phrase. For example, the phrase, "This May Be One Way To Remember" could become the password TmB1w2R! or another variation.
- 6.5 All system-level passwords (for example: root, enable, NT admin, application administration accounts, and so on) must be changed on at least a quarterly basis.
- 6.6 All user-level passwords (for example: email, web, desktop computer, and so on) must be changed at least every six months. The recommended change interval is every four months.
- 6.7 Passwords must not be shared with anyone, including administrative assistants, secretaries, managers, co-workers, and family members. All passwords are to be treated as sensitive, confidential CCSNH information.
- 6.8 Passwords must not be inserted into email messages or other forms of electronic communication or saved using the "Remember Password" feature of applications (for example, Internet browsers).
- 6.9 Any IT User suspecting that his/her password may have been compromised must report the incident and change all passwords.

## **VII. Unacceptable Use**

### **7.1 System and Network Activities**

The following activities are strictly prohibited:

- 7.1.1 Connecting computers or other devices directly to the CCSNH network that have not been registered with, or approved by, CCSNH.
- 7.1.2 Installing software or hardware on or modifying the software or hardware configuration of a CCSNH-owned IT asset without appropriate authorization from CCSNH Chief Information Officer.

- 7.1.3 Violations of the rights of any person or company protected by copyright, trade secret, patent or other intellectual property, or similar laws or regulations, including but not limited to, the installation or distribution of "pirated" or other software products that are not appropriately licensed for use by CCSNH.
- 7.1.4 Unauthorized copying of copyrighted material including, but not limited to, digitization and distribution of photographs from magazines, books or other copyrighted sources, copyrighted music, and the installation of any copyrighted software for which CCSNH or the end user does not have an active license is strictly prohibited.
- 7.1.5 Violation of federal, state or local laws and regulations regarding access and use of information resources (*e.g.*, Family Education Rights and Privacy Act, Gramm-Leach-Bliley Act, Computer Fraud and Abuse Act, code of professional conduct, etc.).
- 7.1.6 Except for Internet browsing, accessing data, a server or an account for any purpose other than CCSNH educational or business purposes, even if access is otherwise authorized, is prohibited.
- 7.1.7 Exporting software, technical information, encryption software or technology, in violation of international or regional export control laws, is illegal. The appropriate CCSNH official should be consulted prior to export of any material that is in question.
- 7.1.8 Introduction of malicious programs into the network or server (*e.g.*, viruses, worms, Trojan horses, email bombs, etc.)
- 7.1.9 Using a CCSNH technology resource to actively engage in procuring or transmitting material that is in violation of sexual harassment or hostile workplace laws and policies.
- 7.1.10 Effecting security breaches or disruptions of network communication. Security breaches include, but are not limited to, accessing data that the IT User is not an intended recipient of or logging into a server or account that the IT User is not expressly authorized to access. For purposes of this section, disruption includes, but is not limited to, network sniffing, pinged floods, packet spoofing, denial of service, and forged routing information for malicious purposes.
- 7.1.11 Using any kind of program, script, or command designed to interfere with a user's computer or network session or collect, use or distribute another user's personal information.
- 7.1.12 Port scanning, security scanning and executing any form of network monitoring that will intercept data not intended for the IT User's host.
- 7.1.13 Circumventing user authentication or security of any host, network or account.
- 7.1.14 Introducing honeypots, honeynets, or similar technology on the CCSNH network.
- 7.1.15 Interfering with or denying service to any user other than the IT User's host (for example, denial of service attack).
- 7.1.16 Providing information about, or lists of, CCSNH employees or students except as expressly authorized.

## 7.2 Email and Communication Activities

CCSNH faculty and staff must use their assigned CCSNH email address for all email communication to students and other official business of CCSNH and its Colleges. CCSNH faculty and staff shall not forward CCSNH email to personal email addresses.

When using CCSNH technology resources to access and use the Internet, users must realize that their communications may be viewed as representing CCSNH unless they clearly indicate otherwise.

The following activities are strictly prohibited:

- 7.2.1 Sending unsolicited email messages including sending “junk mail,” chain letters, Ponzi or other pyramid schemes of any type, or other inappropriate use of email distribution lists.
- 7.2.2 Any form of harassment via email, telephone or texting, whether through language, frequency, or size of messages.
- 7.2.3 Unauthorized use, or forging, of email header information.
- 7.2.4 Unauthorized use of CCSNH and its Colleges registered Internet domain names.
- 7.2.5 Solicitation of email for any other email address, other than that of the sender’s account with the intent to harass or to collect replies.

### 7.3 Blogging and Social Media

- 7.3.1 CCSNH employees who engage in blogging or use social media, whether using CCSNH’s technology resources or personal computer systems, should at all times be accurate, should exercise appropriate restraint, should show respect for the opinion of others, and should make every effort to indicate when the CCSNH employee is and is not an institutional spokesperson.
- 7.3.2 When an employee is expressing his or her beliefs and/or opinions in blogs or social media, the employee may not, expressly or implicitly, represent themselves as a representative of CCSNH or its Colleges.
- 7.3.3 The name, seal, images and other insignia of CCSNH or any of CCSNH’s Colleges shall not be used without the express written permission of CCSNH.
- 7.3.4 CCSNH hosted web pages and blogs are not to be used for activities unrelated to the business purposes or educational mission of CCSNH or its Colleges without prior written authorization.
- 7.3.5 CCSNH IT Users are prohibited from revealing any CCSNH confidential or proprietary information, trade secrets or any other Restricted Internal, Confidential or Private Information when engaged in blogging or use of social media.

## **XIX. SERVICE LEARNING**

Service learning combines community service with academic instruction. Students enrolled in courses with a service-learning component as part of the academic experience are guided through a critical analysis of what they observe in the field and what is presented in class.

The service-learning approach enhances the breadth and depth of student learning in at least three domains:

- Academics and higher order cognitive skills
- Life skills
- Sense of civic responsibility and ability to be an effective member of the communities where they will reside after graduation.

The service-learning program focuses on promoting service learning as an effective teaching strategy within the existing curricula of The College. Course learning outcomes are the basis for integrating projects that serve The College or the community at large. In order to preserve the

academic integrity of a service learning opportunity, students are not graded on simply, "putting in hours". Rather, they are graded on specific assignments and projects that demonstrate learning from the service-learning experience. Some courses provide built-in, experiential projects; others require students to identify their own projects. Service-learning activities have been demonstrated as positive learning experiences for both students and faculty. Courses with required, service-learning components are labeled SL in the semester course scheduler.

# Academic Support Services

## I. CENTER FOR ACADEMIC PLANNING AND SUPPORT

Academic planning and support services are available to both student and community members through the Center for Academic Planning and Support (CAPS). Services include: peer and professional tutoring; web-based instruction; workshops; disability, single parent, gender equity, and ELL (English Language Learner) support services; international student advising; and academic coaching and assessment. In addition, the Center maintains a computer lab, study/tutoring space, a computer training room, assistive technology station, and testing rooms. Students are encouraged to visit CAPS during their first week of classes to familiarize themselves with the services and staff. CAPS services are free of charge to students enrolled in credit-bearing courses. Community members may access the Center and its services through the purchase of a Community Access Card.

<b>Hours of Operation*:</b>	
Monday - Wednesday	8:00am to 6:00pm
Thursday	8:00am to 7:00pm
Friday	8:00am to 4:00pm
<i>*Hours may vary when classes are not in session. Updated hours are posted throughout the Center and on the CAPS webpages.</i>	
Rochester hours are 8 AM-7 PM Monday-Thursday, 8 AM-4 PM Friday, and 8 AM-1:30 PM alternating Saturdays.	

For more information about any CAPS service, or to receive a brochure, email CAPS at [greatbaycaps@ccsnh.edu](mailto:greatbaycaps@ccsnh.edu), visit the website at [www.greatbay.edu/caps](http://www.greatbay.edu/caps), call 603-427-7715, or drop in during open hours. CAPS is located in Room 210 in Portsmouth, and services may be accessed through Jenna Anand in Rochester.

### Academic Counseling/Coaching

CAPS counselors in Portsmouth and Rochester work with students at any point in their program in developing academic skills and strategies, as well as organizational and other life management techniques. Specialty advising is available in the areas described below, and students may work collaboratively with faculty and CAPS counselors around these topics. When appropriate, students are referred to outside agencies for further assistance. Students referred to CAPS through an Academic Alert Form from a faculty or staff member will be contacted to receive these services.

### Tutoring Services

Both peer and professional tutors are available in many subject areas to help students gain greater knowledge/confidence in their learning strategies; develop organizational skills; and complete assignments more successfully. Tutoring options include: Drop-In Centers for Math and Writing; one-to-one tutoring; small group tutoring; as well as multimedia, web-based tutorials and software applications. Schedules for tutoring on the Portsmouth and Rochester campuses are posted each semester in CAPS and on the website at [www.greatbay.edu/tutoring](http://www.greatbay.edu/tutoring). Services are free of charge for GBCB students taking credit-bearing courses. The tutor program trains and certifies its tutors via the College Reading & Learning Association (CRLA) international standards. For more information about receiving tutoring or becoming a tutor, contact the Coordinator of Tutoring and College Readiness Services.

### College Readiness Services

Students who are transitioning to college from GED or adult education programs, or who have been away from school for prolonged periods, may access CAPS support in developing college readiness skills. Specialized assistance is provided in getting connected with college resources, and improving skills for success and confidence in the classroom. For more information, contact the Coordinator of Tutoring and College Readiness Services.



## **Disabilities Support Services**

Community College System of New Hampshire (CCSNH) Disabilities Services Mission Statement: It is the mission of CCSNH Disabilities Services to provide equal educational access, opportunities, and experiences to all qualified students with documented disabilities who register with the college's Disabilities Services Office. Reasonable accommodations are provided to students to allow them to achieve at a level limited only by their abilities and not by their disabilities. Assistance is provided in a collaborative way to help students develop strong and effective independent learning and self-advocacy skills, as they assume responsibility for reaching their academic goals.

In compliance with Section 504 of the 1973 Rehabilitation Act and the Americans with Disabilities Act of 1990, the College does not discriminate against students with disabilities in terms of program admission and/or opportunities for academic success. Students are entitled to equal access to programs and services for which they are otherwise qualified.

Although students are not obliged to disclose their disability, in doing so they become eligible to receive support services that promote retention and success. As each student's needs are unique, the provision of services is designed individually each semester. Reasonable accommodations are determined by the nature of the disability, requirements of the curriculum and specific classes, and timeliness of the request.

To access services students must provide recent documentation of their disability to the Coordinator of Disability Support Services. All information is kept confidential. **For more information or to schedule an appointment, contact the Coordinator of Disability Services or visit our website at <http://greatbay.edu/student-services/academic-support/disability-services> .**

Additional support is available to students with documented disabilities in career and technical programs through the Carl D. Perkins Vocational Educational Grant, and may include financial scholarships as well as coaching. For more information, contact the Student Success Mentor at (603) 427-7724.

**Grievance Policies and Procedures Appeal Process for a Student Denied Disability Services:** Students denied disability services may submit a written appeal of the decision. Appeals should be sent to the Director of the Center for Academic Planning and Support (CAPS) and to the Vice President of Academic Affairs (VPAA) within ten (10) working days of receipt of the decision from the Disabilities Counselor. The Director and VPAA will research the appeal and provide a decision to the student within ten (10) working days of receipt of the appeal letter.

If the student does not agree with the decision of the Director of CAPS and the Vice President of Academic Affairs, the student may submit a written appeal to the President of Great Bay Community College. The original documentation and recommendation of the Disabilities Counselor will be reviewed by the President (or designee), who will communicate his/her decision in writing within fifteen (15) working days of receipt of the written appeal. The student may then appeal this decision to the Chancellor of the Community College System of New Hampshire, if desired. Inquiries may also be directed to the US Department of Education, Office of Civil Rights, 8<sup>th</sup> Floor, 5 Post Office Square, Boston, MA 02109-3921; (617) 289-0111; TDD: (800) 877-8339; email: OCR.Boston@ed.gov.

## **English Language Learners (ELL) and International Student Services**

ELL and international students receive specialized academic support and advising services, which include: skill development in oral and written communication, reading, study skills, test preparation, tutoring, and more. Other supports include advising regarding immigration status, employment eligibility, health insurance, taxes, travel, and legal referral. Students are encouraged to participate in the International Club to promote social growth and cross-cultural understanding. For more information, contact the Diversity Programming Coordinator in CAPS.

### **Gender equity/Nontraditional fields of study**

Nontraditional fields of study are occupations or fields of work in which individuals from one gender comprises less than 25 percent of the total number. Examples include computer science, criminal justice, and several other emerging high skill occupations. Support, resources and scholarships may be available for students studying in nontraditional fields. For information regarding these services and which programs are considered to be nontraditional, please contact the Student Success Mentor in CAPS.

### **Project Success**

Project Success is a program designed to provide personal and academic support, and community access to needed services for single parents, displaced homemakers, and single pregnant women enrolled in career and technical programs at Great Bay Community College. Funded by the Carl D. Perkins Vocational Educational Grant, eligible students may receive funds to help with books, and/or tuition. For more information regarding the application process, contact the Student Success Mentor at 603-427-7724.

### **Testing**

CAPS provides a range of testing services which include, but are not limited to, proctored exams for distance learners, alternative testing services for faculty, student assessments for academic and career purposes, CLEP exams, and placement testing for new students. CLEP exams and placement testing (ACCUPLACER) are both described in more detail under Academic Policies. See page 44 for CLEP and page 42 for Accuplacer.

### **Workshops**

The Center for Academic Planning and Support works collaboratively with other departments throughout the college and outside partners to offer non-credit workshops in a variety of subjects relevant to students and faculty. Dates and times are posted in the college events calendar and/or through promotional materials. Community members may attend workshops for a fee or by purchasing a Community Access Card.

## **II. ACADEMIC ADVISING**

The goal of academic advising at Great Bay Community College is to assist students in creating academic plans that will help them achieve their educational goals with temporal and financial efficiency. This is done using a process in which the student and the advisor work collaboratively to set individual objectives for the student's college experience. Whether the goal is to earn a degree, certificate, transfer to another institution, or just take a few classes, the advisor will assist in developing a plan to achieve the goal.

### **The Advising and Transfer Center**

The Advising and Transfer Center is staffed by professional advisors **on both the Portsmouth and Rochester campuses**. They work with all students who are new to the college, regardless of major\*, to select classes for their first semester. In subsequent semesters, the advisors work with a variety of majors including Liberal Arts and non-matriculated students. Other students are advised by the program faculty in the specific discipline. A complete list of faculty advisors can be found in the Advising and Transfer Center or online at <http://greatbay.edu/student-services/advising-center>. All students, regardless of major, should feel welcome to contact the Advising and Transfer Center with any academic advising, or transfer, questions or concerns.

\*First semester Nursing students are advised by faculty advisors.

## **III. TRANSFER ADVISING**

Advising services include assistance with exploring colleges for transfer, the transfer application process and course selection based on future transfer goals.

As a comprehensive community college, Great Bay Community College develops partnerships to enable seamless transfer to baccalaureate colleges and universities across the state and beyond. Some of these colleges and universities include:

- Berklee College of Music
- Franklin Pierce University
- Granite State College
- Keene State College
- Maine College of Art
- New England College
- New Hampshire Institute of Art
- Plymouth State University
- Rivier University
- Southern New Hampshire University
- University of New England
- University of Massachusetts Lowell
- University of New Hampshire Durham
- University of New Hampshire Manchester

### **New Hampshire Transfer Connections Program**

Students who originally applied and were not accepted to University System of New Hampshire (USNH) schools (UNH, UNH-Manchester, Plymouth State, Keene State, or Granite State College) can enroll full-time for a year at Great Bay Community College, complete 24 credits in English, math and specific electives, earn a C or better in all college level courses and an overall GPA of 2.8 or better, and be automatically accepted into the University System of New Hampshire institution where they originally applied with no fees or reapplication. Additionally, students who never applied to a USNH school may opt in to the program. Visit [www.nhtransfer.org](http://www.nhtransfer.org) for more information.

### **New Hampshire Dual Admission Program**

The dual admission program is an agreement between the Community College System of NH and the University System of NH that allows students to complete their associate degree at a CCSNH institution and then transition to an institution within the University System to complete their bachelor degree. Admission to a specific program is dependent upon meeting that program's individual requirements. For more information please visit [www.dualnh.com](http://www.dualnh.com)

Seamless transfer programs (articulation agreements) have been developed with the University of New Hampshire to guarantee transfer into the following colleges:

- The College of Life Sciences and Agriculture
- The College of Engineering and Physical Science
- The Peter T. Paul College of Business and Economics

### **SNHU Dual Admission Program**

Great Bay Community College (GBCC) and Southern New Hampshire University (SNHU) have developed a transfer agreement that allows students who have completed an associate degree program at Great Bay Community College to automatically transfer to SNHU to complete their bachelor degree. Participation in this dual admission agreement can take place at the time of the student's acceptance or any time prior to graduation from Great Bay Community College. All academic course work in which a student has earned a 2.0 cumulative grade point average (CGPA) or grade of C or higher in individual courses is fully transferable.

For more information on these and other transfer opportunities please contact the Advising and Transfer Center: [greatbayadvising@ccsnh.edu](mailto:greatbayadvising@ccsnh.edu) or 603-427-7728.

## **IV. LIBRARY**

The Library supports the teaching and learning activities of Great Bay Community College and provides informational services for New Hampshire residents. A full range of library services is available, including: circulation of our 10,000 + volume library for browsing and research, remote access to information provided by 64 journal databases and over 180,000 electronic books, instructor reserves, research/ reference support, information literacy training, photocopying, information via free access to the Internet and interlibrary loan.

### **Hours and Locations**

The Library is open Monday through Thursday from 8 am to 6 pm, and on Friday from 8 am to 4 pm. Hours may change during holidays and summer. Please call the Library for current hours.

### **Reference Help**

Librarians have professional expertise in helping students find and use information. Librarians are familiar with library assignments handed out in classes and also offer instruction in the print and electronic research process. Students can access assistance at the Library circulation desk, by phone, or via email. Questions can be e-mailed to [reference@ccsnh.edu](mailto:reference@ccsnh.edu).

### **Online Access**

Using Library workstations or their own computers, students can access the online catalog, locate full-text periodical articles, search electronic reference sources, access entire e-books, or search the Internet. Begin at the Library home page [greatbay.edu/library](http://greatbay.edu/library). Only current students can access electronic resources from off campus, using their EZ Login username and password. Call the Library for further assistance in remote use.

### **Academic Programs Material**

Library materials include: reference resources, circulating books; electronic books; online full-text databases of periodicals and reference materials, and a wide variety of audiovisual materials such as videos, DVDs, and CDs. All media materials and the equipment to use them are available for use in the Library. In addition, there is a reserve collection of materials, placed on reserve by instructors for specific classes.

Reserves may be in print or audiovisual format. From Library workstations, students can also access their online course(s), web email, and the Internet. Thousands of periodicals and newspapers are available online. Many online databases offer the full text of periodical articles that students may print, download, or send via email. Librarians can show students how to use these resources.

### **Printing & Copying**

Great Bay Community College uses a print management solution called PaperCut for network printing from college computers. Every student is given a \$40 initial credit for printing and/or copying (scanning to a USB Thumb Drive is free). It is every student's responsibility to monitor their own print account and ration their quota appropriately. If a student runs out of their initial \$40 credit they can purchase more credits by visiting the One Stop. All credits expire at the end of every semester and another \$40 credit will be reloaded for the new semester. No refunds will be issued for any unused credits (including purchased credits) per semester. *Note: There are three semesters in an academic year, Fall, Spring, and Summer. Quotas will start the first day of each semester.*

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### Printing/Copying Costs:

	Single Sided B/W	Double Sided B/W	Single Sided Color	Double Sided Color
Letter 8.5" x 11"	.05	.10	.20	.40
Legal 8.5" x 14"	.05	.10	.20	.40
Tabloid 11" x 17"	.10	.20	.40	.80

*Great Bay Community College reserves the right to change print/copying quantities and pricing at any time.*

Credits can be purchased in \$5.00 increments and can take up to three business days to appear in the students print balance, please plan accordingly. No refunds will be issued for any unused credits or purchased credits per semester.

### Scanning

The four Multifunction Printers are capable of scanning to a USB Thumb Drive. You must login with your GBCC ID to use the scanning features, there is **no cost** for scanning images to your thumb drive. *Note: at this time scanning to email is not available, an announcement will be made when this feature is available.*

### Printing, Copying & Scanning Guidelines

- Respect the rights of other students, faculty and staff while printing or copying.
- During peak times avoid large print/copying jobs.
- Stored printed jobs expire after 36 hours.
- Do not open the printer for jams, please contact the IT Dept.
- Do not remove toner, please contact the IT Dept.
- Do not remove or load paper, please contact the IT Dept. If you need scratch paper please visit the CAPS lab.
- Do not adjust, unplug, or remove any of the printers components or reconfigure any permanent settings.
- Please be sure you have logged out of your session when making copies or scanning. **IMPORTANT:** Leaving an open session could allow another user to print on your credits. GBCC is not responsible for left open sessions.
- When copying documents, you are responsible for following copyright laws.
- Lost, stolen, or damaged cards have a \$10 replacement fee. Replacement IDs for name changes are free with return of old card, otherwise there will be a \$10 fee.
- Do not wait until you are down to a zero balance before purchasing more credits, it can take up to three business days after purchasing to see your new balance.

**Material from Other Libraries**

Students needing material that is at another Community College System of New Hampshire campus can request that it be sent through interlibrary loan. Students may make a request themselves online through the card catalog or ask a Library staff member to make the request.

Great Bay Community College students, under a reciprocal agreement, have access to the resources of the University System libraries. These include the libraries at UNH Manchester and Durham, Keene State, Plymouth State and Granite State College. Students, with a valid picture student ID, may go to these libraries and borrow materials directly at no charge. Please be aware that if materials are not returned to any University System library, students will be responsible for the full replacement cost of the items plus any applicable fees. This will result in a charge being placed on the student's account at Great Bay Community College and will need to be paid before registering for classes, receiving transcripts or graduating.

**Fines**

Fines for most items are .25 cents/day per item. A hold will be placed on student records if materials are not returned or fines are not paid. This hold must be cleared before a student can check out more materials, register for classes, graduate, or obtain transcripts.

**Access, Use, and Check-out Procedures for Library Materials**

Students need a current Great Bay Community College photo ID to check out Library materials. Books are loaned for three weeks. Loan periods for other materials vary and may include room-use-only restrictions.

# STUDENT SERVICES

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## **Bookstore – Pease Campus**

The college maintains an on-campus bookstore at the Pease Campus stocked with textbooks, supplies, novelty items, and college clothing articles. The college contracts with Follet to run the bookstore. Students who have questions about pricing, books or any issues should direct their inquiries directly to the bookstore at (603) 427-0891. Students can also purchase text books online. The bookstore can be accessed through the college web site.

## **Fitness Center – Pease Campus**

The Pease location has a fitness center with cardio, circuit and free weight equipment. Registered students may utilize the Center with their Student ID.

## **Gymnasium – Pease Campus**

The Pease location has a gymnasium for students to play basketball. Registered students may utilize the Center with their Student ID.

## **Student Identification Cards**

Students may obtain a college ID at the Student Info Desk during normal weekday operating hours. Students must know their Student ID numbers and must have photo IDs with them (driver's license, passport, military ID). Cards are required for borrowing Library books, returning books to the campus bookstore and for student discounts at area merchants or public facilities. Students may also have borrowing privileges at other college libraries through presentation of their Student Identification Cards to participating college libraries. Students will need to stop by the Student Info Desk at the start of each academic year in order to get a current validation sticker for their IDs.

## **Lost Identification Cards**

Any student who loses an identification card can obtain a new card at a cost of \$10 (payable at College Services One Stop).

## **Helpdesk**

The Helpdesk is a vital information and trouble ticket center for all students, faculty, and staff at Great Bay Community College. This service helps resolve problems with SIS, Blackboard, Email, Computer issues, or general college FAQs. The Helpdesk also has a physical location, in room 200C at the Pease Location. Hours of operation are Monday – Thursday 9:30am to 6:00pm and Fridays 9:30am to 3:30pm. The Helpdesk is closed on Saturday and Sunday, however tickets are still received. If the Helpdesk is unable to resolve an issue on the weekend, it will be resolved first thing Monday morning. Visit the website at: [www.greatbay.edu/helpdesk](http://www.greatbay.edu/helpdesk).

## **Information Technology Services (IT)**

Classroom computers and College technology systems are maintained and updated by the College's Information Technology department. IT staff work directly with faculty and Department Chairs to support the learning needs of a diverse student population, and classrooms are equipped with a variety of instructional technology. Wireless networks exist for instruction, meetings, and special events. Open computer labs are located in the library and in the CAPS Department for students to work on assignments and access online learning environments such as CANVAS. Information Technology specialists also partner with Disability Services to review, purchase, and implement assistive technology for students with disabilities.

### **Cafeteria – Portsmouth Location**

The college cafeteria is located on the main floor. Students can buy hot or cold foods, drinks, and pastries. The cafeteria hours are posted each semester. Meals are available at reasonable prices, and vending machines are also available. The college contracts with a private vendor to run the cafeteria.

### **Campus Safety – Portsmouth Location**

Campus Safety officers are stationed at the Front Desk to monitor traffic coming into and exiting the building, respond to any safety concerns that may arise, and provide an escort service for those students, faculty and staff who would like to be accompanied to their vehicles.

### **GBCC Alerts**

An emergency notification system has been developed whereby members of the Great Bay community will be notified by telephone, e-mail and text of any emergencies that may occur. Most commonly these notices will be related to weather related cancellations and closings, but could involve any number of other possible emergency situations. Students must “opt-in” to this service, and may do so by clicking the GBCC Alerts button on the front page of our website.

### **Bus Service**

Great Bay Community College students ride the COAST Bus Service free with their valid College ID Card. Bus service is available Monday-Friday. Schedules are available at the front desk.

### **Housing and Living Expenses**

The college does not maintain residence halls or assume responsibility for housing. Students are advised to check on campus to see if any information about local housing options have been made available or have been posted. Arrangements and contracts for housing are solely between the student and the landlord.

### **Insurance**

The college is not liable for personal injuries incurred by students who are in attendance. Students are encouraged to either provide their own coverage or purchase the insurance provided by the System.

All Nursing and Allied Health Students who have a clinical must have accident and illness insurance, as well as professional liability coverage. Information regarding this professional liability coverage is available in the Nursing and Allied Health Departments.

All students who wish to participate in intercollegiate athletics must produce evidence of enrollment in an accident insurance policy.

### **Student Handbook**

The college's student handbook is available to all students on the college website. The student handbook documents academic and student policies and procedures. Students are responsible for being familiar with the information in the student handbook.

### **Campus Crime Report**

Each year the College compiles a report which identifies the frequency with which certain crimes have been reported to have occurred on campus and on adjacent public property. In addition, related policies, programs and services are identified. This report may also be accessed on our website under the “About Us” tab on the front page.



# STUDENT LIFE

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Great Bay Community College believes in the value of providing students with the comprehensive skills needed to be successful upon graduation. The Student Life office strives to promote student growth and development for learning, involvement, leadership, and community building through diverse co-curricular cultural, social, educational, athletic, and recreational activities.

## Leadership Development

- Emerging Leader Program - Students attend a three day retreat to explore how their individual characteristics/traits impact a group while learning key interpersonal skills such as effective communication, ethical decision making, and time management.
- Engaged Leader Program - Students attend a three day retreat to explore various leadership styles while learning skills that are needed to lead groups such as conflict resolution and group dynamics/diversity.

## Mentor Programs

- Women In Business Mentor Program – Students attend monthly luncheons with a variety of leaders from the Seacoast community. Students explore a variety of topics and develop practical networking skills while learning what it means to be a professional.
- Executive Mentor Program – Students work one on one with a business professional in the Seacoast community to gain insight on networking, effective communication and what it means to be a professional.

## Civic Engagement

- 100 Hour Program - Students become self-aware of their community and the importance of civic engagement. This program requires students to complete 100 hours of community service during their time at the college and reflect on how the experience has impacted their perspective as a member of society.
- Clubs for a Cause - Student club and organizations actively engage in community service to see the impact volunteering has on a community.

## Campus Involvement

- Student Clubs and Organizations - Students have the opportunity to experience success in the classroom and take advantage of a wide range of activities to further enhance life skills. Our student clubs and organizations offer the chance to be a part of a team, gain a head start on a career, build leadership skills, and get involved in community service.

## Intercollegiate Athletics

Through their participation in intercollegiate athletics, students will become more self-aware of the roles within a team and develop skills such as effective communication, problem solving, conflict resolution, and time management.

- Women's Volleyball
- Women's Basketball
- Men's Basketball
- Men's Baseball
- Women's Softball

# BUSINESS & TRAINING CENTER

The Business & Training Center is focused on building the skills and aptitudes needed by employers of the Seacoast region. Programs provide short term training solutions for entry level positions as well as professional development for mid and upper management. The Business & Training Center faculty and consultants bring a depth and breadth of experience and expertise to evaluate needs and deliver training solutions to improve productivity and performance. Customized delivery of both credit and non-credit programming can be offered on-site and on campus.

## CURRENT COMMUNITY AND CORPORATE EDUCATION COURSES AND PROGRAMS

### BUSINESS

#### INSURANCE INDUSTRY PROGRAM

Designed in collaboration with leading insurance industry professionals, this program develops skills for high demand entry-level positions. These courses, from The Institutes, a nationally recognized leader in risk management and property casualty education, prepare students for The Institutes exams that lead to insurance designations.

NCBU120G	Introduction to Property - Casualty Insurance	Non-Credit
NCBU124G	Property and Liability Insurance Principles	Non-Credit
NCBU122G	Personal Insurance	Non-Credit
NCBU123G	Commercial Insurance	Non-Credit
	Internship in the Insurance Industry	Non-Credit
NCBU160G	Commercial Underwriting	Non-Credit
NCBU161G	Underwriting Commercial Property	Non-Credit
NCBU162G	Underwriting Commercial Liability	Non-Credit
NCBU163G	Strategic Underwriting Techniques	Non-Credit

#### MICROSOFT® OFFICE

Hands-on training in Microsoft® Office applications

NCBU121G	Introduction to Excel	Non-Credit
NCBU122G	Intermediate Excel	Non-Credit
NCBU123G	Advanced Excel	Non-Credit
NCBU126G	PowerPoint Presentations	Non-Credit
NCBU127G	Introduction to Access	Non-Credit
NCBU128G	Intermediate Access	Non-Credit
NCBU129G	Advanced Access	Non-Credit

#### SUPERVISION

Skill development in interactive courses for new and seasoned supervisors as well as those aspiring to a supervisory position.

NCBU126G	Frontline Supervision	Non-Credit
NCBU127G	Smart Supervision for Managers	Non-Credit

#### ONLINE PROFESSIONAL DEVELOPMENT

Great Bay Community College partners with UGotClass to offer current and relevant short-term online professional development courses in a variety of areas including Business, New Media Marketing and Social Media. Visit [www.greatbay.edu/btconline](http://www.greatbay.edu/btconline).

## TECHNOLOGY TRAINING

### COMPUTER NUMERICAL CONTROL (CNC) PRODUCTION TECHNOLOGY CERTIFICATE

Prepare to enter a career in the manufacturing industry by becoming an in-demand, skilled CNC operator. Gain in-depth knowledge and understanding of the machine tool trade and learn marketable skills for employment in manufacturing. This is a full-time, 240 hour, six week boot camp.

NCAM300G	Computer Numerical Control Production Technology	Non-Credit
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### PRECISION MACHINING AND COMPUTER NUMERICAL CONTROL (CNC) TECHNOLOGY

Beginning and intermediate courses in manual machine tooling and advanced courses in CNC technology include reading and understanding blueprints, G&M code and software skills necessary for successful machinists in today's industry.

NCAM100G	Introduction to Precision Machining	Non-Credit
NCAM125G	Introduction to Blue Print Reading and Inspection	Non-Credit
NCAM150G	Intermediate Precision Machining	Non-Credit

### OUTDOOR POWER EQUIPMENT REPAIR PROGRAM

This program offers classroom and hands-on experience help to build an understanding of theory, as well as troubleshooting, repair and maintenance skills. The program is designed for the homeowner and those considering a career in outdoor power equipment repair.

NCPE001G	Small Engine Repair	Non-Credit
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## SOLIDWORKS

The Introduction to Solidworks course provides students with the opportunity to become proficient in creating 3D models from a simple to an advanced blueprint. The course includes preparation for the Certified Solidworks Associate Exam (CSWS) which indicates a foundation in and apprentice knowledge of 3D CAD and engineering practices and principles.

NCAM320G	Introduction to Solidworks	Non-Credit
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## HEALTHCARE

### HOME HEALTH AIDE APPRENTICESHIP COURSE

This 144-hour course is designed as the classroom portion of the Home Health Aide Apprenticeship Program through the US Department of Labor. Through classroom instruction, students will become competent in technical skills such as Infection Control, Personal & Client Safety Body Mechanics, Health Maintenance Tasks, In-home Nutritional Support, Cognitive Impairment and Dementia Care, Palliative and Hospice Care, and Specific Illnesses.

NCHC131G	Home Health Aide Apprenticeship Course	Non-Credit
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### MEDICAL ASSISTANT TRAINING PROGRAM

This program prepares students to assist physicians by performing functions related to the administrative and clinical responsibilities of a medical office. This is a full time, 480 hour, 12 week boot camp delivered in collaboration with local medical practices.

NCHC140G	Medical Assistant	Non-Credit
NCHC141G	Medical Assistant Practicum	Non-Credit

### **MEDICAL OFFICE SPECIALIST TRAINING PROGRAM**

This program prepares students to assist physicians by performing functions related to the administrative responsibilities of a medical office. This is a full time, 240 hour, 12 week boot camp. Focusing on medical secretarial duties using specific knowledge of anatomy, medical ethics, medical terminology, electronic medical records, and integrated administrative procedures used in a medical office, clinic, or hospital settings.

NCHC145G	Medical Office Specialist	Non-Credit
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### **VETERINARY TECHNOLOGY NATIONAL EXAMINATION (VTNE) PREPARATION**

Meet with your peers in an eight week study group instructed by Great Bay Community College faculty. The material review follows the breakdown of the VTNE. Each class focuses on a different topic and will employ mini-tests, games, and other techniques to help retain key material. Test taking strategies are emphasized.

NCHC026G	Vet Tech National Exam Preparation	Non-Credit
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## **TRANSITION PROGRAMS**

### **Project SEARCH Seacoast NH PROGRAM**

This two semester school-to-work program for students with cognitive and physical disabilities is a total workplace immersion training model. Project SEARCH facilitates a seamless combination of classroom instruction, career exploration and on-the-job training and support. Project SEARCH is hosted at Portsmouth Regional Hospital and is one of many programs world-wide.

NCHC33G	SEARCH	Non-Credit
NCHC34G	SEARCH	Non-Credit

### **WORKREADYNH PROGRAM**

This tuition-free program offers professional development training for career builders and job seekers looking to improve their skills and employment opportunities. Participants will develop the skills employers are looking for and add the National Career Readiness Certificate credential to their resume.

Skill-building modules for Applied Math, Workplace Documents and Graphic Literacy are fully online, self-paced and convenient. Completing the assessment leads to the National Career Readiness Certificate, a portable, evidence-based national credential that measures essential workplace skills and is a reliable predictor of employee success in the workplace.

Core and interpersonal skills are developed through a 60-hour workplace simulated course. Instructor facilitated activities develop and refine workplace behaviors such as communication, conflict resolution, problem solving, and team membership skills. New Hampshire employers look for mastery of these skills. Those who possess them increase their earning power and stand out from other applicants.

WorkReadyNH is offered at both the Portsmouth and Rochester campuses.

NCPD246G	WorkReadyNH Soft Skills	Non-Credit
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**Contact the WorkReadyNH Center at (603) 427-7636 Portsmouth and Rochester or [workreadygbcc@ccsnh.edu](mailto:workreadygbcc@ccsnh.edu)**

### **Non-Credit Tuition Payment and Refund Policy**

Tuition is required at the time of registration. Students registered for non-credit workshops/professional training must withdraw in writing at least three business days prior to the first session to receive a full refund of tuition and fees. Students registered for credit bearing

courses are subject to the tuition refund per GBCC policy. Refunds take approximately four to six weeks to be processed. If the college cancels a class, tuition and lab fees will be refunded.

### **Funding for Training**

#### *Workforce Innovation and Opportunity Act (WIOA)*

WIOA provides funds for many Community Education programs to qualified individuals. For qualification guidelines, speak with a counselor at the local NH Works office [www.nhworks.org](http://www.nhworks.org).

#### *Trade Act*

Trade Act provides funds for many Great Bay Community College programs to qualified individuals who lost their job to overseas markets. For qualification guidelines, speak with a counselor at the local NH Works office [www.nhworks.org](http://www.nhworks.org).

#### *NH Job Training Fund (NHJTF) Grant*

The NHJTF Grant is awarded to NH businesses to improve the capability of their workforce. This grant can reimburse employers up to one-half of the cost of training. The member colleges of the Community College System of NH are the preferred training vendors. To find out more about the NHJTF Grant, go to [www.nhjobtrainingfund.org](http://www.nhjobtrainingfund.org) and contact the Business & Training Center staff to discuss training solutions.

#### *Business & Training Center Non-Credit Scholarship*

Qualified individuals may be eligible for up to 50% of tuition costs. For more information, see <http://greatbay.edu/courses/business-training/btc-tuition-assistance>

# DUAL ENROLLMENT PROGRAMS

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## Running Start, eStart & Early College

Dual Enrollment, often referred to as *concurrent enrollment*, allows high school students to take college courses while still enrolled in high school and receive college credits that will be applied to both high school and college transcripts. Great Bay Community College offers high school students three options for dual enrollment.

### **RUNNING START**

The New Hampshire Running Start program is a unique higher-education initiative for high school juniors and seniors. Specifically, this program enables high school students to enroll in selected college courses offered by Great Bay Community College at a significant reduction in tuition. College courses are offered during the day at high schools throughout New Hampshire.

The Running Start program promotes a very special -- and important -- partnership with secondary schools. This partnership will play a significant role in promoting access to higher education and lowering the costs associated with obtaining a college education.

#### **Program Goals**

The Running Start program is focused on the following goals:

- Encourage more young learners to seek a higher education.
- Accelerate the process of higher education.
- Retain more residents in the New Hampshire public higher education system.
- Enroll more young students in the CCSNH.
- Reduce the cost of higher education.

#### **Benefits for Students**

- Students receive college credit and appropriate high school credit.
- Students will graduate from high school with a college transcript of earned credits.
- Students are recognized as Great Bay students with access to many college resources.

#### **Assessment**

Students will have the opportunity to take the Accuplacer assessment offered at the high school or college. This assessment is required of any student who wishes to enroll in a College Composition or Math course.

#### **Cost**

The cost to enroll in a Great Bay course through Running Start is \$150 per course plus books and supplies (if not provided by the high school). This represents a substantial savings in college tuition costs. Any course less than three credit hours will be pro-rate.

#### **Faculty Information**

All teaching faculty come from the ranks of the secondary schools and meet or exceed the hiring qualifications for Great Bay faculty. There is no adjunct salary compensation for Running Start faculty. In addition to providing a faculty mentor, Great Bay welcomes Running Start faculty at departmental and other college activities as professional development opportunities. Great Bay will also issue one course voucher for every college course taught. Course vouchers cover the cost of \$300.00 toward tuition for any college course taken within the Community College System of New Hampshire (fees excluded) and are intended for the use of Running Start faculty. Running Start faculty may elect to transfer their voucher.

## **Transfer Opportunities**

Running Start alumni have successfully transferred credits to many colleges and universities. Transferability policies vary from college to college and are dependent on a variety of factors such as major course of study.

### For Further Information

Contact the Running Start coordinator or your local high school regarding courses offered for college credit through the Running Start program.

## **eSTART**

eStart is a partnership between the Virtual Learning Academy Charter School (VLACS) and the Community College System of New Hampshire (CCSNH).

Credits earned through eStart are dual credits - high school and college. The online courses are taught by CCSNH faculty. eStart courses are available to New Hampshire residents who are enrolled in a public school, private school, alternative school or home school program. Eligible students must be at least 15 years old, or have obtained special permission from the eStart course instructor.

The Community College System of New Hampshire eStart tuition is \$150. Students must also purchase textbooks which may cost between \$75 and \$100.

The college credits may be used for degree programs at CCSNH or transferred to other post-secondary institutions.

Students and parents: Contact your school's guidance department to be sure the eStart course meets requirements for high school credit and graduation.

## **EARLY COLLEGE**

Early College invites high school juniors and seniors to take college courses on the Great Bay Community College campus. College courses are offered during the day and evening and are taught by highly qualified college professors. Students may choose from a large selection of courses; some courses may require placement testing. Prior to registration, High School and Home Schooled students must confer with their school counselors or curriculum coordinators to make sure the courses they select will satisfy high school requirements for graduation. High School and Home Schooled students are limited to taking two courses per semester; these courses may be face-to-face or hybrid. Students interested in 100% online classes are encourage to enroll in eStart.

Enrollment forms are available on the Great Bay website or in the Great Bay Advising Center. Early College allows high school students to experience college life both inside and outside the classroom as well as take advantage of the many college resources to support their success. The cost for Early College students is 50% of the regular tuition. Students are responsible for textbooks, and course materials.

# GENERAL DEGREE INFORMATION

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**1. A CREDIT HOUR:** shall be the equivalent of one (1) hour of classroom or direct faculty instruction and a minimum of two hours of out-of- class student work each week for 15 or 16 weeks.

**2. A SEMESTER CREDIT HOUR:** shall be comprised of the following:

- a. Direct Faculty Instruction (face-to-face or online contact);
- b. Laboratory or studio;
- c. Clinics
- d. Practicum, Fieldwork, etc.
- e. Internships\*;
- f. Co-ops\*\*.

**3. ASSIGNMENT OF CREDITS:** A credit hour shall be allocated based on the below:

Category	Contact hours per week	Contact hours per semester (based on minimum 15 week semester)
Class	1	15
Laboratory	2 or 3	30-45
Clinical	3 to 5	45-75
Practicum, Fieldwork	3	45
Internship	3 to 6	45-90
Co-op	Variable by Dept.	Variable by Dept.

## 4. INSTRUCTIONAL HOUR DESIGNATION

One instructional hour is equal to fifty (50) minutes of classroom/direct faculty instruction or laboratory/studio, or sixty (60) minutes of clinical, practicum or fieldwork, internship or co-op.

Next to each course is the course credit breakdown, shown in three numbers. The first number represents the number of lecture hours per week. The second number represents the number of lab, clinical, co-op, internship, or practicum hours per week. The third number represents the total number of credits.

BIOL110G	Human Anatomy and Physiology I	3-3-4
PSYC110G	Introduction to Psychology	3-0-3

The academic instructional semester consists of no less than 15 weeks and no longer than 16 weeks, or their equivalent, including final exams. Courses that are delivered in alternate schedules including summer semester (8 weeks, 12 weeks, etc.) will be shown the same as above, and will be scheduled to reflect the equivalency of the total number of hours. For example, PSYC110G offered on an 8 week schedule meets 6 hours per week and earns the same 3 credits.

- a. **INTERNSHIP DEFINITION:** A capstone educational experience that allows a student to independently apply skills and knowledge acquired in major field courses in a workplace setting. While the goals and expected outcomes of the internship experience are determined by faculty, specific daily work activities are assigned by the on-site supervisor, and students are supervised and evaluated on-site by an employee of the company hosting the internship. Individual departments must approve internship sites, determine assessment requirements, and set minimum standards for eligibility. Faculty will typically visit (in person or virtually) students and supervisors at the internship site a minimum of



1-3 times per semester and will collaborate with the on-site supervisor in the assessment of student performance. Internships may be paid or unpaid, and one credit is awarded for every 3-6 hours of internship per week for a 15/16-week semester (prorated accordingly for shorter semesters).

- b. PRACTICUM DEFINITION :** An educational experience that allows a student to work with professional practitioners, typically in an education or social work setting, while concurrently enrolled in a course that meets regularly to help groups of students assigned to different practicum sites integrate their experiences with learned theory. Students work collaboratively with on-site professionals to observe and perform activities under the guidance of on-site staff. Faculty work with on-site professionals to determine the appropriate types of activities to ensure that students gain experience that meets specified program goals and outcomes. Individual departments must approve practicum sites, determine assessment requirements, and set minimum standards for eligibility. Faculty will typically visit (in person or virtually) students and supervisors at the practicum site a minimum of 1-2 times per semester and will collaborate with the on-site supervisor in the assessment of student performance. Practicum experiences are typically unpaid, and one credit is awarded for every 3 hours of practicum per week for a 15/16-week semester (prorated accordingly for shorter semesters).
  
- c. CLINICAL DEFINITION:** An educational experience that allows a student to develop skills in applying theory to practice in a patient care setting. Students are supervised directly on site by college faculty, who work collaboratively with on-site staff at the facility, and are directly assessed by college faculty in accordance with published evaluation criteria. Individual departments engage the clinical site through a legal Memorandum of Understanding, which defines criteria for student participation at the site. Clinical experiences are unpaid, and one credit is awarded for every 3-5 hours of clinical experience per week for a 15/16-week semester (prorated accordingly for shorter semesters).
  
- d. CO-OP DEFINITION:** A co-op is an educational program involving paid, productive work experience in a field related to the student's major or career. The student is a full-time employee of the site and is not required to take classes during the duration of the co-op. Depending on the length of the co-op and criteria established by the sponsoring academic department, up to 4 credits may be awarded. Each college department will set standards for credit allocation and student eligibility to participate in a co-op. Individual departments must approve co-op sites and will determine requirements (papers, journals, etc.) that must be met during the co-op. The co-op will be graded using the college's grading system and credit will be awarded accordingly.

## COURSE SUBSTITUTIONS

In programs that require the courses listed below, higher level courses within that department may be substituted in fulfillment of degree requirements.

FYE101G	First Year Seminar	1-0-1
MATH145G *	Quantitative Reasoning	4-0-4
CIS110G * (or CIS107G*)	Introduction to Computers (or Essentials of Computer Literacy)	2-2-3 (or 2-4-4)
*Based on placement testing scores. Please note: DGMT courses 115G, 135G and 142G may be substituted for CIS 110G (or CIS107G). Please check your program of study.		

## **Elective Course Information**

In addition to the required courses in a student's program, there may be elective options. Each program offers a unique set of electives, so please refer to each individual program for specific options. The following information provides the categories of electives and selection of elective courses. All academic subject codes and course numbers refer to courses offered only at Great Bay Community College.

**Business Elective:** Any course with the academic subject code of ACCT, BUS, ECON, HOS, INSR, MKTG, SPTS, and a course number of at least 100.

**English Elective:** Any course with the academic subject code of ENGL and a course number of at least 100.

**Foreign Language/Humanities Elective/Fine Arts Elective:** Any course with the academic subject code of AMER, ARTS, ASL, ENGL (except for ENGL215G), HIST120G, HIST130G, PHIL, SPAN, FREN, and a course number of at least 100.

**Liberal Arts Elective:** Any course listed under the categories of English elective, Social Science elective, Foreign Language/Humanities/Fine Arts elective, Math elective, Natural Resources elective, or Science elective with a course number of at least 100.

**Life Science Electives:** The following list of life science courses is approved for the Liberal Arts General Biology program. At least two need to be of the 200 level. BIOL110G, BIOL120G, BIOL150G, BIOL160G, BIOL210G, BIOL220G, BIOL230G, BTEC105G, CHEM116G, CHEM205G.

**Math Elective:** Any course with the academic subject code of MATH or DATA and a course number of at least 100.

**Open Elective:** Any course that the college offers with a course number of at least 100.

**Science Elective:** Any course with the academic subject code of BIOL, BTEC (excluding BTEC205G), CHEM, ESCI, PHYS and a course number of at least 100.

**Social Science Elective:** Any course with the academic subject code of ANTH, ECON, GEOG, HIST, POLS, PSYC, SOCI, and a course number of at least 100.

**Technical Elective:** Any course designation determined by the program of at least the 100 level.

## **TRANSFER CREDIT POLICY**

In addition to the Transfer of Credit from Another Institution Policy in the completion of Course Credits section of this catalog, each program of study establishes its own individual transfer and currency requirements.

Programs of Study carry the credits based on Great Bay Community College courses. Courses may be transferred in for fewer credits than indicated in the Program of Study.

## **CLASS SCHEDULES**

Class schedules noting specific times and days are developed on a semester-by-semester basis and are published in the Semester Course Schedule. Classes are held during the day, evening, weekend, and online. In addition, classes designated as hybrid are a combination of on-campus and online. Evening courses start at 5pm or later. Students completing program requirements may need to take classes at any of those times.

# PROGRAMS OF STUDY

## ACCOUNTING

### ASSOCIATE IN SCIENCE CERTIFICATE

#### Program Description

The Accounting curriculum is continuously evaluated, modified and improved to remain current with ever-changing rules, laws, and technology. The accounting program focuses on providing the student with the accounting skills needed to meet current job requirements as well as the necessary analytical skills needed to be successful in business. The Accounting degree provides a foundation in economics, law, management, finance, and information technologies.

Accounting graduates are prepared for employment in entry-level accounting/bookkeeping positions or can transfer to a four-year institution in pursuit of a bachelor's degree. Accounting careers include public accounting, private industry accounting, government and non-profit accounting, international accounting, financial analysis, credit analysis, cost accounting, tax accounting, consulting, advising, auditing and forensic accounting among many other possibilities. There are a variety of exciting, challenging and rewarding career opportunities for those with an accounting degree.

The Accounting degree transfers to many four-year colleges. The Accounting program is accredited by the Accreditation Council for Business Schools and Programs (ACBSP) which supports transfers to many four year institutions.

#### Program Outcomes

Students will:

- Have a practical working knowledge of financial and managerial accounting.
- Know how to operate at least one accounting software program.
- Know how to prepare a complex individual tax return.
- Be able to prepare accurate and well-organized financial statements.
- Be able to make the adjustments needed to create financial statements in accordance with generally accepted accounting principles.
- Demonstrate proficiency in analytical thinking, oral and written communication, and applied mathematical skills.
- Be able to transfer to a four-year college or university with a solid accounting and overall business studies foundation so as to continue their accounting education in a seamless manner.

#### Transfer Credit Policy

In addition to Great Bay transfer credit policies, transfer of courses in accounting more than ten years old will be evaluated by the program coordinator on an individual basis.

#### Technical Standards

Students should be able to communicate effectively using written and oral communication skills, possess good analytical skills, understand and practice ethical behavior, be comfortable using computers and computer application software, be able to sit and concentrate for extended periods of time and be comfortable with fundamental mathematics.

DEGREE PROGRAM FIRST YEAR		TH	LAB	CR
<b>Fall Semester</b>				
FYE111G	First Year Seminar: Business/Hospitality^	1	0	1
ACCT113G	Accounting and Financial Reporting I	3	0	3
BUS114G	Management	3	0	3

ENGL110G	College Composition I	4	0	4
MATH145G/147G	Quantitative Reasoning/Plus	4/5	0	4/5
CIS156G/154G	Computer Applications in Business/ Comprehensive Business Computer Applications*	2	2/4	3/4
<b>Semester Total:</b>		<b>17-18</b>	<b>2-4</b>	<b>18-20</b>

<sup>^</sup>Recommended. Any one-credit FYE course fulfills this requirement.

\*Prerequisite: placement in CIS156G or successful completion of CIS110G (or CIS107G).

<b>Spring Semester</b>		<b>TH</b>	<b>LAB</b>	<b>CR</b>
ACCT123G	Accounting and Financial Reporting II	3	0	3
ECON234G	Macroeconomics	3	0	3
MATH225G	Probability and Statistics	4	0	4
ENGL210G (ENGL214G)	Introduction to Creative Nonfiction or (Oral Communications)	3 (3)	0 (0)	3 (3)
	Science Elective*	3	0	3
<b>Semester Total:</b>		<b>16</b>	<b>0</b>	<b>16</b>
<b>First Year Total:</b>		<b>33-34</b>	<b>2-4</b>	<b>34-36</b>

\*A 3-4 credit science elective may be accepted in transfer to fulfill this requirement.

<b>DEGREE PROGRAM SECOND YEAR</b>				
<b>Fall Semester</b>		<b>TH</b>	<b>LAB</b>	<b>CR</b>
ACCT213G	Cost Accounting I	3	0	3
ACCT243G	Federal Income Taxes-Individual	3	0	3
ACCT223G	Intermediate Accounting I	3	0	3
BUS211G	Business Law	3	0	3
ECON235G	Microeconomics	3	0	3
<b>Semester Total:</b>		<b>15</b>	<b>0</b>	<b>15</b>

<b>Spring Semester</b>		<b>TH</b>	<b>LAB</b>	<b>CR</b>
ACCT215G	Cost Accounting II	3	0	3
ACCT233G	Intermediate Accounting II	3	0	3
ACCT216G	Software Systems Applications	2	2	3
BUS221G	Business Finance	3	0	3
PHIL240G	Ethics	3	0	3
<b>Semester Total:</b>		<b>14</b>	<b>2</b>	<b>15</b>
<b>Second Year Total:</b>		<b>29</b>	<b>2</b>	<b>30</b>
<b>Degree Total:</b>		<b>62-63</b>	<b>4-6</b>	<b>64-66</b>

<b>ACCOUNTING CERTIFICATE</b>				
		<b>TH</b>	<b>LAB</b>	<b>CR</b>
ACCT113G	Accounting and Financial Reporting I	3	0	3
ACCT123G	Accounting and Financial Reporting II	3	0	3
ACCT213G	Cost Accounting I	3	0	3
ACCT215G	Cost Accounting II	3	0	3
ACCT223G	Intermediate Accounting I	3	0	3
ACCT233G	Intermediate Accounting II	3	0	3
ACCT243G	Federal Income Taxes-Individual	3	0	3
<b>Certificate Total:</b>		<b>21</b>	<b>0</b>	<b>21</b>

Gainful Employment disclosure information is available at:

<http://greatbay.edu/sites/default/files/GE/accounting/52.0301-Gedt.html>

# ADVANCED COMPOSITES MANUFACTURING CERTIFICATE

Advanced manufacturing is part of the state's largest industry sector, making up 19% of New Hampshire's economy. The economic impact of jobs in advanced manufacturing far exceeds that of jobs in other industries. The Advanced Composites Manufacturing program at Great Bay prepares participants with skills and knowledge required for jobs in the high growth fields of composites manufacturing and aerospace.

The program is offered at the College's Advanced Technology & Academic Center in Rochester, NH. Introductory courses provide opportunities for students to experience working in modern, clean, hands-on training labs while learning and applying skills critical for success. In addition to a mechanical aptitude, students interested in the program should have keen attention to detail and demonstrate a desire for quality. They must also enjoy learning in a hands-on way and working as part of a team.

The program consists of two levels and can be completed in 6 months in the full-time schedule. A part-time, evening and weekend option is also available, which can be completed in a year. The introductory level is designed to provide students with an overview of advanced composites manufacturing and to help them select an area of specialization based on interest, ability, and job outlook. During level 2 training, students will complete general fundamental manufacturing courses and concentrated courses of study leading to machine operator certificates with specializations including:

1. Resin Transfer Molding Technician
2. Bonding and Finishing Operator
3. Quality Inspection and Coordinate Measuring Machine (CMM) Technician
4. Composites CNC Milling and Set-Up Operator

Many students will enter the workforce after completing level 2. They may continue to learn as they earn by studying in either technical or leadership tracks. A leadership path could provide opportunities to become a team leader within their specialization. A technical path could lead to increased skill level and potential certification by the Society of Manufacturing Engineers as a Certified Manufacturing Technologist.

Dual enrollment: Students enrolled in the ACM Certificate program may elect to enroll in the Associate Degree in Technical Studies. Dual enrollment is contingent upon active or graduate status of the certificate. Completion of the ACM certificate satisfies the requirement for the technical specialty core (24 credits) of the Technical Studies degree.

## **Program Outcomes**

The goal of the Advanced Composites Manufacturing program is to prepare the student to work in the advanced composites manufacturing industry, including aerospace, automotive, wind energy, and others. After successful completion of the program, students will be able to:

- Define the processes and materials used in advanced composites manufacturing.
- Illustrate the flow of materials and resources within the manufacturing process for advanced composite materials.
- Apply terminology used in aerospace, explain regulatory compliance, and describe quality concepts.
- Demonstrate the ability to solve mathematical problems that affect composite part design and manufacture.
- Understand the fundamental science concepts behind composites manufacturing.
- Apply techniques for observing, gathering, and recording data.
- Anticipate or recognize the existence of a problem or nonconformity.
- Demonstrate ability to recognize safety issues and to observe all safety procedures.

- Demonstrate the ability to successfully meet the requirements of a machine operator position in advanced composites manufacturing.
- Demonstrate the ability to follow written instructions with particular attention to detail and quality.

**Technical Standards**

This program includes work in a manufacturing lab and requires participants to physically perform the functions of reaching, walking and standing, safely lifting up to 20 lbs. and more for some specializations, hearing sounds of equipment, ability to visually inspect parts for quality, and ability to pass a fitting test and to wear a dust mask for extended periods of time. Students will be specializing in one of eight areas, some requiring additional physical demands.

- The weaving specialization also requires ability to be able to work seated for extended periods of time, reaching with a steady hand, and climbing steps, bending, and stooping to visually inspect the weaving process. Manual dexterity in both hands is required for trimming.
- The resin transfer molding specialization requires ability to handle heated tools and sufficient pulmonary function to wear respirators and full face masks. This specialization also requires reaching, bending, and lifting up to 35 lbs. to attach and handle overhead lifting equipment and attachments.
- The bonding/finishing specialization requires manual dexterity for precision work; visual acuity to the standard of 20/15; and sufficient pulmonary function to wear respirators and full face masks for extended periods of time.
- The paint technician specialization requires manual dexterity and sufficient pulmonary function to wear respirators and full face masks for extended periods of time.
- The quality inspection and coordinate measuring machine operator specialization requires repetitive reaching with hands and arms, standing and walking, occasional lifting or moving up to 35 lbs. and visual acuity to the standard of 20/15.
- In order to successfully satisfy course objectives and the requirements of the field, students must be able to meet all standards stated above.

**Admissions Requirements**

1. Complete an application for the program.
2. Provide proof of high school completion or equivalent.
3. Provide an official copy of prior college transcripts, if appropriate.
4. ACM information session or admissions appointment.
5. Place into MATH080G, CIS110G (or CIS107G) or higher and college level Reading.

**Health and Safety Considerations**

This program includes work in a composites manufacturing lab where potentially hazardous materials are used. Students will be taught industry standards for safety and will be expected to follow all safety procedures for material handling. Personal protective equipment must be worn. Students will provide their own safety boots or shoes.

**Transfer Credit Policy**

In addition to Great Bay transfer credit policies, transfer of courses in the Advanced Composites Manufacturing program will be evaluated by the program coordinator on an individual basis.

<b>CERTIFICATE CORE COURSES</b>				
<b>Course</b>		<b>TH</b>	<b>LAB</b>	<b>CR</b>
ACM110G	Introduction to Advanced Composites	2	3	3
ACM115G	Applied Math & Measurement for Manufacturing	1	2	2
ACM120G	Technical Blueprint Reading	1	2	2
ACM210G	Fundamentals of Composites Manufacturing	3	2	4
ACM230G	Manufacturing Ethics	1	0	1

BUS210G	Organizational Communication	3	0	3
CIS110G	Introduction to Computers* or	2	2	3
(CIS107G)	(Essentials of Computer Literacy)	(2)	(4)	(4)
<b>Total:</b>		<b>13</b>	<b>11-13</b>	<b>18-19</b>

*\*Students may substitute a higher level CIS course. Recommended substitutions are CIS111G Computer Technologies and CIS156G Computer Applications in Business.*

### **CERTIFICATE CONCENTRATION COURSES**

Students must select one elective below for Concentration:

<b>Course</b>	<b>TH</b>	<b>LAB</b>	<b>CR</b>	
ACM250G	Paint Operator	0	3	1
ACM251G	Weaving Technician and Preform Finishing	1	3	2
ACM252G	Resin Transfer Molding Technician	0	4	2
ACM253G	Bonding and Finishing Operator	0	4	2
ACM254G	Quality Inspection and CMM Operator	2	2	3
ACM255G	Composites CNC Milling and Set-up Operator	4	4	6
<b>Total:</b>		<b>7</b>	<b>20</b>	<b>16</b>

**Total Certificate Credits: 19-25**

ACM Certificate students continuing with the Technical Studies A.S. Degree may select Technical Electives, including but not limited to:

### **ACM TECHNICAL ELECTIVES**

<b>Course</b>	<b>TH</b>	<b>LAB</b>	<b>CR</b>	
ACM256G	Composites Repair Technician	1	3	2
ACM257G	High Performance Composites Fabrication	0	4	2
ACM265G	Multi Axis CNC Milling	2	4	4
MANF266G	CNC Programming	2	2	3
MANF225G	Solidmodeling	2	2	3
NDT110G	Introduction to Nondestructive Testing	2	2	3
<b>Total:</b>		<b>9</b>	<b>17</b>	<b>17</b>

Gainful Employment disclosure information is available at:  
<http://greatbay.edu/sites/default/files/GE/adv-comp/14.1801-Gedt.html>

### **Curriculum Recommendations**

A higher level CIS course may be substituted for CIS110G Introduction to Computers (or CIS107G Essentials of Computer Literacy). Recommended substitutes are CIS111G Computer Technologies and CIS156G Computer Applications in Business.

# AMERICAN STUDIES ASSOCIATE IN ARTS

American Studies is the interdisciplinary study of the United States and all its local, national, and global contexts. Drawing from a variety of content areas and methodologies, American Studies focuses on particular American moments, places, and ideas in order to pursue questions, such as “What is American culture? What does it mean to be American? Who, What, and Where is ‘American’?” and what is at stake when we ask these questions? The degree program is designed to provide students with the rigorous interdisciplinary training necessary to transfer into baccalaureate programs in not only American Studies, but related fields as well, such as English, History, Political Science, Education, Sociology, Anthropology, and others. Students with degrees in American Studies have found jobs in a wide variety of fields such as publishing, education, communications, government, public service, public relations, marketing, management, law, and social welfare to name a few.

## Program Outcomes

- Students will understand the methods, goals, and value of an interdisciplinary investigation of American history, ideology, culture and discourse.
- Students will be acquainted with themes and questions commonly addressed in the field of American Studies and understand how they arise from, and inform particular historical and cultural moments.
- Students will be prepared to move on to a more extensive program of American Studies and/or related fields such as History, American Literature, or Political Science.

## Transfer Credit Policy

In addition to Great Bay transfer credit policies, Liberal Arts and Science courses will be considered for transfer regardless of when they were taken as long as they meet minimum grade requirements. See individual department policies for program exceptions on general education requirements. In the case of English and math course transfers, it may be recommended that the student take portions of the Accuplacer Placement Test to demonstrate the skill level required for success in subsequent classes within the program.

Transfer of a course to this institution does not guarantee transfer of that same course to subsequent institutions. SAT testing may be required by some transfer institutions.

<b>DEGREE PROGRAM FIRST YEAR</b>				
<b>Fall Semester</b>		<b>TH</b>	<b>LAB</b>	<b>CR</b>
ENGL110G	College Composition I	4	0	4
	Lab Science Elective*	3	3	4
	US History or American Literature Survey Elective^	3	0	3
AMER110G	Introduction to American Studies	3	0	3
<b>Semester Total:</b>		<b>13</b>	<b>3</b>	<b>14</b>
<i>^Choose HIST202G, HIST204G, ENGL209G, or ENGL220G.</i>				
<b>Spring Semester</b>		<b>TH</b>	<b>LAB</b>	<b>CR</b>
ENGL 214G	Introduction to Creative Nonfiction	3	0	3
	Math Elective	4	0	4
	US History or American Literature Survey Elective^	3	0	3
ANTH101G	Introduction to Anthropology or (Social Science Elective)	3	0	3
	Humanities/Foreign Language/Fine Arts Elective*	3	0	3



	<b>Semester Total:</b>	<b>16</b>	<b>0</b>	<b>16</b>
	<b>First Year Total:</b>	<b>29</b>	<b>3</b>	<b>30</b>

\* Theory, lab, and credit hours may vary depending on the elective course chosen.  
 ^Choose HIST202G, HIST204G, ENGL209G, or ENGL220G.

<b>DEGREE PROGRAM SECOND YEAR</b>				
<b>Fall Semester</b>		<b>TH</b>	<b>LAB</b>	<b>CR</b>
AMER210G	American Studies Seminar	3	0	3
	Lab Science Elective	3	3	4
	US History or American Literature Survey Elective^	3	0	3
POLS 110G	American Government or (Social Science Elective)	3	0	3
	Liberal Arts Elective	3	0	3
<b>Semester Total:</b>		<b>15</b>	<b>3</b>	<b>16</b>
^Choose HIST202G, HIST204G, ENGL209G, or ENGL220G.				
<b>Spring Semester</b>		<b>TH</b>	<b>LAB</b>	<b>CR</b>
	Social Science Elective	3	0	3
	Math Elective	4	0	4
	Liberal Arts Elective*	3	0	3
	Foreign Language/Humanities/Fine Arts Elective*	3	0	3
CRIT110G	Critical Thinking in the Humanities	3	0	3
<b>Semester Total:</b>		<b>16</b>	<b>0</b>	<b>16</b>
<b>Second Year Total:</b>		<b>31</b>	<b>3</b>	<b>32</b>
<b>Degree Total:</b>		<b>60</b>	<b>6</b>	<b>62</b>

\* Theory, lab, and credit hours may vary depending on the elective course chosen.

### Curriculum Recommendations

It is recommended that students make Lab Science, Math, Humanities/Foreign Language/Fine Arts, and Social Science Elective choices based upon particular 4-year colleges' transfer requirements and general education cores.

It is recommended to take AMER110G Introduction to American Studies, and ENGL110G College Composition I in the first semester.

# ANALYTICS

## ASSOCIATE IN SCIENCE

The Analytics program is designed to meet many of the first- and second-year Baccalaureate requirements including the computer programming, mathematics, and database skills essential to complete a 4-year degree. The transfer program has been developed in consultation with the Analytics Department at the University of New Hampshire, Manchester, in order to align program requirements for transfer purposes. Upon completion, students will be in a strong position to complete the remainder of the Bachelor of Science degree with two years of additional study. Other degrees students may wish to pursue include a B.S. in Math/Computer Science or B.S. Statistics.

The Associate in Science degree in Analytics is more than just a transfer degree. Students who complete the degree will be in a position to be employed as a junior data scientist. The 2 years of bachelor degree completion primarily focus on the field in which (ultimately) a student might wish to concentrate his/her expertise. The associate degree alone provides an individual with all of the data analytical skills needed to begin a career. Job experience and domain expertise will allow the person to gain more ability to advance his/her career beyond simply junior and entry-level status.

This degree emulates the first two years of four-year college and university degrees in (data) analytics, and prepares students to be successful in one of the disciplines that relies on data science to answer questions, drive business decisions, and conduct research.

### Program Outcomes:

Select a topic of research for which sufficient data exist or data can be simulated in order to answer a question involving statistical analysis, and create a reproducible research report that incorporates and illustrates competent knowledge with the following:

- Use advanced R packages and constructs and create R functions
- Develop reproducible analysis report using Markdown and generated in 3 formats: html, Word doc and pdf doc
- Apply the Cross-Industry Standard Process for Data Mining (CRISP–DM) methodology to the analysis project
- Perform linear regression and multiple linear regression on real-world data sets that are applicable to the project
- Apply statistical methods such as clustering, classification, time series analysis and/or factor analysis as applicable to the project selected and communicate results of these analyses
- Develop advanced visualizations in support of communicating results of statistical analysis as part of the final report in an aesthetically appropriate manner

DEGREE PROGRAM FIRST YEAR				
Fall Semester		TH	LAB	CR
FYE101G	First Year Seminar <sup>1</sup>	1	0	1
CIS112G	Introduction to Object Oriented Programming	3	0	3
MATH210G	Pre-Calculus	4	0	4
ENGL110G	College Composition I	4	0	4
	Lab Science Elective*	3	3	4
<b>Semester Total:</b>		<b>15</b>	<b>3</b>	<b>16</b>
<sup>1</sup> Any one-credit FYE course fulfills this requirement.				

<b>Spring Semester</b>		<b>TH</b>	<b>LAB</b>	<b>CR</b>
CIS148G	Introduction to Java Programming	2	2	3
BUS110G	Introduction to Business	3	0	3
	Foreign Language/Humanities/Fine Arts Elective <sup>^</sup> – ARTS125G Preferred**	3	0	3
MATH230G	Calculus I	4	0	4
MATH235G***	Statistics for Engineers and Scientists	4	0	4
<b>Semester Total:</b>		<b>17</b>	<b>2</b>	<b>17</b>
<b>First Year Total:</b>		<b>32</b>	<b>5</b>	<b>33</b>

\* Lab Sciences: BIOL106G, 150G, 108G, 109G, 110G, 120G, 160G, 210G, BTEC105G, CHEM110G, 115G, 116G, PHYS135G, 136G, 290G, 295G

\*\* Must choose from ARTS123G, 105G, 117G, 125G, 127G, or 137G

\*\*\* IF MATH150G/152G is needed, students will need to take the course in the summer prior to year one in order to be on track; these students should take MATH235G in spring of year two.

#### **Summer Semester Prior to Year One (if needed)**

MATH150/152G	College Algebra	4	0	4
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<sup>^</sup>Theory, lab, and credit hours will vary depending on the elective course chosen.

#### **DEGREE PROGRAM SECOND YEAR**

<b>Fall Semester</b>		<b>TH</b>	<b>LAB</b>	<b>CR</b>
DATA210G	Elements of Data Science	3	0	3
CIS113G	Database Design and Management	2	2	3
MATH245G	Linear Algebra	4	0	4
ENGL215G	Writing Technical Documents	3	0	3
SOC120G	Society and Technological Change	3	0	3
<b>Semester Total:</b>		<b>16</b>	<b>2</b>	<b>16</b>

<b>Spring Semester</b>		<b>TH</b>	<b>LAB</b>	<b>CR</b>
DATA220G	Introduction to Data Analysis with R	3	0	3
CIS210G	Data Structures with Elementary Algorithms	3	2	4
MATH250G (MATH235G)*	Calculus II or (Statistics for Engineers and Scientists)	4 (4)	0 (0)	4 (4)
CIS177G	Introduction to Python	2	2	3
<b>Semester Total:</b>		<b>14</b>	<b>4</b>	<b>14</b>

<b>Summer Semester</b>		<b>TH</b>	<b>LAB</b>	<b>CR</b>
DATA225G	Analytics Capstone	2	0	2
<b>Semester Total:</b>		<b>2</b>	<b>0</b>	<b>2</b>

**Second Year Total: 32 6 32**

**Degree Total: 64 11 65**

\* Students who started with MATH150G/152G will take MATH235G in 2nd year instead of MATH250G Calculus II; Total MATH credits: 20

# **AUTOMOTIVE TECHNOLOGY CERTIFICATE**

The goal of this program is to provide students with skills and knowledge required for entry-level technicians performing inspection, diagnostics, maintenance and repair on automobiles and light trucks. Students will use investigative skills as they learn to locate problems, use a variety of power tools as well as hand tools and diagnostic tools as they work on parts, and work with technical reference materials. Applied math and computer skills will be incorporated throughout the curriculum. Students will prepare for Student Certification ASE exams in some areas and entry level employment in the field. This program will be offered evenings at the Richard W. Creteau Regional Technology Center in Rochester, New Hampshire, and can be completed in three semesters.

## **Students will be able to:**

The goal of the Automotive Technician program is to prepare the student to work in the increasingly sophisticated and complex field of automotive technology through a combination of classroom instruction and hands-on skill development. Technicians must be able to work with electronic diagnostic equipment, read and understand technical manuals, investigate to find the cause of a problem, and connect effectively with the customer. They use a variety of tools, including both manual and high-tech equipment, to perform repairs.

After successful completion of the program, students will be able to:

- Demonstrate skills and knowledge required for passing the Student Certification ASE exams, including inspection, diagnostics, maintenance and repair of vehicles;
- Demonstrate safe and appropriate use and care of tools and equipment in the automotive lab;
- Diagnose, repair and document automotive systems including electrical, brakes, engines, suspensions, and steering;
- Inspect a vehicle, use a diagnostic approach to determine cause of operating problems, and decide action to take; complete a NH State Vehicle Inspection;
- Compare and contrast alternate actions to determine whether to repair or replace a part;
- Use appropriate software for information retrieval, analysis, and reporting;
- Communicate effectively with coworkers and customers.

## **Technical Standards**

This program includes work in an automotive lab and involves physically performing functions that require the following:

- Normal vision for reading instructions and for performing tasks, including inspecting parts for quality (corrective vision is acceptable).
- Mobility and strength for performing tasks that require reaching, walking, standing, and safely lifting up to 20 lbs.
- Ability to hear sounds of equipment, for equipment operation and safety.

## **Admissions Requirements**

- Complete an application for the program.
- Provide proof of high school completion or equivalent.
- Provide an official copy of prior college transcripts, if appropriate.
- Must possess a valid driver's license.

## **Health and Safety Considerations**

This program includes work in an automotive lab where potentially hazardous equipment and materials are used. Students will be taught industry standards for safety and will be expected to

follow all safety procedures. Personal protective equipment must be worn. Students will provide their own safety glasses, and boots or shoes before the first class begins.

### Transfer Credit Policy

Students may transfer to either LRCC or MCC to complete an Associate Degree in Automotive Technology where advanced automotive technology courses are offered.

<b>FALL SEMESTER</b>				
<b>Course</b>		<b>TH</b>	<b>LAB</b>	<b>CR</b>
AUTO110G	Automotive Maintenance and Light Repair	2	4	4
AUTO125G	Automotive Electronics I	3	3	4
<b>Semester Total:</b>		<b>5</b>	<b>7</b>	<b>8</b>
<b>SPRING SEMESTER</b>				
AUTO120G	Engine Mechanical	2	6	4
AUTO130G	Automotive Electronics II	2	4	4
<b>Semester Total:</b>		<b>4</b>	<b>10</b>	<b>8</b>
<b>SUMMER SEMESTER</b>				
AUTO140G	Braking Systems	2	4	4
AUTO150G	Suspension and Steering	2	6	4
<b>Semester Total:</b>		<b>4</b>	<b>10</b>	<b>8</b>
<b>Certificate Total:</b>		<b>13</b>	<b>27</b>	<b>24</b>

## Automotive Technology Required Tool List

**Anticipated Cost: \$1,800 to \$2,400**

Students will need to purchase the following tools out of pocket before the third semester classes begin:

### Wrenches

- Combination Wrench set (8mm - 24mm)
- Torque wrench (3/8 drive beam type)
- Torque wrench (1/2" drive 250FT lb.)
- Wrench (8" adjustable)

### Ratchets and Sockets

- 1/2" drive sockets (6 point) 10-24mm
- 1/2" drive (6"-10") extension
- 1/2" deep impact sockets 10-27mm
- 1/2" drive to 3/8" adapter
- 1/2" drive universal impact
- 1/2" drive ratchet
- 3/8" drive sockets (6 point) 7-19mm
- 3/8" drive 3", 6" & 12" extensions
- 3/8" drive to 1/4" adapter
- 3/8" drive universal impact
- 3/8" Ratchet
- 1/4" drive socket set with ratchet & extensions
- Hex Key sockets 1.5mm - 10mm

Torx bit sockets (male & female) T8-60  
Spark plug sockets (9/16", 5/8" & 13/16")  
12 pt axle nut sockets

### **Screwdrivers**

Screwdriver set (common)  
Screwdriver set (Phillips)

### **Pliers**

Pliers (slip joint)  
Pliers (needle nose)  
Pliers (locking - vise grip)  
Pliers (diagonal cutters)  
Pliers (10" channel lock)

### **Hammers**

Hammer (soft face)  
Hammer ball peen (large)  
Hammer ball peen (small)  
Hammer Dead blow

### **Test Equipment**

Test light (12 volt)  
Fluke auto-ranging meter (88-V Required)  
Electrical test leads  
T- Pins  
Thermometer

### **Other**

Lockable Seven Draw Bench Tool box  
Scraper (razor blade)  
Feeler gauges (metric)  
Steel rule (6")  
Tire pressure gauge  
Tire valve core remover  
Safety glasses  
1/2" drive pneumatic impact wrench with fitting  
Pry-bar  
Fender cover  
Air chuck with "Tru-flate" fitting  
Tape measure (std/metric)  
Telescoping magnet  
LED work/drop light  
Hearing protection  
Work uniforms  
Netbook/Laptop computer with software  
4GB flash drive

Gainful Employment disclosure information is available at:  
<http://greatbay.edu/sites/default/files/GE/automotive/47.0604-Gedt.html>

# AVIATION TECHNOLOGY HELICOPTER ASSOCIATE IN SCIENCE

**\*Please note: The Aviation Technology Helicopter program is in a teach-out phase and is no longer accepting new students.**

## **Program Description**

Many professional helicopter pilots flying today received training from the US Army during the Vietnam conflict. These pilots are approaching mandatory retirement age and as a result there is a growing need for qualified helicopter pilots. Demand in helicopter pilot career paths such as Search & Rescue, Emergency Medical Services (EMS), Oil Exploration, Charter Services, Flight Instruction, Heavy Lift, Tourism, Law Enforcement, News Reporting and Executive Transport is increasing. The Aviation Technology Helicopter Pilot Program provides the graduate with the Federal Aviation Administration (FAA) certifications required to start your career as a professional helicopter pilot in addition to providing foundational education in the Science, Mathematics and Liberal Arts.

Instruction is provided by FAA-certified flight and ground instructors in primary, instrument, commercial and instructor ratings. Students must complete certification within the semester of that course.

The goal of the program is to provide our students with a comprehensive academic and aviation foundation, emphasizing technical/flying skills, integrity, decision-making, leadership, dedication and professionalism. The program provides students the skills, FAA ratings and academic degree to be highly competitive as they enter the employment market in pursuit of a position as a professional helicopter pilot. The program can admit students with absolutely no experience in helicopter piloting and is completed on a full-time basis in two years (summer session is required). Students matriculated in the Aviation Technology Helicopter A.S. Degree will be charged New Hampshire In-State tuition for courses required for the program.

## **Students will be able to:**

Students graduate with all of the certifications and licenses necessary to immediately start a career as a helicopter pilot. Graduates will hold a Commercial Pilot License/Helicopter with an Instrument Rating/Helicopter and Instructor-Instrument Certification/Helicopter. In addition to the Professional Pilot career path, the program provides a good starting place for entry into such career fields as Airport Management, Aircraft Maintenance, Airport Line Management, Fixed-Base Operation Management and Airport Maintenance.

## **Admissions Requirements**

1. Complete an application to the college.
2. Provide proof of high school completion or equivalent.
3. Take placement test in reading, writing, computers, and math; place into math 084 or higher
4. Interview with program chair.
5. Second-Class Medical Certificate

Applicants will be contacted by Admissions to set up interviews with the program director once the first three requirements have been met.

<b>DEGREE PROGRAM - FIRST YEAR</b>					
<b>Semester 1</b>			<b>TH</b>	<b>LAB</b>	<b>CR</b>
AVTN150G	Private Pilot I Ground		3	0	3
AVTN151G	Private Pilot I Flight**		0	8	4
FYE101G	First Year Seminar		1	0	1
ENGL110G	College Composition I		4	0	4
<i>Total</i>			8	8	12

<b>Semester 2</b>			<b>TH</b>	<b>LAB</b>	<b>CR</b>
AVTN160G	Private Pilot II Ground		3	0	3
AVTN161G	Private Pilot II Flight**		0	8	4
ENGL210G	Oral Communications		3	0	3
MATH150G/152G	College Algebra (Plus)		4/5	0	4/5
<i>Total</i>			10/11	8	14/15

<b>Semester 3</b>			<b>TH</b>	<b>LAB</b>	<b>CR</b>
AVTN170G	Instrument Pilot Ground		3	0	3
AVTN171G	Instrument Pilot Flight***		0	8	4
	Social Science elective		3	0	3
	Liberal Arts Elective*		3	0	3
<i>Total</i>			9	8	13

<b>DEGREE PROGRAM - SECOND YEAR</b>					
<b>Semester 4</b>			<b>TH</b>	<b>LAB</b>	<b>CR</b>
AVTN250G	Commercial Pilot Ground		3	0	3
AVTN251G	Commercial Pilot Flight**		0	10	5
PHYS135G	College Physics		3	3	4
CRIT150G	Critical Thinking in the Humanities		3	0	3
<i>Total</i>			9	13	15

<b>Semester 5</b>			<b>TH</b>	<b>LAB</b>	<b>CR</b>
AVTN252G	Certified Flight Instructor Ground		1.5	0	1.5
AVTN253G	Certified Flight Instructor Flight**		0	4	2
AVTN254G	Certified Flight Instructor Instrument Ground		1.5	0	1.5
AVTN255G	Certified Flight Instructor Instrument Flight***		0	4	2
	Liberal Arts elective*		3	0	3
<i>Total</i>			6	8	10
<b>TOTAL DEGREE CREDITS – 64/65</b>					

\* Can be fulfilled by MATH145G Prerequisite to MATH150G or other Liberal Arts Electives

\*\* Either R22 or R44 helicopter

\*\*\* R44 helicopter required

<b>MISCELLANEOUS EXPENSES</b>							
<b>Semester</b>	<b>Item</b>	<b>Item Description</b>	<b>Est.Low Price</b>	<b>Est. High Price</b>	<b>Vendor Option 1</b>	<b>Vendor Option 2</b>	<b>Vendor option 3</b>
Purchase first week of Semester 1	iPad	common	\$500	\$1,500	Amazon	Best Buy	Walmart



Purchase first week of Semester 1	ForeFlight Software	Required proprietary flight planning software, cost is for annual subscription	\$100/year	-	foreflight.com	n/a	n/a
Purchase first week of Semester 1	Flight Suit	Nomex Military Standard flight suit model # CWU 27/P	\$174.99	\$228.99	TacticalGear.com	Gibson &	Propper.com
Purchase first week of Semester 1	Noise cancellation headset	"Active cancellation" is considered the better product when compared to "nonactive cancellation" headset	\$300 (for nonactive)	\$1500 (for high-end active)	Bose	LightSpeed	David-Clark
Purchase in	Flight Computer	E6B circular slide rule, industry standard	\$6	\$30	Sporty's Pilot Shop	Avia	Sky Geek
Purchase in	Plotter	combination ruler and protractor, hand tool used for ETA calculations	\$9	\$17	Sporty's Pilot Shop	Avia II	Sky Geek
Purchase in	VFR Sectional Charts	paper charts used to plot courses, 2-3 needed for program	\$12/ea	-	mypilotstore.com	pilotshop.com	marvgolden.com
Purchase in	Instrument Charts	paper charts used to plan, file and fly instrument flights. 2-3 needed for program	\$12/ea	-	mypilotstore.com	pilotshop.com	marvgolden.com
Purchase spread over Semesters 1-5	Books, DVDs, Study Guides	Various reading material will be assigned by instructors. Some material is available free from the FAA. Other materials may be purchased.	\$150/semester	-	assigned by instructor	assigned by instructor	assigned by instructor

## HELICOPTER RATES FOR STUDENTS – BOTH R22 AND SOME R44

Rates for students using both R22 and some required R44. R22 for students 220 lb. and under. The VA only pays for the minimum flight hours.

Course	Sem	R22 Dual Instruction \$300.00/hr PVT Pilot \$325/hr ALL others	R22 Solo Flight \$300.00/hr	R44 Dual Instruction \$450.00/hr Required	Flight Simulator \$80.00/hr	Pre/Post Briefings \$45.00/hr	Ground School \$40.00/hr PVT Pilot \$45.00/hr ALL others	FAA Exam Flight Fees	Admin Fee	= Total
AVTN150G Private Pilot I Ground	1						15 hrs (15x40 =\$600)		\$578.00	\$1,178.00
AVTN151G Private Pilot I Flight	1	27 hrs (27X300= \$8,100)	3 hrs (3X300= \$900)		10 hrs (10X80 =\$800)	20 hrs (20X45= \$900)			\$3,620.00	\$14,320.00
AVTN160G Private Pilot II Ground	2						15 hrs (15x40 =\$600)		\$578.00	\$1,178.00
AVTN161G Private Pilot II Flight	2	28 hrs (28X300= \$8,400)	7 hrs (7X300= \$2,100)		10 hrs (10X80 =\$800)	20 hrs (20X45= \$900)		\$600.00	\$3,872.00	\$16,672.00

AVTN170G Instrument Pilot Ground	3						20 hrs (20X45 =\$900)		\$858.00	\$1,758.00
AVTN171G Instrument Pilot Flight (Note: R44 required)	3			40 hrs (40X450= \$18,000)	10 hrs (10X80 =\$800)	20 hrs (20X45= \$900)		\$850.00	\$3,466.00	\$24,016.00
AVTN250G Commercial Pilot Ground	4						15 hrs (15X45 =\$675)		\$831.00	\$1,506.00
AVTN251G Commercial Pilot Flight	4	50 hrs (50X325= \$16,250)	10 hrs (10X300 =\$3,000)		10 hrs (10X80 =\$800)	40 hrs (40X45= \$1,800)		\$600.00	\$3,944.00	\$26,394.00
AVTN252G Certified Flight Instructor Ground	5						15 hrs (15X45 =\$675)		\$456.00	\$1,131.00
AVTN253G Certified Flight Instructor Flight	5	25 hrs (25X325= \$8,125)				20 hrs (20X45= \$900)		\$600.00	\$1,655.00	\$11,280.00
AVTN254G Certified Flight Instructor Instrument Ground	5						15 hrs (15X45 =\$675)		\$456.00	\$1,131.00
AVTN255G Certified Flight Instructor Instrument Flight	5			10 hrs (10X450= \$4,500)		10 hrs (10X45= \$450)		\$850.00	\$1,196.00	\$6,996.00

## HELICOPTER RATES FOR STUDENTS – USING ONLY R44

Rates for students using only R44. For students over 220 lb. – 300 lb. The VA only pays for the minimum flight hours.

Course	Sem	R44 Dual Instruc tion \$450.00/ hr	R44 Solo Flight \$425.00 /hr	Flight Simula tor \$80.00 /hr	Pre/Pos t Briefing s \$45.00/ hr	Ground School \$40.00 /hr PVT Pilot \$45.00 /hr ALL others	FAA Exam Flight Fees	Admin Fee	= Total
AVTN150G Private Pilot I Ground	1					15 hrs (15x40 =\$600)		\$578.00	\$1,178.00
AVTN151G Private Pilot I Flight	1	27 hrs (27X450= \$12,150)	3 hrs (3X425= \$1,275)	10 hrs (10X80 =\$800)	20 hrs (20X45= \$900)			\$4,151.00	\$19,276.00
AVTN160G Private Pilot II Ground	2					15 hrs (15x40 =\$600)		\$578.00	\$1,178.00
AVTN161G Private Pilot II Flight	2	28 hrs (28X450= \$12,600)	7 hrs (7X425= \$2,975)	10 hrs (10X80 =\$800)	20 hrs (20X45= \$900)		\$850.00	\$4,511.00	\$22,636.00
AVTN170G Instrument Pilot Ground	3					20 hrs (20X45 =\$900)		\$858.00	\$1,758.00
AVTN171G Instrument Pilot Flight	3	40 hrs (40X450= \$18,000)		10 hrs (10X80 =\$800)	20 hrs (20X45= \$900)		\$850.00	\$3,466.00	\$24,016.00
AVTN250G	4					15 hrs		\$831.00	\$1,506.00

Commercial Pilot Ground						(15X45 =\$675)			
AVTN251G Commercial Pilot Flight	4	50 hrs (50X450= \$22,500)	10 hrs (10X425 =\$4,250)	10 hrs (10X80 =\$800)	40 hrs (40X45= \$1,800)		\$850.00	\$4,874.00	\$35,074.00
AVTN252G Certified Flight Instructor Ground	5					15 hrs (15X45 =\$675)		\$456.00	\$1,131.00
AVTN253G Certified Flight Instructor Flight	5	25 hrs (25X450= \$11,250)			20 hrs (20X45= \$900)		\$850.00	\$2,060.00	\$15,060.00
AVTN254G Certified Flight Instructor Instrument Ground	5					15 hrs (15X45 =\$675)		\$456.00	\$1,131.00
AVTN255G Certified Flight Instructor Instrument Flight	5	10 hrs (10X450= \$4,500)			10 hrs (10X45= \$900)		\$850.00	\$746.00	\$6,996.00

<b>FAA CERTIFICATION EXAM FEES (Out of Pocket)</b>	
<b>\$165.00 per FAA written test (6 total)</b>	
<b>\$600.00 per FAA practical test (5 total)</b>	
Semester 1	Not applicable
Semester 2	\$765.00
Semester 3	\$765.00
Semester 4	\$765.00
Semester 5	\$1,695.00
<b>Total</b>	<b>\$3,990.00</b>

# BIOLOGICAL SCIENCE

## ASSOCIATE IN ARTS

The Biological Science Associate in Arts Degree serves students who are interested in Biological Sciences and intend to transfer to a 4-year institution, but are either unsure of the specific transfer program that interests them, are potentially interested in a Biology minor, or who are interested in programs such as Wildlife Conservation, Sustainable Agriculture, or Marine Biology that require a more varied set of major-related courses at the sophomore level. In comparison to the A.S. degree in Biological Science, students enrolled in the A.A. degree program in Biological Science will graduate with a greater number of general education credits completed, but with fewer credits in the sciences. When selected appropriately, all courses are transferrable to the University of New Hampshire, with the exception of College Algebra.

### Program Outcomes

Students will be able to:

- Understand theoretical principles across a broad range of sub-disciplines in biological sciences and chemistry.
- Understand and be able to apply principles of mathematics as they pertain to the study of biological science and chemistry.
- Understand and be able to apply the scientific method.
- Understand and be able to execute a wide variety of laboratory techniques in microbiology, biochemistry, cell biology, ecology, genetics, and chemistry.
- Generate and maintain accurate lab documentation, including a laboratory notebook.
- Analyze and draw conclusions from generated scientific data, and present findings both orally and in formal laboratory reports.
- Conduct basic bioinformatics-based analysis.
- Qualify for transfer to a four-year college or university with the necessary foundation in biology, chemistry, and mathematics for upper level study in a wide variety of biological disciplines.

### Technical Standards

Students enrolling in Biological Science degree programs must, in addition to meeting the specific pre-requisite requirements for each course, meet the following general, technical standards:

- Students must be able to comprehend the English language, both oral and written, and must have sufficient manual dexterity to produce legible written documents in a timely manner.
- Students must be able to sit or stand at a desk/ laboratory bench, and must possess the necessary focus to stay on task for extended periods of time.
- Students must be able to comprehend and follow instructions in the classroom and laboratory in a timely manner.
- Students must possess the necessary manual dexterity to carry out assigned laboratory tasks.

Students must be able to perform required classroom and laboratory operations, including mathematical operations, without reference to notes, as directed.

DEGREE PROGRAM FIRST YEAR				
Fall Semester		TH	LAB	CR
ENGL110G	College Composition I	4	0	4
BIOL108G	General Biology I	3	3	4

MATH150G <sup>1</sup>	College Algebra	4	0	4
	Foreign Language/Humanities/Fine Arts Elective*	3	0	3
<b>Semester Total:</b>		<b>14</b>	<b>3</b>	<b>15</b>
<b>Spring Semester</b>		<b>TH</b>	<b>LAB</b>	<b>CR</b>
BIOL109G	General Biology II	3	3	4
CHEM115G	General Chemistry I	3	3	4
MATH210G <sup>2</sup>	Pre-Calculus	4	0	4
ENGL214G	Introduction to Creative Nonfiction	3	0	3
	Social Science Elective	3	0	3
<b>Semester Total:</b>		<b>16</b>	<b>6</b>	<b>18</b>
<b>First Year Total:</b>		<b>30</b>	<b>9</b>	<b>33</b>

(Students should consider completing one of these courses over the summer.)

<b>DEGREE PROGRAM SECOND YEAR</b>				
<b>Fall Semester</b>		<b>TH</b>	<b>LAB</b>	<b>CR</b>
CHEM116G	General Chemistry II	3	3	4
	Math Elective* <sup>4</sup> / Lab Science Elective* <sup>4</sup>	3	3	4
	Social Science Elective	3	0	3
	Foreign Language/Humanities/Fine Arts Elective*	3	0	3
<b>Semester Total:</b>		<b>12</b>	<b>6</b>	<b>14</b>
<b>Spring Semester</b>		<b>TH</b>	<b>LAB</b>	<b>CR</b>
	Biology Elective <sup>3</sup>	3	3	4
	Math Elective* <sup>4</sup> / Lab Science Elective* <sup>4</sup>	3	3	4
	Social Science Elective	3	0	3
	Foreign Language/Humanities/Fine Arts Elective*	3	0	3
<b>Semester Total:</b>		<b>12</b>	<b>6</b>	<b>14</b>
<b>Second Year Total:</b>		<b>24</b>	<b>12</b>	<b>28</b>
<b>Degree Total:</b>		<b>54</b>	<b>21</b>	<b>61</b>

\*Theory, lab, and credit hours may vary depending on the elective course chosen.

<sup>1</sup>Students who do not test directly into MATH150G (College Algebra) may substitute MATH152G (College Algebra Plus). Students with appropriate test scores may substitute a higher level

course from the Calculus Math pathway: MATH210G (Pre-Calculus), MATH230G (Calculus I), MATH235G (Statistics for Engineers and Scientists), or MATH250G (Calculus II).

<sup>2</sup>Students with appropriate test scores or the appropriate prerequisite may substitute a higher level course from the Calculus Math pathway: MATH230G (Calculus I), MATH235G (Statistics for Engineers and Scientists), MATH250G (Calculus II), or MATH265G (Differential Equations).

<sup>3</sup>Choose from BIOL210G (Microbiology), BIOL220G (Genetics), or BIOL230G (Ecology).

<sup>4</sup>Choose from BIOL110G (A&P I), BIOL120G (A&P II), BIOL210G (Microbiology), BIOL220G (Genetics), BIOL230G (Ecology), CHEM200G (Organic Chemistry), CHEM205G (Biochemistry), PHYS135G (College Physics I), PHYS136G (College Physics II), PHYS290G (University Physics I), PHYS295G (University Physics II), MATH230G (Calculus I), MATH235G (Probability and Statistics for Engineering), or MATH 250G (Calculus II).

# BIOLOGICAL SCIENCE

## ASSOCIATE IN SCIENCE

The Biological Science Associate in Science degree serves students who intend to transfer to a 4-year institution to pursue a bachelor's degree with a major field related to biological or biomedical sciences. It is designed to replicate the course schedule for the freshman and sophomore years at a bachelor's degree granting institution such as the University of New Hampshire, and with sufficiently high math placement, is fully transferable to the College of Life Science and Agriculture at UNH.

### Program Outcomes

Students will be able to:

- Understand theoretical principles across a broad range of sub-disciplines in biological sciences and chemistry.
- Understand and be able to apply principles of mathematics as they pertain to the study of biological science and chemistry.
- Understand and be able to apply the scientific method.
- Understand and be able to execute a wide variety of laboratory techniques in microbiology, biochemistry, cell biology, ecology, genetics, and chemistry.
- Generate and maintain accurate lab documentation, including a laboratory notebook.
- Analyze and draw conclusions from generated scientific data, and present findings both orally and in formal laboratory reports.
- Conduct basic bioinformatics-based analysis.
- Qualify for transfer to a four-year college or university with the necessary foundation in biology, chemistry, and mathematics for upper level study in a wide variety of biological disciplines.

### Technical Standards

Students enrolling in Biological Science degree programs must, in addition to meeting the specific pre-requisite requirements for each course, meet the following general, technical standards:

- Students must be able to comprehend the English language, both oral and written, and must have sufficient manual dexterity to produce legible written documents in a timely manner.
- Students must be able to sit or stand at a desk/ laboratory bench, and must possess the necessary focus to stay on task for extended periods of time.
- Students must be able to comprehend and follow instructions in the classroom and laboratory in a timely manner.
- Students must possess the necessary manual dexterity to carry out assigned laboratory tasks.
- Students must be able to perform required classroom and laboratory operations, including mathematical operations, without reference to notes, as directed.

DEGREE PROGRAM FIRST YEAR				
Fall Semester		TH	LAB	CR
ENGL110G	College Composition I	4	0	4
BIOL108G	General Biology I	3	3	4
MATH150G	College Algebra <sup>1</sup>	4	0	4
CHEM115G	General Chemistry I	3	3	4

<b>Semester Total:</b>		<b>14</b>	<b>6</b>	<b>16</b>
<b>Spring Semester</b>		<b>TH</b>	<b>LAB</b>	<b>CR</b>
BIOL109G	General Biology II	3	3	4
CHEM116G	General Chemistry II	3	3	4
MATH210G <sup>3</sup>	Pre-Calculus	4	0	4
ENGL214G	Introduction to Creative Nonfiction	3	0	3
<b>Semester Total:</b>		<b>13</b>	<b>6</b>	<b>15</b>
<b>First Year Total:</b>		<b>27</b>	<b>12</b>	<b>31</b>

<b>DEGREE PROGRAM SECOND YEAR</b>				
<b>Fall Semester</b>		<b>TH</b>	<b>LAB</b>	<b>CR</b>
BIOLXXXG	Biology Elective <sup>4</sup>	3	3	4
	Math/Science Elective <sup>5*</sup>	4/3	0/3	4/4
	Math/Science Elective <sup>5*</sup>	4/3	0/3	4/4
	Humanities/Fine Arts Elective*	3	0	3
<b>Semester Total:</b>		<b>12-14</b>	<b>3-9</b>	<b>15</b>
<b>Spring Semester</b>		<b>TH</b>	<b>LAB</b>	<b>CR</b>
	Biology Elective <sup>4</sup>	3	3	4
	Math/Science Elective <sup>5*</sup>	4/3	0/3	4/4
	Social Science Elective*	3	0	3
	Open Elective <sup>2*</sup>	3	0	3
<b>Semester Total:</b>		<b>12-13</b>	<b>3-6</b>	<b>14</b>
<b>Second Year Total:</b>		<b>24-27</b>	<b>6-15</b>	<b>29</b>
<b>Degree Total:</b>		<b>51-54</b>	<b>18-27</b>	<b>60</b>

*\*Theory, lab, and credit hours may vary depending on the elective course chosen.*

<sup>1</sup>Students who do not test directly into MATH150G may substitute MATH152G. Students with appropriate test scores may substitute a higher level course from the Calculus math pathway: MATH210G, MATH230G, MATH235G, MATH250G.

<sup>2</sup>Students intending to transfer should take care to select a course that will transfer appropriately to their intended institution.

<sup>3</sup>Students with appropriate test scores or the appropriate prerequisite may substitute a higher level course from the Calculus math pathway: MATH230G, MATH235G, MATH250G, MATH265G.



<sup>4</sup>BIOLXXXG: Depending on program and pathway, students should choose one of the following courses: BIOL210G (Microbiology), BIOL220G (Principles of Genetics), BIOL230G (Ecology), BIOL110G (A&P I), BIOL120G (A&PII).

<sup>5</sup>Math/Science Elective: Depending on program and pathway, students should choose two courses from the following list: BIOL110G (A&P I), BIOL120G (A&PII), BIOL210G (Microbiology), BIOL220G (Principles of Genetics), BIOL230G (Ecology), CHEM200G (Organic Chemistry), CHEM205G (Biochemistry), MATH230G (Calculus I), MATH235G (Probability and Statistics for Engineering), MATH250G (Calculus II), PHYS135G (College Physics I), PHYS136G (College Physics II), PHYS290G (University Physics I), PHYS295G (University Physics II)

Note: at least two of the courses taken as *Math or Science Electives* must be at the 200 level.

# BIOTECHNOLOGY

## ASSOCIATE IN SCIENCE CERTIFICATES

Biotechnology is a subject area that has enormous implications for the future of the 21st century. It already has a significant impact on our lives, and will continue to revolutionize the ways in which we diagnose and treat disease, lengthen the life span, feed the planet, and remediate the environment. Our nationally recognized Biotechnology program prepares students with the skills and knowledge needed to enter the biotechnology industry or to proceed to further education a four-year college or university. Current graduates may be found in a variety of biotechnology companies, working as Lab Technicians, Manufacturing Associates, Quality Control and Quality Assurance Technicians, and as Validation Consultants.

### Program Outcomes

Students graduating with the A.S. degree in Biotechnology will be able to:

- Understand the role of biotechnology in human experience, past and present.
- Understand the “benchtop to bottle” process of bringing a biopharmaceutical or other biotechnology-based product to market.
- Understand the Central Dogma, and its role as the theoretical foundation of modern biotechnology.
- Understand and be able to apply the scientific method.
- Understand and be able to execute a wide variety of laboratory techniques in microbiology, biochemistry and molecular genetics, including (but not limited to) solution preparation, gene cloning, DNA extraction and amplification, library construction, hybridization, forensic analysis, cell culture, and protein production, purification and verification.
- Generate and maintain accurate lab documentation, including laboratory notebooks, batch records and log books.
- Understand and adhere to the documentation guidelines of cGMP, when required
- Analyze and draw conclusions from generated scientific data, and present findings in a formal laboratory report.
- Understand the basic principles of genomics, proteomics and systems approaches in biotechnology.
- Conduct basic bioinformatics-based analysis.
- Use critical thinking and principles of logic to analyze ethical issues raised in the practice of biotechnology.
- Qualify for entry level work in the biomanufacturing sector of the biotechnology industry.
- Qualify for transfer to a four-year college or university with the necessary foundation in biology, chemistry and mathematics for upper level study in a wide variety of biological disciplines.

### Health and Internship Considerations

The Biotechnology program offers an optional externship. Participation in this externship requires the student to follow the College Immunization Policy. See page 50. Depending upon the site, the student may be required to possess and maintain professional liability insurance.

For unpaid externships, the student must possess and maintain accident insurance. See page 64 for purchase options available through the College.

### Technical Standards

Students enrolling in degree and certificate programs, and/or enrolling in individual courses within the Biotechnology Program, in addition to meeting the specific prerequisite requirements for each course, must meet the following general, technical standards:

- Students must be able to comprehend the English language, both oral and written.
- Students must have sufficient manual dexterity to produce legible written documents in a timely manner. Appropriate assistive technology may be used, as needed.
- Students must be able to sit or stand at a desk and laboratory bench, and must possess the necessary focus to stay on task for extended periods of time.
- Students must be able to comprehend and follow instructions in the classroom and laboratory in a timely manner.
- Students must possess the necessary manual dexterity to carry out assigned laboratory tasks.
- Students must be able to perform required classroom and laboratory operations, including mathematical operations, without reference to notes, as directed.

### Transfer Credit Policy

In addition to Great Bay transfer credit policies, transfer of courses in Biotechnology more than ten years old will be evaluated by the department chair on an individual basis.

<b>DEGREE PROGRAM FIRST YEAR (PATHWAY I)</b>				
<b>Fall Semester</b>		<b>TH</b>	<b>LAB</b>	<b>CR</b>
	Social Science Elective	3	0	3
BIOL108G	General Biology I	3	3	4
MATH145G/147G	Quantitative Reasoning/Plus	4/5	0	4/5
ENGL110G	College Composition I	4	0	4
<b>Semester Total:</b>		<b>14-15</b>	<b>6</b>	<b>15-16</b>
<b>Spring Semester</b>		<b>TH</b>	<b>LAB</b>	<b>CR</b>
BTEC205G	Bioethics*	3	0	3
CHEM115G	General Chemistry I	3	3	4
BTEC 105G	Intro to Biotechnology	3	3	4
MATH 225G	Probability and Statistics	4	0	4
<b>Semester Total:</b>		<b>13</b>	<b>6</b>	<b>15</b>
<b>First Year Total:</b>		<b>27-28</b>	<b>12</b>	<b>30-31</b>
*PHIL240G Ethics may be substituted for BTEC205G Bioethics.				

<b>DEGREE PROGRAM SECOND YEAR</b>				
<b>Fall Semester</b>		<b>TH</b>	<b>LAB</b>	<b>CR</b>
BTEC210G	Biotechnology Research	2	6	4
CHEM116G	General Chemistry II	3	3	4
BIOL109G	General Biology II	3	3	4
	Technical Elective^	3/4	0/3	3/4

	Foreign Language/Humanities/Fine Arts Elective <sup>^</sup>	3	0	3
	<b>Semester Total:</b>	<b>14-15</b>	<b>12-15</b>	<b>18-19</b>

<b>Spring Semester</b>		<b>TH</b>	<b>LAB</b>	<b>CR</b>
BTEC220G	Biomanufacturing	2	6	4
BIOL210G	Microbiology	3	3	4
	Technical Elective <sup>^</sup>	3/4	0/3	3/4
	Technical Elective <sup>^</sup>	3/4	0/3	3/4
	<b>Semester Total:</b>	<b>11-12</b>	<b>9-15</b>	<b>13-15</b>
	<b>Second Year Total:</b>	<b>25-27</b>	<b>21-30</b>	<b>31-34</b>
	<b>Degree Total:</b>	<b>52-55</b>	<b>33-42</b>	<b>61-65</b>

<sup>^</sup>Theory, lab, and credit hours may vary depending on the elective course chosen.

Note: Technical Electives for the A.S. degree in Biotechnology are defined as any BIOL, BTEC, MATH, PHYS, CHEM, IST, CIS, DATA or BUS courses not already part of the A.S. Degree in Biotechnology.

<b>DEGREE PROGRAM - FIRST YEAR (PATHWAY II)</b>				
<b>Fall Semester</b>		<b>TH</b>	<b>LAB</b>	<b>CR</b>
CHEM115G	General Chemistry I	3	3	4
BIOL108G	General Biology I	3	3	4
MATH150G/152G	College Algebra/Plus*	4/5	0	4/5
ENGL110G	College Composition I	4	0	4
	<b>Semester Total:</b>	<b>14-15</b>	<b>6</b>	<b>16-17</b>
<i>*A higher level MATH may be substituted.</i>				
<b>Spring Semester</b>		<b>TH</b>	<b>LAB</b>	<b>CR</b>
BTEC205G	Bioethics*	3	0	3
CHEM116G	General Chemistry II	3	3	4
BTEC 105G	Intro to Biotechnology	3	3	4
MATH 210G	Precalculus**	4	0	4
	<b>Semester Total:</b>	<b>13</b>	<b>6</b>	<b>15</b>
	<b>First Year Total:</b>	<b>27-28</b>	<b>12</b>	<b>31-32</b>
<i>*PHIL240G Ethics may be substituted for BTEC205G Bioethics.</i>				
<i>**A higher level MATH may be substituted.</i>				

<b>DEGREE PROGRAM SECOND YEAR</b>				
<b>Fall Semester*</b>		<b>TH</b>	<b>LAB</b>	<b>CR</b>
BTEC210G	Biotechnology Research	2	6	4
BIOL210G	Microbiology	3	3	4
BIOL109G	General Biology II	3	3	4
	Technical Elective <sup>^</sup>	3/4	0/3	3/4
	Foreign Language/Humanities/Fine Arts Elective <sup>^</sup>	3	0	3
	<b>Semester Total:</b>	<b>14-15</b>	<b>12-15</b>	<b>18-19</b>

<b>Spring Semester</b>		<b>TH</b>	<b>LAB</b>	<b>CR</b>
BTEC220G	Biomanufacturing	2	6	4
	Social Science Elective	3	0	3
	Technical Elective	3/4	0/3	3/4
	Technical Elective	3/4	0/3	3/4
<b>Semester Total:</b>		<b>11-12</b>	<b>12</b>	<b>13-15</b>
<b>Second Year Total:</b>		<b>25-27</b>	<b>24-27</b>	<b>31-34</b>
<b>Degree Total:</b>		<b>52-55</b>	<b>36-39</b>	<b>62-66</b>

*\*Students may want to consider taking one of these courses during the summer term  
 Note: Technical Electives for the A.S. degree in Biotechnology are defined as any BIOL, BTEC, MATH, PHYS, CHEM, IST, CIS, DATA or BUS courses not already part of the A.S. Degree in Biotechnology.*

*^Theory, lab, and credit hours may vary depending on the elective course chosen.*

### **BIOTECHNOLOGY CERTIFICATE**

#### **Admissions Requirements:**

1. Complete an application for the program.
2. Provide proof of high school completion or equivalent.
3. Provide an official copy of prior college transcripts, if appropriate.
4. Successful completion of high school algebra, biology and chemistry with a grade of C or better.
5. Placement into ENGL110G or higher.

		<b>TH</b>	<b>LAB</b>	<b>CR</b>
BTEC105G	Introduction to Biotechnology	3	3	4
TECHXXX	Technical Elective <sup>^</sup>	2/3	2/3	3/4
MATH145G/147G	Quantitative Reasoning/Plus	4	0	4/5
BIOL108G	General Biology I (or Microbiology)	3	3	4
CHEM110G	Introduction to Chemistry (or CHEM115)	3	3	4
BTEC210G	Biotechnology Research	2	6	4
BTEC220G	Biomanufacturing	2	6	4
<b>Certificate Total:</b>		<b>19-20</b>	<b>23-24</b>	<b>27-29</b>

*\*Higher level CIS course may be substituted.*

*\*\* Higher level MATH class may be substituted.*

*^Theory, lab, and credit hours may vary depending on the elective course chosen.*

Gainful Employment disclosure is available at:

<http://greatbay.edu/sites/default/files/GE/biotechnology/41.0101-Gedt.html>

### **BIOTECHNOLOGY ADVANCED CERTIFICATE**

#### **Admissions Requirements**

1. Complete an application for the program.
2. Provide proof of high school completion or equivalent.
3. Provide evidence of college level Biology and Chemistry.
4. Obtain permission of Department Chair.

		<b>TH</b>	<b>LAB</b>	<b>CR</b>
BTEC105G	Introduction to Biotechnology*	3	3	4

BTEC210G	Biotechnology Research	2	6	4
BTEC220G	Biomanufacturing	2	6	4
	<b>Certificate Total:</b>	<b>7</b>	<b>15</b>	<b>12</b>
*200 level BIOL or CHEM course may be substituted at discretion of the department chair.				
<i>Note: The Biotechnology Advanced Certificate Program is not financial aid eligible.</i>				

### **Curriculum Recommendations**

A higher level math class may be substituted for MATH150G; however, students planning to transfer are recommended to follow the Calculus sequence of Math courses.

# **BUSINESS ADMINISTRATION**

## **ASSOCIATE IN SCIENCE**

The Associate in Science Degree in Business Administration emphasizes broad management competencies in finance, marketing, human resources, economics, and computers. All of these competencies are needed in industry, nonprofit, and service organizations. The study of Business Administration focuses on how organizations develop and use strategies to compete in national and global arenas within the increasingly complex and changing socio-cultural, political/legal, economic, and technological environment.

Students in the program are encouraged to relate theoretical learning to practice and establish bridges between the classroom and the work environments. The Associate in Science Degree in Business Administration provides the framework needed for successful careers in high-tech industries, manufacturing, banking and finance, health care, communications, service industries, and nonprofit organizations.

The Business Administration degree is designed to provide students with options that enhance transfer to four-year institutions, or allow students to pursue employment upon completion of the program. The Business Administration program is accredited by the Accreditation Council for Business Schools and Programs (ACBSP) which supports transfers to many four- year institutions.

### **Program Outcomes**

Graduates with a degree in Business Administration will:

- Know the fundamentals of theory and practices in Business Administration.
- Demonstrate written and oral proficiency in business communications.
- Understand the foundations and importance of business ethics and social responsibility.
- Be able to transfer to a four-year college or university with a solid business studies foundation.
- Be prepared to enter the workforce with entry-level skills for Business Administration.
- Possess a solid curricular foundation for transfer.
- Understand the need for lifelong learning to help ensure employability.
- Demonstrate competency in fundamental areas of business: Accounting, finance, computers, and economics.
- Possess an understanding of cross-cultural and global issues, and sensitivity to diversity and other cultures.
- Demonstrate information literacy through research skills and the use of technology.
- Demonstrate proficiency in critical thinking, analysis, reasoning, questioning and quantitative skills.

### **Health and Internship Considerations**

Participation in an internship requires the student to follow the College Immunization Policy. See page 50. Depending upon the site, the student may be required to possess and maintain professional liability insurance. For unpaid internships, the student must possess and maintain accident insurance. See page 64 for purchase options available through the College.

### **Transfer Credit Policy**

In addition to Great Bay transfer credit policies, transfer of courses in Management more than ten years old will be evaluated by the department chair on an individual basis.

### **Technical Standards**

Students must be able to demonstrate the ability to communicate effectively using written and oral techniques, including the use of technology, conduct themselves in a professional manner, possess critical thinking and analytical skills, be comfortable using computers and computer application software, and work independently and in groups.

<b>DEGREE PROGRAM FIRST YEAR</b>				
<b>Fall Semester</b>		<b>TH</b>	<b>LAB</b>	<b>CR</b>
FYE111G	First Year Seminar – Business/Hospitality*	1	0	1
BUS110G	Introduction to Business	3	0	3
CIS156G (CIS154G)	Computer Applications in Business (Comprehensive)	3 (4)	0 (0)	3 (4)
ENGL110G	College Composition I	4	0	4
BUS114G	Management	3	0	3
	Business or Liberal Arts Elective	3	0	3
	<b>Semester Total:</b>	<b>17-18</b>	<b>0</b>	<b>17-18</b>
<b>Spring Semester</b>				
	Math Elective	4	0	4
ECON234G	Macroeconomics	3	0	3
	Lab Science Elective^	3	3	4
	Business or Liberal Arts Elective^	3	0	3
	<b>Semester Total:</b>	<b>13</b>	<b>3</b>	<b>14</b>
	<b>First Year Total:</b>	<b>30-31</b>	<b>3</b>	<b>31-32</b>

\*Recommended. Any one-credit FYE course fulfills this requirement.

^Theory, lab, and credit hours may vary depending on the elective course chosen.

<b>DEGREE PROGRAM SECOND YEAR</b>				
<b>Fall Semester</b>		<b>TH</b>	<b>LAB</b>	<b>CR</b>
ACCT113G	Accounting and Financial Reporting I	3	0	3
Select One:				
CRIT150G	Critical Thinking in the Humanities or	3	0	3
(MATH215G)	(Finite Math) or	(4)	(0)	(4)
(MATH225G)	(Probability and Statistics) or	(4)	(0)	(4)
(MATH230G)	(Calculus I)	(4)	(0)	(4)
ECON235G	Microeconomics	3	0	3
	Business or Liberal Arts Elective^	3	0	3
	BUS, ACCT, ECON, MKTG, or HOSP Elective^	3	0	3
	<b>Semester Total:</b>	<b>15-16</b>	<b>0</b>	<b>15-16</b>
<i>^Theory, lab, and credit hours may vary depending on the elective course chosen.</i>				
<b>Spring Semester</b>				
ACCT123G	Accounting and Financial Reporting II	3	0	3
	Business or Liberal Arts Elective^	3	0	3
	Business or Liberal Arts Elective^	3	0	3
PHIL240G	Ethics	3	0	3
	BUS, ACCT, ECON, MKTG, or HOSP Elective	3	0	3



	<b>Semester Total:</b>	<b>15</b>	<b>0</b>	<b>15</b>
	<b>Second Year Total:</b>	<b>30-31</b>	<b>0</b>	<b>30-31</b>
	<b>Degree Total:</b>	<b>60-62</b>	<b>3</b>	<b>61-63</b>

*^Theory, lab, and credit hours may vary depending on the elective course chosen.*

#### **SUGGESTED PATHWAYS:**

##### **Pathway 1: Transfer to UNH Paul School or Other Universities**

		<b>TH</b>	<b>LAB</b>	<b>CR</b>
	Elective (Fine & Performing Arts Discovery) ^	3	0	3
	Elective (Environment, Technology & Society Discovery) ^	3	0	3
	Elective (Social or Physical Science) ^	3	0	3
	Elective (World Cultures or Humanities Discovery) ^	3	0	3
	Elective (Historical Perspectives Discovery) ^	3	0	3
ACCT213G	Cost Accounting I	3	0	3
ACCT215G	Cost Accounting II	3	0	3
	<b>Total:</b>	<b>21</b>	<b>0</b>	<b>21</b>

*^Theory, lab, and credit hours may vary depending on the course chosen.*

#### **SUGGESTED PATHWAYS:**

##### **Pathway 2: Leadership & Management (Transfer to SNHU or other 4-Year Institutions)**

		<b>TH</b>	<b>LAB</b>	<b>CR</b>
MKTG101G	Introduction to Marketing	3	0	3
BUS210G (BUS200G)	Organizational Communication or (Teambuilding)	3 (3)	0 (0)	3 (3)
BUS224G (BUS116G)	Human Resources Management or (Organizational Behavior)	3 (3)	0 (0)	3 (3)
BUS208G	Leadership: Theory & Practice	3	0	3
BUS211G	Business Law	3	0	3
BUS221G	Business Finance	3	0	3
BUS209G	Global Business	3	0	3
	<b>Total:</b>	<b>21</b>	<b>0</b>	<b>21</b>

#### **SUGGESTED PATHWAYS:**

##### **Pathway 3: Sales & Digital Marketing (Entrepreneurs, Direct-to-Career, and Transfer)**

		<b>TH</b>	<b>LAB</b>	<b>CR</b>
MKTG101G	Introduction to Marketing	3	0	3
MKTG224G	Sales & Sales Management	3	0	3
MKTG201G	Business Relationship Management (Relationship Marketing)	3	0	3

BUS210G (BUS200G)	Organizational Communication or (Teambuilding)	3 (3)	0 (0)	3 (3)
BUS205G (BUS291G)	Small Business Management or (Internship)	3 (0)	0 (9)	3 (3)
BUS209G	Global Business	3	0	3
BUS282G	Capstone Research	3	0	3
<b>Total:</b>		<b>21</b>	<b>0-9</b>	<b>21</b>

**SUGGESTED PATHWAYS:**

**Pathway 4: Insurance & Risk Management**

		<b>TH</b>	<b>LAB</b>	<b>CR</b>
INSR120G	Principles of Risk Management & Insurance	3	0	3
INSR122G	Personal Insurance	3	0	3
INSR123G	Commercial Insurance	3	0	3
INSR124G	Agency Operations	3	0	3
MKTG101G	Introduction to Marketing	3	0	3
INSR125G	Introduction to Claims	3	0	3
BUS291G	Internship	0	9	3
<b>Total:</b>		<b>18</b>	<b>9</b>	<b>21</b>

**SUGGESTED PATHWAYS:**

**Pathway 5: Sports Management**

		<b>TH</b>	<b>LAB</b>	<b>CR</b>
MKTG101G	Introduction to Marketing	3	0	3
SPTS101G	Introduction to Sports Management	3	0	3
SPTS210G	Sports & Facilities Management	3	0	3
SPTS225G	Sports Law	3	0	3
HOS211G	Sports & Recreation Tourism	3	0	3
SOCI116G	Sports & Society	3	0	3
BUS291G	Internship	0	9	3
<b>Total:</b>		<b>18</b>	<b>9</b>	<b>21</b>

**Summer Institute: Start in Summer, End in Summer  
Part-Time Night/Online Pathway**

**DEGREE PROGRAM YEAR ONE**

**Summer Semester**

		<b>TH</b>	<b>LAB</b>	<b>CR</b>
FYE111G	First Year Seminar: Business/Hospitality*	1	0	1
ENGL110G	College Composition I	4	0	4
	Math Elective	4	0	4
<b>Semester Total:</b>		<b>9</b>	<b>0</b>	<b>9</b>

*\*Recommended. Any one-credit FYE course fulfills this requirement.*

**Fall Semester**

**1<sup>st</sup> Eight Weeks**

		<b>TH</b>	<b>LAB</b>	<b>CR</b>
BUS110G	Introduction to Business	3	0	3
ECON234G	Macroeconomics	3	0	3

**2<sup>nd</sup> Eight Weeks**

	Business or Liberal Arts Elective^	3	0	3
ECON235G	Microeconomics	3	0	3
<b>Semester Total:</b>		<b>12</b>	<b>0</b>	<b>12</b>

<b>Spring Semester</b>				
<b>Full Semester</b>		<b>TH</b>	<b>LAB</b>	<b>CR</b>
CIS156G	Computer Applications in Business	2	2	3
<b>1<sup>st</sup> Eight Weeks</b>				
BUS114G	Business Management	3	0	3
<b>2<sup>nd</sup> Eight Weeks</b>				
	Business or Liberal Arts Elective <sup>^</sup>	3	0	3
<b>Semester Total:</b>		<b>8</b>	<b>2</b>	<b>9</b>
<b>DEGREE PROGRAM YEAR TWO</b>				
<b>Summer Semester</b>		<b>TH</b>	<b>LAB</b>	<b>CR</b>
	Lab Science Elective <sup>^</sup>	3	2/3	4
ACCT113G	Accounting and Financial Reporting I	3	0	3
<b>Semester Total:</b>		<b>6</b>	<b>2/3</b>	<b>7</b>
<b>Fall Semester</b>				
<b>Full Semester</b>		<b>TH</b>	<b>LAB</b>	<b>CR</b>
ACCT123G	Accounting and Financial Reporting II	3	0	3
<b>1<sup>st</sup> Eight Weeks</b>				
	Business or Liberal Arts Elective <sup>^</sup>	3	0	3
<b>2<sup>nd</sup> Eight Weeks</b>				
	BUS, ACCT, ECON, MKTG, or HOSP Elective <sup>^</sup>	3	0	3
<b>Semester Total:</b>		<b>9</b>	<b>0</b>	<b>9</b>
<b>Spring Semester</b>				
CRIT150G	Critical Thinking in the Humanities or	3	0	3
(MATH215G)	(Finite Mathematics) or	(4)	(0)	(4)
(MATH225G)	(Probability and Statistics) or	(4)	(0)	(4)
(MATH230G)	(Calculus I)	(4)	(0)	(4)
PHIL240G	Ethics	3	0	3
<b>Semester Total:</b>		<b>6-7</b>	<b>0</b>	<b>6-7</b>
<b>DEGREE PROGRAM YEAR THREE</b>				
<b>Summer Semester</b>		<b>TH</b>	<b>LAB</b>	<b>CR</b>
	Business or Liberal Arts Elective <sup>^</sup>	3	0	3
	Business or Liberal Arts Elective <sup>^</sup>	3	0	3
	BUS, ACCT, ECON, MKTG, or HOSP Elective <sup>^</sup>	3	0	3
<b>Semester Total:</b>		<b>9</b>	<b>0</b>	<b>9</b>
<b>Degree Total:</b>		<b>59</b>	<b>2-3</b>	<b>61-62</b>

<sup>^</sup>Theory, lab, and credit hours may vary depending on the elective course chosen.

# CHEMISTRY

## ASSOCIATE OF ARTS

The Chemistry degree is designed for students who wish to transfer to a four-year institution to pursue a degree in chemistry, biochemistry or chemical engineering. It provides a basic foundation in chemistry, along with appropriate coursework in the related disciplines of mathematics, biology and physics.

### Program Outcomes

Students graduating with the Associate of Arts degree in Chemistry will be able to:

- Understand and be able to apply principles of chemistry across the sub-disciplines.
- Understand principles of mathematics, biology and physics at a level appropriate to preparation for an undergraduate major in chemistry, biochemistry, or chemical engineering.
- Understand and be able to apply the scientific method.
- Understand and be able to execute a wide variety of laboratory techniques in chemistry and related fields.
- Generate and maintain accurate lab documentation including a laboratory notebook.
- Analyze and draw conclusions from generated scientific data, and present findings in a formal laboratory report.
- Qualify for transfer to a four-year college or university.

### Technical Standards

Students enrolling in the Chemistry program must, in addition to meeting the specific pre-requisite requirements for each course, meet the following general, technical standards:

- Students must be able to comprehend the English language, both oral and written, and must have sufficient manual dexterity to produce legible written documents in a timely manner.
- Students must be able to sit or stand at a desk/ laboratory bench, and must possess the necessary focus to stay on task for extended periods of time.
- Students must be able to comprehend and follow instructions in the classroom and laboratory in a timely manner.
- Students must possess the necessary manual dexterity to carry out assigned laboratory tasks.
- Students must be able to perform required classroom and laboratory operations, including mathematical operations, without reference to notes, as directed.

### Transfer Credit Policy

In addition to Great Bay transfer credit policies, transfer of courses more than ten years old will be evaluated by the department chair or program coordinator on an individual basis.

DEGREE PROGRAM FIRST YEAR				
Fall Semester		TH	LAB	CR
ENGL110G	College Composition I	4	0	4
CHEM115G	General Chemistry I	3	3	4
MATH150/152G <sup>1</sup>	College Algebra/Plus	4	0	4-5
	Social Science Elective*	3	0	3

	<b>Semester Total:</b>	<b>14</b>	<b>3</b>	<b>15-16</b>
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<b>Spring Semester</b>		<b>TH</b>	<b>LAB</b>	<b>CR</b>
CHEM116G	General Chemistry II	3	3	4
MATH210G <sup>2</sup>	Pre-Calculus	4	0	4
BIOL108G	General Biology I	3	3	4
	Social Science Elective <sup>3*</sup>	3	0	3
	Foreign Language/Humanities/Fine Arts Elective <sup>3*</sup>	3	0	3
	<b>Semester Total:</b>	<b>16</b>	<b>6</b>	<b>18</b>
	<b>First Year Total:</b>	<b>30</b>	<b>9</b>	<b>33-34</b>

<b>DEGREE PROGRAM SECOND YEAR</b>				
<b>Fall Semester</b>		<b>TH</b>	<b>LAB</b>	<b>CR</b>
CHEM200G	Organic Chemistry	3	3	4
MATH230G <sup>2</sup>	Calculus I	4	0	4
ENGL214G	Introduction to Creative Nonfiction	3	0	3
	Foreign Language/Humanities/Fine Arts Elective <sup>3*</sup>	3	0	3
	<b>Semester Total:</b>	<b>13</b>	<b>3</b>	<b>14</b>

<b>Spring Semester</b>		<b>TH</b>	<b>LAB</b>	<b>CR</b>
CHEM205G	Biochemistry	3	3	4
PHYS290G	University Physics I	3	3	4
	Social Science Elective <sup>3*</sup>	3	0	3
	Foreign Language/Humanities/Fine Arts Elective <sup>3*</sup>	3	0	3
	<b>Semester Total:</b>	<b>12</b>	<b>6</b>	<b>14</b>
	<b>Second Year Total:</b>	<b>25</b>	<b>9</b>	<b>28</b>
	<b>Degree Total:</b>	<b>55</b>	<b>18</b>	<b>61-62</b>

*\*Theory, lab, and credit hours may vary depending on the elective course chosen.*

### **Curriculum Recommendations**

<sup>1</sup> Students who do not test directly into MATH 150G may substitute MATH 152G. Students with appropriate test scores may substitute a higher level course from the Calculus math pathway: MATH210G, MATH230G, MATH235G, MATH250G.

<sup>2</sup> Students with appropriate test scores or the appropriate prerequisite may substitute a higher level course from the Calculus math pathway: MATH230G, MATH235G, MATH250G, MATH265G.

<sup>3</sup> Students intending to transfer should take care to select a course that will transfer appropriately to their intended institution.

# COMPUTER NUMERIC CONTROL (CNC) CERTIFICATE

This certificate is designed to prepare participants for jobs as computer-controlled milling machine operators for metal and plastic. Courses are taught over two terms, with the first term being an 8-week term covering foundation skills and prerequisites for the CNC course. The next term provides basic skills, including milling, inspection, and computer aided design/computer aided manufacturing. Courses in this certificate prepare students for entry level jobs as CNC operators.

Dual enrollment: Students enrolled in the CNC Certificate program may elect to enroll in the Associate Degree in Technical Studies. Dual enrollment is contingent upon active or graduate status of the certificate. Completion of the CNC certificate satisfies the requirement for the technical specialty core (24 credits) of the Technical Studies degree.

## Program Outcomes

After completing this certificate students will be able to:

- Demonstrate skills and knowledge required for jobs as CNC machine operators/programmers;
- Demonstrate ability to inspect, test, or measure materials, products, or work for conformance to specifications;
- Apply critical thinking skills to use logic and reason to identify the strengths and weaknesses of alternative approaches to problems;
- Safely operate a 3 axis milling machine, set up and maintain probes and cutting tools, perform basic machine maintenance, and apply tolerance specifications;
- Monitor operation/performance to make sure a machine is working properly, make improvements or take corrective action.

## Admissions Requirements

- Complete an application for the program.
- Provide proof of high school completion or equivalent.
- Provide an official copy of prior college transcripts, if appropriate.
- Complete Accuplacer testing for math and computer.

## Transfer Credit Policy

- In addition to Great Bay transfer credits policies, transfer of courses in the CNC program will be evaluated by the department chair on an individual basis.
- Students enrolled in the CNC Certificate program may elect to enroll in the Associate Degree in Technical Studies. Dual enrollment is contingent upon active or graduate status of the certificate. Completion of the CNC certificate satisfies the requirement for the technical specialty core of the Technical Studies degree.

## Technical Requirements

This program includes work in a manufacturing lab and requires participants to physically perform functions that require the following:

- Normal vision for reading instructions and for performing tasks, including inspecting parts for quality (corrective vision is acceptable).
- Mobility and strength for performing tasks that require reaching, walking, standing, and safely lifting up to 20 lbs.
- Ability to hear sounds of equipment, for equipment operation and safety.

## Health and Safety Considerations

This program includes work in a manufacturing lab where potentially hazardous materials are used. Students will be taught industry standards for safety and will be expected to follow all

safety procedures for material handling. Personal protective equipment must be worn. Students will provide their own safety boots or shoes.

<b>FALL SEMESTER</b>				
<b>Course</b>		<b>TH</b>	<b>LAB</b>	<b>CR</b>
ACM120G	Technical Blueprint Reading	1	3	2
MANF135G	Technical Math for Manufacturing*	3	0	3
FYE101G	First Year Seminar**	1	0	1
		<b>Semester Total:</b>		
		<b>5</b>	<b>3</b>	<b>6</b>
<i>*ACM110G and ACM115G may be accepted to fulfill this requirement.</i>				
<i>**Any one-credit FYE course fulfills this requirement.</i>				

<b>SPRING SEMESTER</b>				
<b>Course</b>		<b>TH</b>	<b>LAB</b>	<b>CR</b>
MANF112G	Topics in Manufacturing*	2	2	3
ACM254G	Quality Inspection and CMM	2	2	3
ACM255G	Composites CNC Milling and Set-Up Operator	4	4	6
MANF225G	Solid Modeling (CAD/CAM)	2	2	3
		<b>Semester Total:</b>		
		<b>10</b>	<b>10</b>	<b>15</b>
		<b>Certificate Total:</b>		
		<b>15</b>	<b>13</b>	<b>21</b>
<i>* ACM210G may be accepted to fulfill this requirement.</i>				

CNC Certificate students continuing with the Technical Studies A.S. Degree may select Technical Electives including, but not limited to:

<b>TECHNICAL ELECTIVES</b>				
<b>Course</b>		<b>TH</b>	<b>LAB</b>	<b>CR</b>
MANF260G	Advanced GD&T and Print Reading	2	2	3
MANF266G	CNC Programming	2	2	3
ACM265G	Multi Axis CNC Milling	2	4	4
MANF267G	Work Holder and Fixture Design	2	2	3

Gainful Employment disclosure information is available at:

<http://greatbay.edu/sites/default/files/GE/comp-num-control/48.0510-Gedt.html>

# COMPUTER TECHNOLOGIES

## ASSOCIATE IN SCIENCE

### CERTIFICATES

The Department of Computer Technologies offers an Associate Degree program for either full-time or part-time study. The 67 credit degree consists of 30 credits of General Education Core courses, 13 credits of a Technical Core of courses, and a minimum of 24 credits of Computer Technical electives. It is recommended that students use the Computer Technical electives to create a technology focus or pathway. This will allow students to gain a breadth and depth of knowledge in a given specialty and ensure the development of a marketable set of skills to offer employers in industry.

#### **Program Outcomes**

Pending course selection, graduates will be able to:

- Analyze a problem, and identify and define the computing requirements appropriate to its solution.
- Design, implement and evaluate a computer-based process or program to meet desired needs.
- Use current techniques, skills, and tools necessary for computing practices.
- Demonstrate a familiarity with state-of-the-art programming techniques, tools, and practices.
- Demonstrate a solid foundation in the fundamental areas of computer science - which are algorithms, systems, and software - and exposure to multiple sub-disciplines of computer science.
- Understand professional, ethical, legal, security, and social issues and responsibilities related to IT, to include an understanding of cross-cultural issues and global perspectives.
- Use written and oral communication skills necessary to be effective in the IT industry.
- Recognize the need to maintain currency with future changes in the computing profession.
- Use creative and critical thinking processes to work independently and/or collaboratively to develop complex solutions, and take the lead to implement those solutions.
- Function effectively on teams to accomplish a common goal.
- Through the use of an online portfolio, students will assess and reflect upon their own learning and create a cumulative portfolio of their "best" work.

#### **Technical Requirements**

Students who enroll in the program should comprehend the English language, both oral and written, and should have the ability to communicate effectively to gather and convey information. They should be able to sit at a computer workstation and stay on task for extended periods of time, and be able to replicate teacher-demonstrated procedures. They should apply principles, concepts, and procedures for industry standards, behave appropriately in both self-directed and shared learning environments, and perform basic mathematical operations.

#### **Health and Internship Considerations**

Participation in an internship requires the student to follow the College Immunization Policy. See page 50. Depending upon the site, the student may be required to possess and maintain



professional liability insurance. For unpaid internships, the student must possess and maintain accident insurance. See page 64.

### Computer Technologies Transfer Credit Policy

In addition to Great Bay transfer credit policies, transfer of courses in Computer Technologies more than five years old will be evaluated by the program coordinator on an individual basis.

### Curriculum Recommendations

#### Associate in Science

- If students are seeking to transfer to a four-year program, it is recommended that they consider fulfilling a Liberal Arts Elective requirement with a higher-level MATH course. MATH170 is the minimum required MATH course; however, MATH215G or above is strongly encouraged.
- Students should see their advisor for specific recommendations based on possible future transfer plans.
- Students should also see their advisor for assistance when making course selections.

<b>DEGREE PROGRAM FIRST YEAR</b>				
<b>Fall Semester</b>		<b>TH</b>	<b>LAB</b>	<b>CR</b>
ENGL110G	College Composition I	4	0	4
	Liberal Arts Elective (Math recommended if needed for MATH170)	3	0	3
FYE151G	Essential Skills for College Success: Computer Technologies	3	0	3
CIS111G	Computer Technologies	2	2	3
CIS112G	Intro to Object Oriented Programming	2	2	3
<b>Semester Total:</b>		<b>14</b>	<b>4</b>	<b>16</b>

<b>Spring Semester</b>		<b>TH</b>	<b>LAB</b>	<b>CR</b>
MATH170G	Discrete Mathematics	4	0	4
CIS113G	Database Design and Management	2	2	3
	Technical Elective**	2	2	3
	Technical Elective**	2	2	3
SOC120G	Society and Technological Change^	2	2	3
	Humanities/Fine Arts Elective* ^	3	0	3
<b>Semester Total:</b>		<b>15</b>	<b>8</b>	<b>19</b>
<b>First Year Total:</b>		<b>29</b>	<b>12</b>	<b>35</b>
<i>^It is recommended to take these courses in the summer semester if possible.</i>				
<i>*Theory, lab, and credit hours may vary depending on the elective course chosen.</i>				

<b>DEGREE PROGRAM SECOND YEAR</b>				
<b>Fall Semester</b>		<b>TH</b>	<b>LAB</b>	<b>CR</b>
	Science Elective	3	3	4
	Liberal Arts Elective	3	0	3
IST122G	Introduction to Networks	2	2	3
	Technical Elective**	2	2	3
	Technical Elective**	2	2	3
<b>Semester Total:</b>		<b>12</b>	<b>9</b>	<b>16</b>

<b>Spring Semester</b>		<b>TH</b>	<b>LAB</b>	<b>CR</b>
ENGLXXXG	English Elective	3	0	3
	Technical Elective**	2	2	3
	Technical Elective**	2	2	3
	Technical Elective**	2	2	3
	Technical Elective**	2	2	3
CIS292G	Portfolio Preparation and Presentation	1	0	1
<b>Semester Total:</b>		<b>12</b>	<b>8</b>	<b>16</b>
<b>Second Year Total:</b>		<b>24</b>	<b>17</b>	<b>32</b>
<b>Degree Total:</b>		<b>53</b>	<b>29</b>	<b>67</b>

### **\*\*COMPUTER TECHNICAL ELECTIVE COURSES**

The 24 credits of elective computer courses must be taken primarily with a designation of Computer Technologies (CIS). A limit of 4 courses (12 credits) within the DGMT, IST, ACCT, BUS, and MKTG designations may be used for Computer Technical Electives. At least 3 computer technical elective courses (9 credits) must be at the 200 level.

# LINUX CERTIFICATE

The Linux operating system provides powerful open source solutions which offer increased stability, higher levels of security, and lower cost than commercial operating systems. Linux is particularly attractive to small and mid-sized businesses, and interest in Linux is high and growing rapidly.

There are a variety of applications available for Linux today, and many of these open source solutions have been ported to run within a Windows environment as well. Many of these programs are gaining a large foothold in the business community, and the demand for skilled professionals in this area is high. The Linux Certificate will provide students with the fundamental knowledge needed to work in a Linux/Open Source environment. Students enrolled in this Certificate program must have a solid background in computer use and significant experience with at least the Windows or Mac OS X operating system.

## Program Outcomes

Pending course selection, graduates will be able to:

- Analyze a problem, and identify and define the computing requirements appropriate to its solution.
- Design, implement and evaluate a computer-based process or program to meet desired needs.
- Use current techniques, skills, and tools necessary for computing practices.
- Demonstrate a familiarity with state-of-the-art programming techniques, tools, and practices.
- Demonstrate a solid foundation in the fundamental areas of computer science - which are algorithms, systems, and software - and exposure to multiple sub-disciplines of computer science.
- Understand professional, ethical, legal, security, and social issues and responsibilities related to IT, to include an understanding of cross-cultural issues and global perspectives.
- Use written and oral communication skills necessary to be effective in the IT industry.
- Recognize the need to maintain currency with future changes in the computing profession.
- Use creative and critical thinking processes to work independently and/or collaboratively to develop complex solutions, and take the lead to implement those solutions.
- Function effectively on teams to accomplish a common goal.
- Through the use of an online portfolio, students will assess and reflect upon their own learning and create a cumulative portfolio of their "best" work.

*Note: The LINUX Certificate is a rigorous program. Students are expected to spend additional time beyond the minimum to complete requirements and achieve success. Students are also required to have college level reading, writing and math skills prior to enrollment.*

CERTIFICATE REQUIREMENTS				
Course		TH	LAB	CR
CIS113G	Database Design and Management	2	2	3
CIS146G	Linux I	2	2	3

CIS149G	Linux Applications	2	2	3
CIS216G	Web Server Administration	2	2	3
CIS246G	Linux II	2	2	3
CIS249G	Linux Databases	2	2	3
CIS254G	PHP and MySQL	2	2	3
<b>Certificate Total:</b>		<b>14</b>	<b>14</b>	<b>21</b>

Gainful Employment disclosure information is available at:  
<http://greatbay.edu/sites/default/files/GE/linux/11.0103-Gedt.html>

# PROGRAMMING CERTIFICATE

The Computer Technologies Department offers a Programming Certificate for students who want to develop the technical expertise for a career in backend, middle-tier programming or web application development. The core portion of the Certificate provides students with a solid foundation in programming fundamentals and database design. Students can focus on Java, C++, or C# as their development platform and then expand on their expertise by selecting electives in a particular area.

Successful completion of this program will allow students to seek employment in entry-level programming, quality assurance, technical support, or technical sales and integration.

## Program Outcomes

Students will be able to:

- Analyze a problem, and identify and define the computing requirements appropriate to its solution.
- Design, implement and evaluate a computer-based process or program to meet desired needs.
- Use current techniques, skills, and tools necessary for computing practices.
- Demonstrate a familiarity with state-of-the-art programming techniques, tools, and practices.
- Demonstrate a solid foundation in the fundamental areas of computer science - which are algorithms, systems, and software - and exposure to multiple sub-disciplines of computer science.
- Understand professional, ethical, legal, security, and social issues and responsibilities related to IT, to include an understanding of cross-cultural issues and global perspectives.
- Use written and oral communication skills necessary to be effective in the IT industry.
- Recognize the need to maintain currency with future changes in the computing profession.
- Use creative and critical thinking processes to work independently and/or collaboratively to develop complex solutions, and take the lead to implement those solutions.
- Function effectively on teams to accomplish a common goal.
- Through the use of an online portfolio, students will assess and reflect upon their own learning and create a cumulative portfolio of their "best" work.

*Note: The Programming Certificate is a rigorous program. Students are expected to spend additional time beyond the minimum to complete requirements and achieve success. Students are also required to have college level reading, writing and math skills prior to enrollment. CIS112G Introduction to Object Oriented Programming or permission of the program advisor is required before taking any CISXX8G course.*

CORE COURSES				
Course		TH	LAB	CR
CIS113G	Database Design and Management	2	2	3
CIS124G	Web Development I	2	2	3
CIS224G	Web Development II	2	2	3
CIS1X8G	Introductory Programming course*	2	2	3

CIS2X8G	Advanced Programming course*	2	2	3
<b>Total:</b>		<b>10</b>	<b>10</b>	<b>15</b>
<i>*Programming languages include .NET, Java, and C++.</i>				

**ELECTIVE COURSES -- 9 CREDITS (Choose a minimum of 3 courses):**

Students must take at least one introductory and advanced class in the language of their choice. Once they complete the advanced course, they may select another programming language for study. All of the programming classes listed as part of the core can also count toward an elective.

<b>Course</b>		<b>TH</b>	<b>LAB</b>	<b>CR</b>
CIS118G	Introduction to .NET	2	2	3
CIS134G	Web Style and Design	2	2	3
CIS146G	Linux I	2	2	3
CIS148G	Introduction to Java	2	2	3
CIS158G	Introduction to C++	2	2	3
CIS177G	Introduction to Python	2	2	3
CIS216G	Web Server Administration	2	2	3
CIS218G	Advanced .NET	2	2	3
CIS223G	Advanced SQL	2	2	3
CIS246G	Linux II	2	2	3
CIS248G	Advanced Java	2	2	3
CIS249G	Linux Databases	2	2	3
CIS253G	Data Sharing	2	2	3
CIS254G	PHP and MySQL	2	2	3
CIS258G	Advanced C++	2	2	3
CIS291G	Advanced Topics	2	2	3
<b>Total:</b>		<b>6</b>	<b>6</b>	<b>9</b>
<b>Certificate Total:</b>		<b>16</b>	<b>16</b>	<b>24</b>

Gainful Employment disclosure information is available at:

<http://greatbay.edu/sites/default/files/GE/computer-programming/11.0201-Gedt.html>

# SOFTWARE DEVELOPMENT CERTIFICATE

The certificate provides a solid foundation for software and application development. Successful completion of this certificate prepares students for entry into the exciting industry of developing apps for smart devices/tablets and mobile platforms.

The Software Development certificate is intended to prepare students for careers such as:

- Software Developers
- Software Project Managers
- Web and Mobile App Developers

## Technical Standards

Students must have college level writing, mathematics and technology skills. Placement into the following (or equivalent) will satisfy these prerequisites:

- ENGL110G
- MATH150G/170G
- CIS110G (or CIS107G)

<b>CERTIFICATE REQUIREMENTS</b>				
<b>Course</b>		<b>TH</b>	<b>LAB</b>	<b>CR</b>
CIS112G	Introduction to Object Oriented Programming	2	2	3
CIS113G	Database Design & Management	2	2	3
IST113G	IT Essentials: PC Hardware and Software	2	2	3
CIS124G	Web Development I	2	2	3
CIS148G	Introduction to Java Programming	2	2	3
CIS177G	Introduction to Python	2	2	3
CIS224G	Web Development II or	2	2	3
(CIS248G)	(Advanced Java Programming)	(2)	(2)	(3)
IST150G	Network Operating Systems Fundamentals	2	2	3
IST212G	Mobile Systems Architecture	2	2	3
IST275G	Network Protocols and Services	2	2	3
MATH170G	Discrete Mathematics	4	0	4
<b>Certificate Total:</b>		<b>24</b>	<b>20</b>	<b>34</b>

Gainful Employment disclosure information is available at:

<http://greatbay.edu/sites/default/files/GE/software-dev/11.0202-Gedt.html>

# **CRIMINAL JUSTICE ASSOCIATE IN SCIENCE**

The Criminal Justice degree is designed to prepare students for careers in Law Enforcement, Corrections, Juvenile Justice, or Courts. In addition, it also serves as the academic foundation to transfer on to complete a baccalaureate degree. For those already in service the program provides educational progress for promotion and other career development purposes. The degree of Associate in Science with a major in Criminal Justice will be awarded upon completion of all requirements.

NOW OFFERED 100% ONLINE. Students will have the option of enrolling in the Criminal Justice program in its original format as a face to face hybrid offering, or as a 100% online program. After completion, students are prepared to work in local or state law enforcement as an officer, in corrections as an officer or within the state and federal court systems. To accommodate the specific needs of the online student, an additional advising component has been added to the program. Guest speakers from law enforcement, corrections, juvenile justice and courts will be integrated into course delivery and as part of the online curriculum. As in other formats, students will be placed in a Criminal Justice internship. Additional training may be required after graduation to become certified.

## **Program Outcomes**

Upon successful completion of the program of study, students should be able to:

- Demonstrate knowledge of current issues, concepts, philosophies, and theories in the field of criminal justice.
- Explain and discuss various theories of crime causation and societal response, and the techniques of prevention and treatment of crime.
- Describe the role of the courts in the administration of justice.
- Apply constitutional principles that protect the rights of citizens and regulate criminal justice agencies.
- Identify and discuss procedures necessary to establish a lawful arrest and search, proper judicial procedures, and the admissibility of evidence.
- Explain principles of effective law enforcement and security administration.
- Describe the structure and procedures of juvenile court; the function and jurisdiction of juvenile agencies; and the processing and disposition of juvenile cases.
- Articulate the role of corrections in the criminal justice system.
- Think logically and critically in order to formulate, present, and defend logical arguments.
- Comprehend information presented in written or spoken form, and communicate clearly and effectively in both written and oral form.
- Apply the knowledge of ethical principles with the high standards expected of criminal justice practitioners.

## **Health and Internship Considerations**

Applicants should be aware of the basic health and fitness requirements for many careers in the criminal justice field. Prospective students with special needs or limitations that may affect their internship placement and/or potential employability are encouraged to discuss their career goals during the interview with a department member prior to admission. The



College must ensure that individuals (customers, employees, etc.) at internship and service learning sites are not adversely effected by students during learning experiences. Therefore, students participating in internship and field experiences must demonstrate the emotional stability required to exercise sound judgment, accept direction and guidance from a supervisor or faculty member, and establish rapport and maintain sensitive interpersonal relationships with employees, customers, and clients. Students participating in an internship are required to follow The College Immunization Policy. See page 50.

### Technical Standards

Applicants should be aware that thorough background checks are completed by potential employers prior to obtaining any position with arrest or detention powers, and typically, even before being accepted for an internship. Applicants who have had involvement with the law may not be employable, or even eligible for participation in the Criminal Justice Internship Program. Due to the possible negative impact on future employability, applicants are strongly advised to discuss any concerns with the Department Chair prior to applying to the program.

To be successful in the Criminal Justice field, one must demonstrate the emotional stability required to exercise sound judgment, and accept direction and guidance from a supervisor. One must also be able to establish rapport and maintain sensitive interpersonal relationships with employees, customers, and clients. Overall opportunities within Criminal Justice will be favorable for individuals who meet psychological, physical, and personal qualifications.

### Transfer Credit Policy

In addition to Great Bay transfer credit policies, transfer of courses in Criminal Justice more than ten years old will be evaluated by the program coordinator on an individual basis.

<b>DEGREE PROGRAM FIRST YEAR</b>				
<b>Fall Semester</b>		<b>TH</b>	<b>LAB</b>	<b>CR</b>
CRMJ101G	Introduction to Criminal Justice	3	0	3
CRMJ121G	Criminal Procedure	4	0	4
ENGL110G	College Composition I	4	0	4
CIS110G	Introduction to Computers	2	2	3
or (CIS107G)	(or Essentials of Computer Literacy)	(2)	(4)	(4)
PHIL240G	Ethics	3	0	3
<b>Semester Total:</b>		<b>16</b>	<b>2-4</b>	<b>17-18</b>

<b>Spring Semester</b>		<b>TH</b>	<b>LAB</b>	<b>CR</b>
CRMJ123G	Criminal Law	4	0	4
CRMJ210G	Juvenile Justice Administration	3	0	3
PSYC110G	Introduction to Psychology	3	0	3
POLS220G	Public Administration	3	0	3
SOCI110G	Sociology	3	0	3
<b>Semester Total:</b>		<b>16</b>	<b>0</b>	<b>16</b>
<b>First Year Total:</b>		<b>32</b>	<b>2-4</b>	<b>33-34</b>

<b>DEGREE PROGRAM SECOND YEAR</b>				
<b>Fall Semester</b>		<b>TH</b>	<b>LAB</b>	<b>CR</b>
CRMJ150G	Criminology	3	0	3

CRMJ205G	Police Operations	3	0	3
CRMJ215G	Corrections Operations	3	0	3
MATH145G/147G	Quantitative Reasoning/Plus	4/5	0	4/5
PSYC205G	Crisis Intervention	3	0	3
	Open Elective*	3	0	3
<b>Semester Total:</b>		<b>18-19</b>	<b>0</b>	<b>18-19</b>

<b>Spring Semester</b>		<b>TH</b>	<b>LAB</b>	<b>CR</b>
BIOL106G	Human Body	3	2	4
CRMJ225G	Drug Abuse and the Law	3	0	3
CRMJ230G	Justice and the Community	3	0	3
ENGL210G	Oral Communications or English Elective*	3	0	3
CRMJ270G or (CRMJ275G)	Criminal Justice Internship or (Senior Project)	0  (3)	9  (0)	3  (3)
<b>Semester Total:</b>		<b>12-15</b>	<b>11</b>	<b>16</b>
<b>Second Year Total:</b>		<b>30</b>	<b>11</b>	<b>34-35</b>
<b>Degree Total:</b>		<b>62</b>	<b>13-15</b>	<b>67-69</b>

*\*Theory, lab, and credit hours may vary depending on the elective course chosen.*

**Curriculum Recommendations:**

It is highly recommended that all students enroll in a minimum of one Criminal Justice course during the first semester of attendance.

# **CYBER SECURITY INFRASTRUCTURE ASSOCIATE IN SCIENCE**

The Department of Information Systems Technology offers coursework in a Cyber Security Infrastructure Program. The Cyber Security Program will provide students the skills to become knowledgeable and skilled in a layered approach to computer systems security. The education process will train students for entry-level positions as network security technicians, data security analysts, and systems security administrators. The program provides students an introduction to the latest security technologies and best practices. Students will examine issues related to network security hardware, security awareness and education, security planning and defense, network security organization, and the legal and ethical issues associated with information systems security. Students also will complete multiple projects throughout the 2 year program to solidify new knowledge and skills. Students completing this degree program will be able to use the curriculum fundamentals learned to prepare for the CCNA, CCNAS, Network+, and Security+ industry certification exams. This program is designed for students to enter the Cyber Security field at an entry-level position.

## **Students will be able to:**

- Plan, configure, and implement network routers and switch configurations based on security “best practice”.
- Monitor the security infrastructure to analyze network problems and traffic flow
- SNMP, Netflows, Syslog, Radius, Snort IDS
- Identify and remediate network security vulnerabilities and threats
- Understand the need for a Business Continuity Plan (BCP) and Disaster Recovery Plan (DRP) and the relationship between the two
- Design, monitor and enforce an organizational security policy
- Install, configure, and monitor a firewall
- Introductory and advanced programming skills in either Java or C++

## **Technical Standards**

Students who enroll in the program should comprehend the English language, both oral and written, and have sufficient keyboarding skills to produce electronic documents in a timely manner. They should be able to sit or stand at a desk or workstation and stay on task for extended periods of time. They should be detail-oriented, able to read small print, and able to perform basic mathematical operations with emphasis on Binary Boolean Algebra. Successful employees in the field demonstrate the emotional stability required to exercise sound judgment, accept direction and guidance from a supervisor and establish rapport and maintain sensitive interpersonal relationships with employees, customers, and clients.

## **Health and Internship Considerations**

The College must ensure that stakeholders at internship and service learning sites are not adversely affected by students during learning experiences. Therefore, students participating in internship and field experiences must demonstrate the emotional stability required to exercise sound judgment, accept direction and guidance from a supervisor or faculty member, and establish rapport and maintain sensitive interpersonal relationships with employees, customers, and clients. Participation in an internship requires the student to follow the College’s Immunization Policy. Depending upon the site, the student may be required to possess and maintain professional liability insurance.

## **Transfer Credit Policy**

In addition to Great Bay transfer credit policies, all Information Systems Technology transfer credits will be evaluated by the IST Program Coordinator or his/her designee.

<b>DEGREE PROGRAM FIRST YEAR</b>				
<b>Fall Semester</b>		<b>TH</b>	<b>LAB</b>	<b>CR</b>
ENGL110G	College Composition I	4	0	4
MATH145G/147G	Quantitative Reasoning/Plus	4/5	0	4/5
IST122G	Introduction to Networks	2	2	3
IST123G	Routing and Switching Essentials	2	2	3
<b>Semester Total:</b>		<b>12-13</b>	<b>4</b>	<b>14-15</b>
<b>Spring Semester</b>		<b>TH</b>	<b>LAB</b>	<b>CR</b>
MATH170G	Discrete Math	4	0	4
IST142G	Virtualization Essentials	2	2	3
IST222G	Scaling Networks	2	2	3
IST223G	Connecting Networks	2	2	3
CIS177G	Introduction to Python	2	2	3
<b>Semester Total:</b>		<b>12</b>	<b>8</b>	<b>16</b>
<b>Summer Semester</b>		<b>TH</b>	<b>LAB</b>	<b>CR</b>
IST266G	Security+	2	2	3
<b>Semester Total:</b>		<b>2</b>	<b>2</b>	<b>3</b>
<b>First Year Total:</b>		<b>24-25</b>	<b>12</b>	<b>33-34</b>
<b>DEGREE PROGRAM SECOND YEAR</b>				
<b>Fall Semester</b>		<b>TH</b>	<b>LAB</b>	<b>CR</b>
POLSXXX	Social Science Elective	3	0	3
ENGL214G (ENGL215G)	Intro to Creative Nonfiction (Writing Technical Documents)	3 (3)	0 (0)	3 (3)
CISXXX	Computer Elective <sup>1</sup>	2	2	3
PHIL240G	Ethics	3	0	3
IST264G	Configuration Security Appliance	2	2	3
<b>Semester Total:</b>		<b>13</b>	<b>4</b>	<b>15</b>
<b>Spring Semester</b>		<b>TH</b>	<b>LAB</b>	<b>CR</b>
BIOLXXX	Lab Science Elective <sup>2</sup>	3	2	4
CISXXX	Computer Elective <sup>3</sup>	2	2	3
MATHXXX	Math Elective <sup>4</sup>	4	0	4
IST262G	Advanced Network Security	2	2	3
<b>Semester Total:</b>		<b>11</b>	<b>6</b>	<b>14</b>
<b>Summer Semester</b>		<b>TH</b>	<b>LAB</b>	<b>CR</b>
IST275G	Network Protocols and Services	2	2	3
<b>Semester Total:</b>		<b>2</b>	<b>2</b>	<b>3</b>
<b>Second Year Total:</b>		<b>26</b>	<b>12</b>	<b>32</b>
<b>Degree Total:</b>		<b>50-51</b>	<b>24</b>	<b>65-66</b>

<sup>1</sup> CIS148G Introduction to Java Programming or CIS158G Introduction to C++ only

<sup>2</sup> BIOL101G Human Disease or BIOL106G Human Body only

<sup>3</sup> CIS248G Advanced Java Programming or CIS258 Advanced C++ only

<sup>4</sup> MATH215G Finite Math or MATH225G Probability and Statistics only

# DATA: PRACTICAL DATA SCIENCE CERTIFICATE

The Certificate in Practical Data Science is designed for undergraduate students and will supplement current administrative, journalistic and technical careers with marketable skills. Upon completion, the student will have gained a foundational understanding and related competencies in many facets of effective communication with data.

Competencies will include conducting surveys and experiments, data wrangling, cleaning, sampling, analyzing, and visualizing of data, and more. Topics pertaining to the analysis and presentation of big data will be explored. Intended as a stand-alone certificate, the Practical Data Science certificate equips students to apply data analysis skills in any career or job that requires reporting from quantitative and qualitative sources of information.

## Program Outcomes

### The student will be able to:

- Write and organize analysis scripts that utilize the functional programming nature of a statistical programming language and vectorization model
- Work with all modern data formats, including XML, CSV, JSON, XLS (Excel), XHTML (web pages), and understand how to appropriately transform this data for use in structured analysis projects and reporting
- Visualize data for use in exploratory data analysis as a precursor to statistical analysis of data sets; effectively communicate preliminary results toward further understanding of the problem and solution
- Apply the Cross-Industry Standard Process for Data Mining (CRISP–DM) methodology to any analysis project; develop reproducible analysis reports generated in a variety of formats
- Understand the concepts of modern statistical methods and analyses and how they apply in data analysis projects and especially how they are used in more advanced predictive modeling
- Develop advanced visualizations in support of communicating results of statistical analyses; produce clear, concise reports in conclusion of analysis of a topic as an effective demonstration of the data as it serves to enlighten and inform.

### Technical Standards:

1. Basic computer skills including software such as web browsers, office applications
2. Good manual dexterity; adequate (basic) keyboarding skills
3. Vision for reading on computer screen and printed material
4. Critical thinking ability
5. Ability to work independently as well as in small groups
6. Be an effective communicator verbally, as in an office/work environment and write legibly

**Transfer Credit Policy:** In addition to Great Bay transfer credit policies, transfer of courses in the Practical Data Science program that are more than 10 years old will be evaluated by the program coordinator on an individual basis.

## CERTIFICATE REQUIREMENTS

### One Year Part Time

#### Fall Semester

		<b>TH</b>	<b>LAB</b>	<b>CR</b>
ARTS125G	Visual Language	3	0	3
DATA210G	Elements of Data Science	3	0	3
MATH210G	Pre-Calculus or	4	0	4
(MATH225G)	(Introduction to Probability & Statistics)	(4)	(0)	(4)
<b>Semester Total:</b>		<b>10</b>	<b>0</b>	<b>10</b>

#### Spring Semester

CIS177G	Introduction to Python Programming	2	2	3
MATH235G	Statistics for Engineers & Scientists	4	0	4
DATA220G	Introduction to Analytics with R	3	0	3
<b>Semester Total:</b>		<b>9</b>	<b>2</b>	<b>10</b>

#### Summer Capstone

DATA225G	Analytics Capstone	2	0	2
<b>Semester Total:</b>		<b>2</b>	<b>0</b>	<b>2</b>

**Certificate Total: 21 2 22**

Gainful Employment disclosure information is available at:

<http://greatbay.edu/sites/default/files/GE/prac-data/30.0801-Gedt.html>

*Note: The Practical Data Science Certificate is a rigorous program. Students are expected to spend additional time beyond the minimum to complete requirements and achieve success. Students are also expected to have college level reading, writing and math skills as soon as possible after declaring this major.*

# **DIGITAL MEDIA COMMUNICATIONS**

## **ASSOCIATE IN SCIENCE**

The Associate of Science Degree in Digital Media Communications requires core computer technology and general education courses. Students will gain an in-depth of knowledge and hands-on experience in a variety of graphic design, web design and animation courses using industry standard software. The program enables students to build their design and technology skills to prepare for an entry-level career in graphic design for print and digital communication, as well as offer options for transfer to a four-year program. The program requires a 1-credit portfolio capstone course. Courses are offered on a rotating semester basis and many courses are delivered in a hybrid format. A basic understanding of computers, in both Windows and Macintosh platforms and an appreciation for design is desirable for success. Students should work with their advisor to plan course selections to optimize program completion time.

### **Program Objectives:**

Upon successful completion of the program of study, students will be able to:

- Demonstrate an understanding of the application of graphic design as visual communication.
- Demonstrate and apply theories of aesthetics to functional objects, websites, motion graphics and brand communication.
- Employ creative problem solving in projects that simulate real-world applications.
- Understand the principles and applications of motion and interactivity in the user experience.
- Describe and apply current theories of usability and functionality in digital media, or web design.
- Explain the history of graphic communication.
- Articulate the role of the artist, designer, programmer and storyteller in technically mediated communication.
- Demonstrate technical mastery in the student's area of concentration via a professional portfolio.

### **Technical Standards**

Students who enroll in the program should comprehend the English language, both oral and written, and should have the ability to communicate effectively to gather and convey information. They should be able to sit at a computer workstation and stay on task for extended periods of time, and be able to replicate teacher-demonstrated procedures. They should apply principles, concepts, and procedures for industry standards, behave appropriately in both self-directed and shared learning environments, and be able to perform algebraic calculations.

### **Transfer Credit Policy**

In addition to Great Bay transfer credit policies, transfer of courses in Computer Technologies more than five years old will be evaluated by the program coordinator on an individual basis.



<b>DEGREE PROGRAM FIRST YEAR</b>				
<b>Fall Semester</b>		<b>TH</b>	<b>LAB</b>	<b>CR</b>
FYE115G	First Year Seminar: Fine Arts^	1	0	1
ENGL110G	College Composition I	4	0	4
DGMT115G	Introduction to Graphic Design	2	2	3
MATH150G	College Algebra	4	0	4
SOCI120G	Society and Technological Change	3	0	3
<b>Semester Total:</b>		<b>14</b>	<b>2</b>	<b>15</b>
<b>Spring Semester</b>		<b>TH</b>	<b>LAB</b>	<b>CR</b>
CIS112G	Introduction to Object Oriented Programming	2	2	3
ARTS124G	Art, Design and Color	2	3	3
	Liberal Arts Elective*	3	0	3
	English Elective*	3	0	3
DGMT142G	Publication Design (or other Digital Media Communications Elective)*	2	4	4
<b>Semester Total:</b>		<b>12</b>	<b>9</b>	<b>16</b>
<b>Summer Semester</b>		<b>TH</b>	<b>LAB</b>	<b>CR</b>
	Lab Science Elective*	3	3	4
	Liberal Arts Elective*	3	0	3
<b>Semester Total:</b>		<b>6</b>	<b>3</b>	<b>7</b>
<b>First Year Total:</b>		<b>32</b>	<b>14</b>	<b>38</b>

<b>DEGREE PROGRAM SECOND YEAR</b>				
<b>Fall Semester</b>		<b>TH</b>	<b>LAB</b>	<b>CR</b>
CIS124G	Web Development I	2	2	3
	Digital Media Communications Elective*	2	2	3
	Digital Media Communications Elective*	2	2	3
	Digital Media Communications Elective*	2	2	3
	Digital Media Communications Elective*	2	2	3
<b>Semester Total:</b>		<b>10</b>	<b>10</b>	<b>15</b>
<b>Spring Semester</b>		<b>TH</b>	<b>LAB</b>	<b>CR</b>
DGMT125G	Introduction to Animation	2	2	3
	Digital Media Communications Elective*	2	2	3
	Digital Media Communications Elective*	2	2	3
	Digital Media Communications Elective*	2	2	3
	Digital Media Communications Elective*	2	2	3
CIS292G	Portfolio Prep and Presentation	1	0	1
<b>Semester Total:</b>		<b>11</b>	<b>10</b>	<b>16</b>
<b>Second Year Total:</b>		<b>21</b>	<b>20</b>	<b>31</b>
<b>Degree Total:</b>		<b>53</b>	<b>34</b>	<b>69</b>

*^Recommended. Any one-credit FYE course fulfills this requirement.*

*\*Theory, lab, and credit hours may vary based on the elective course chosen.*

<b>ELECTIVE COURSES (choose 9 courses for 27-28 credits)</b>				
		<b>TH</b>	<b>LAB</b>	<b>CR</b>
CIS111G	Computer Technologies	2	2	3
CIS134G	Web Style and Design	2	2	3
DGMT135G	Introduction to Photoshop	2	2	3
DGMT142G	Publication Design	2	4	4
DGMT175G	Adobe Illustrator	2	2	3
DGMT215G	Advanced Graphic Design	2	2	3
ARTS126G	Typography	2	2	3
DGMT225G	Introduction to Print Technology	2	2	3
DGMT205G	Advanced Photoshop	2	2	3
DGMT265G	3D Design and Animation	2	2	3
DGMT120G	Intro to Digital Photography	2	2	3
DGMT165G	Intro to Video Production	2	2	3
CIS148G	Introduction to Java Programming	2	2	3
CIS158G	Introduction to C++ Programming	2	2	3
CIS248G	Advanced Java Programming	2	2	3
CIS258G	Advanced C++ Programming	2	2	3
DGMT264G	Expressive Web Animation	2	2	3

# DIGITAL DESIGN & ANIMATION CERTIFICATE

**\*Please note: The Digital Design and Animation Certificate is in a teach-out phase and is no longer accepting new students.**

The Digital Media Technologies Department offers a Digital Design & Animation Certificate that integrates video, graphics, sound, animation, and programming in a studio-oriented environment. This hands-on program introduces the individual components and enables students to develop a portfolio using interactive communication tools and state-of-the-art software. Each student will acquire a well-rounded background while focusing on individual strengths and creativity. Collaboration among students and instructors will heighten the classroom and studio experience. This workshop approach will include interactive group projects enhanced by professional assessment, with emphasis on preparation for career placement.

This certificate program is recommended for students who have a degree in a related field with a desire to update their technology skills. Those seeking a degree to meet the requirements of this competitive field should explore the Digital Media Communications Associate in Science Degree program.

**Admissions Requirement:** Placement into CIS110G (or CIS107G)

*Note: The Digital Design & Animation Certificate is a rigorous program. Students are expected to spend additional time beyond the minimum to complete requirements and achieve success. Students are also expected to have college level reading, writing and math skills prior to enrollment.*

CORE REQUIREMENTS				
		TH	LAB	CR
DGMT115G	Introduction to Graphic Design	2	2	3
CIS124G	Web Development I	2	2	3
DGMT125G	Introduction to Animation	2	2	3
DGMT135G	Introduction to Photoshop	2	2	3
DGMT264G	Expressive Web Animation	2	2	3
<b>Total:</b>		<b>10</b>	<b>10</b>	<b>15</b>
<b>Electives (choose three courses):</b>				
CIS134G	Web Style and Design	2	2	3
DGMT142G	Publication Design	2	4	4
DGMT165G	Introduction to Video Production	2	2	3
DGMT166G	Scriptwriting for Film & Video	2	2	3
DGMT167G	Single Camera Production	2	2	3
DGMT168G	Multi-Camera Production	2	2	3
DGMT169G	Lighting for Video Production	2	2	3
DGMT170G	Production Management	2	2	3
DGMT175G	Adobe Illustrator	2	2	3
DGMT201G	Digital Editing	2	2	3
DGMT202G	Digital Post Effects	2	2	3
DGMT205G	Advanced Photoshop	2	2	3
DGMT215G	Advanced Graphic Design	2	2	3

CIS224G	Web Programming II	2	2	3
DGMT225G	Introduction to Print Technology	2	2	3
CIS254G	PHP and MySQL	2	2	3
DGMT261G	Video Production Field Study	2	2	3
DGMT265G	3D Design and Animation	2	2	3
DGMT275G	Advanced Video Production	2	2	3
<b>Total Certificate Credits:</b>				<b>24</b>

Gainful Employment disclosure information is available at:  
<http://greatbay.edu/sites/default/files/GE/digital-design/10.0304-Gedt.html>

# EDUCATION

## EARLY CHILDHOOD EDUCATION

### ASSOCIATE IN SCIENCE

### CERTIFICATES

The Early Childhood Education (ECE) program provides students with the knowledge and skills necessary to create a positive learning environment for young children. Teachers who work in high quality programs for children understand how young children grow and learn and are able to provide materials and activities that are developmentally and interest appropriate. The College must ensure that students enrolled in any ECE program demonstrate emotional stability to withstand the ever-changing circumstances and the ability to respond quickly and appropriately as events require. Students are also expected to have the maturity to accept direction and guidance, exercise sound judgment, and maintain confidentiality and sensitive interpersonal relationships with teachers, fellow students, children and families.

#### **Admissions Criteria**

All students are welcome to enroll in Early Childhood classes; however, when enrolled in ECE112G, ECE202G and ECE212G where field placements are required, they must be able to meet technical standards for the field and New Hampshire Child Care Licensing Bureau requirements for health and background checks for child care personnel. It is recommended that students begin the background check process upon entering the ECE program if not already employed in a NH child care program. See the department chair for more information.

Prospective students with special needs requiring accommodations that may affect their practicum placement or employment options are advised to discuss specific career objectives with the program coordinator during the admissions process.

#### **Program Outcomes**

The Early Childhood Education program meets the standards for teacher preparation according to the National Association for the Education of Young Children (NAEYC).

#### **Standard 1: Promoting Child Development and Learning**

**GBCC Program Goal:** Students will explain and demonstrate the ability to support children in their development and learning by providing appropriate opportunities for physical, social, emotional, language and cognitive development.

#### **Standard 2: Building Family and Community Relationships**

**GBCC Program Goal:** Students will establish and maintain positive, productive and reciprocal relationships with colleagues, families and other professionals, work effectively as a member of an instructional team and communicate effectively with others to support development, learning and well-being.

#### **Standard 3: Observing, Documenting, and Assessing to Support Young Children and Families**

**GBCC Program Goal:** Students will be reflective practitioners who understand the goals, benefits and purposes of assessment. They will be able to utilize a variety of assessment and evaluative strategies and tools, in partnership with families and other professionals in

order to positively influence child development, including overall and individualized curriculum.

**Standard 4: Using Developmentally Effective Approaches to Connect with Children and Families**

**GBCC Program Goal:** Students will be able to establish and maintain positive, productive relationships with families, respect family choices and goals for children, communicate effectively and meaningfully with families and use families as a primary source of information in planning and meeting the needs of individual children and families.

**Standard 5: Using Content Knowledge to Build Meaningful Curriculum**

**GBCC Program Goal:** Students will design, implement and evaluate a meaningful, challenging and developmentally appropriate curriculum that demonstrates a wide array of teaching practices that reflect multiple content areas and academic subject as well as the child's and family's needs and interests.

**Standard 6: Becoming a Professional**

**GBCC Program Goal:** Students will be active practitioners who continually evaluate their choices and actions on others, seek out opportunities to grow professionally, serve as advocates for young children and their families, improve quality of programs and service for young children, and demonstrate an awareness of and follow the NAEYC Code of Ethical Conduct.

**Standard 7: Early Childhood Field Experience**

**GBCC Program Goal:** Students will actively apply the knowledge and skills learned throughout their program in order to successfully promote the development and learning across all developmental domains for children in the early childhood years.

**Technical Standards**

Technical Standards have been established to provide insight to students as to the skills and abilities required to function successfully in the ECE program and eventually the profession. Applicants who do not feel they can successfully meet these should contact the ECE program coordinator before applying to the program. Students enrolling in the Early Childhood Education program must have sufficient strength, stamina, motor coordination, and sensory capabilities to perform the following:

1. Standing for sustained periods of time, walking, running, bending, sitting on the floor and on child-size furniture to meet the child's needs and accomplish tasks.
2. Frequent lifting, moving and transferring children, especially infants and toddlers.
3. Sufficient visual and hearing acuity to ensure a safe environment and the ability to respond quickly to children, colleagues, and professional partners in the event of an emergency.
4. Sufficient verbal ability to express and exchange information and ideas as well as to interpret important instructions to and from children, colleagues and parents.
5. Sufficient skills in written expression to accurately record children's daily progress and milestones as well as medications administered, accident and suspected child abuse/neglect reports, etc.
6. Ability to work with frequent interruptions, to respond appropriately in unexpected situations, and to cope with extreme variations in workload and stress levels.

7. Students must have reliable transportation to travel to and from practicum settings and have sustained health as outlined in Child Care Personnel Health form to fulfill time commitment as agreed in the Practicum contract.
8. Ability to respond to children's personal needs, including changing diapers, in a manner that safeguards the health and safety of the student, children, and staff.
9. Ability to work in a professional and respectful manner with a diverse range of children and their families including those from different races, cultures, religions, and ethnicities as well as children with a wide range of disabling conditions.
10. Ability to maintain professional boundaries in both the school and home environments.
11. Ability and disposition to adhere to and practice the Code of Ethical Conduct set forth by the National Association for the Education of Young Children  
[http://www.naeyc.org/positionstatements/ethical\\_conduct](http://www.naeyc.org/positionstatements/ethical_conduct).

### **Health and Practicum Considerations**

1. Required GBCC Health Form on file prior to ECE112G or senior practicum placements if not completing site hours in work settings.
2. Required New Hampshire Child Care Personnel Health Form on file that indicates that the student has no apparent health problems that would prohibit him/her from caring for children prior to practicum.
3. Required background check of "clear" or "non-disqualifying" prior to practicum. The cost of the record check and fingerprinting is the responsibility of the student.
4. Students are required to complete practicum during regular morning hours in order to meet the ECE course requirements. Transportation to and from the practicum site is the responsibility of the student. All practicum sites are subject to practicum coordinator approval.

Note: Students who do not successfully complete the health and background requirements will not be able to successfully complete the program.

*Participation in an internship requires the student to follow the College Immunization Policy. (See page 50.) Depending upon the site, the student may be required to possess and maintain professional liability insurance. For unpaid internships, the student must possess and maintain accident insurance. See page 64 for purchase options available through the College.*

### **Transfer Credit Policy**

In addition to Great Bay transfer credit policies, transfer of courses in Early Childhood Education more than five years old from the time of acceptance will be evaluated by the program coordinator on an individual basis.

<b>DEGREE PROGRAM FIRST YEAR</b>				
<b>Fall Semester</b>		<b>TH</b>	<b>LAB</b>	<b>CR</b>
ECE100G	Early Childhood Growth and Development	3	0	3
ECE116G	Child Health, Safety, and Nutrition	3	0	3
ENGL110G	College Composition I	4	0	4
MATH145G/147G (ECEXXXG)	Quantitative Reasoning/Plus (ECE Elective)*	4/5 (3)	0 (0)	4/5 (3)
<b>Semester Total:</b>		<b>14-18</b>	<b>0</b>	<b>14-18</b>
*Recommended: ECE109G Art, Music, Drama, and Movement in ECE. Students are required to <b>choose 2 of 3 ECE electives</b> over the course of the degree program. Theory, lab, and credit hours may vary based on the elective chosen.				

<b>Spring Semester</b>		<b>TH</b>	<b>LAB</b>	<b>CR</b>
ECE112G	Curriculum Planning and Environments in ECE	3	3	4
ENGLXXXG	English Elective*	3	0	3
	Science Elective*	3	3	4
	Social Science Elective*	3	0	3
	Liberal Arts Elective*	3	0	3
<b>Semester Total:</b>		<b>15</b>	<b>6</b>	<b>17</b>
<b>First Year Total:</b>		<b>29-33</b>	<b>6</b>	<b>31-35</b>
*Theory, lab, and credit hours may vary depending on the elective course chosen.				

<b>DEGREE PROGRAM SECOND YEAR</b>				
<b>Fall Semester</b>		<b>TH</b>	<b>LAB</b>	<b>CR</b>
ECE202G	Senior Practicum: Student Teaching	1	6	3
ECE203G	Language Arts in Early Childhood Education	3	0	3
ECE214G	Appropriate Discipline and Guidance for Young Children	3	0	3
	Foreign Language/Humanities/Fine Arts Elective*	3	0	3
(ECEXXXG)	(ECE Elective)**	(3)	(0)	(3)
<b>Semester Total:</b>		<b>9-13</b>	<b>6</b>	<b>12-15</b>
*Theory, lab, and credit hours may vary depending on the elective course chosen. **Recommended: ECE250G Childcare Administration and Management. Students are required to <b>choose 2 of 3 ECE electives</b> over the course of the degree program. Theory, lab, and credit hours may vary based on the elective chosen.				

<b>Spring Semester</b>		<b>TH</b>	<b>LAB</b>	<b>CR</b>
ECE200G	Math and Science Development in Childhood Education	3	0	3
ECE206G	Supporting the Child with Special Needs	3	0	3
ECE210G	Child, Family, and Community Relationships	3	0	3
ECE212G	Senior Practicum: Professional Development	1	6	3
(ECEXXXG)	(ECE Elective)*	(3)	(0)	(3)
<b>Semester Total:</b>		<b>10-13</b>	<b>6</b>	<b>12-15</b>
<b>Second Year Total:</b>		<b>19-26</b>	<b>12</b>	<b>24-30</b>



	<b>Degree Total:</b>	<b>55-56</b>	<b>18</b>	<b>61-62</b>
<p><i>*Recommended: ECE204 Developmentally Appropriate Curriculum for Infants and Toddlers. Students are required to <b>choose 2 of 3 ECE electives</b> over the course of the degree program. Theory, lab, and credit hours may vary based on the elective chosen.</i></p>				

<b>EARLY CHILDHOOD EDUCATION CERTIFICATE</b>				
		<b>TH</b>	<b>LAB</b>	<b>CR</b>
ECE100G	Early Childhood Growth and Development	3	0	3
ECE112G	Curriculum Planning and Environments in ECE	3	3	4
ECE116G	Child Health, Safety and Nutrition	3	0	3
ECE206G	Supporting the Special Needs Child	3	0	3
ECE210G	Child, Family, and Community Relationships	3	0	3
ECEXXG	ECE Elective	3	0	3
ENGL110G	College Composition I	4	0	4
<b>Certificate Total:</b>		<b>22</b>	<b>3</b>	<b>23</b>

Gainful Employment disclosure information is available at:  
<http://greatbay.edu/sites/default/files/GE/early-child/13.1210-Gedt.html>

<b>EARLY CHILDHOOD EDUCATION ADVANCED CERTIFICATE</b>				
		<b>TH</b>	<b>LAB</b>	<b>CR</b>
ECE100G	Early Childhood Growth and Development	3	0	3
ECE112G	Curriculum Planning and Environments in ECE	3	3	4
ECE116G	Child Health, Safety and Nutrition	3	0	3
ENGL110G	College Composition I	4	0	4
ECE210G	Child, Family, and Community Relationships	3	0	3
	Elective* ^	3	0	3
	Elective* ^	3	0	3
	Elective* ^	3	0	3
	Elective* ^	3	0	3
<b>Certificate Total:</b>		<b>28</b>	<b>3</b>	<b>29</b>

\*Elective options include any ECE course, TCHP104G, TCHP215G, TCHP101G, TCHP220G, PSYC110G, PSYC210G, ASL110G, ASL120G.

^Theory, lab, and credit hours may vary depending on the elective course chosen.

Gainful employment disclosure is available at:  
<http://greatbay.edu/sites/default/files/GE/early-child-adv/13.1210-Gedt.html>

# **TEACHER PREPARATION**

## **ASSOCIATE IN ARTS**

The Teacher Preparation degree is designed to allow students to transfer to a four-year degree program to become teachers or prepare students to work in the field as paraprofessionals. The program allows students to experience elementary, middle, and secondary education, and has a common first year of coursework. In the second year, students choose courses in any one of the following areas: math, science, social science, English, foreign languages, special education and elementary education. Completion of these elective courses will demonstrate the content expertise required to become eligible for certification once the baccalaureate degree is completed. Elective courses are selected in consultation with the student's advisor. Students are expected to declare their area of focus prior to the beginning of the second year of the program. This degree also meets the requirements for paraprofessionals seeking an Associate Degree in fulfillment of national and state guidelines. Students are encouraged to take the Praxis I exam prior to the completion of their work at Great Bay Community College. Applicants are recommended to meet with the department chair to discuss the program and career pathways.

1. Graduating students will develop an appreciation for the act of reflective practice and recognize the impact of ongoing reflection and professional development in order to become an effective educator.
2. Graduating students will be exposed to our elementary, middle, and secondary school systems while developing an understanding of the importance of meeting the individual needs of all children.
3. Graduating students will acquire an understanding of various educational theories and their application to the real-world classroom.
4. Graduating students will be exposed to a variety of teaching techniques to be used in today's classrooms in order to meet the individual needs of all children.
5. Graduating students will utilize technology to enhance their teaching skills.

### **Transfer Credit Policy**

In addition to Great Bay transfer credit policies, appropriate education courses will be accepted if taken within a five-year period. Exceptions to this policy, based on professional experience, may be granted at the discretion of the department chair. Proper documentation will be required to initiate this process. In the case of English and math course transfers, it may be recommended that the student take portions of the Accuplacer Placement Test to verify the skill level required in order to be successful in subsequent classes within the program.

### **Technical Standards**

Technical Standards have been created as a guideline for completion of the Teacher Preparation Program and for success as an educator in a public school setting. For state certification as an educator, students are required to pass the Praxis I and Praxis II exams, and to undergo a criminal records check and fingerprinting. Individuals are encouraged to contact the State Department of Education for further requirement details. Students seeking a career in the field of education should possess strong written and verbal communication skills, enjoy working with children, be able to adapt to a variety of situations, and collaborate effectively with others. Students are encouraged to meet with their advisor to discuss any questions regarding these matters.

<b>DEGREE PROGRAM FIRST YEAR</b>				
<b>Fall Semester</b>		<b>TH</b>	<b>LAB</b>	<b>CR</b>
TCHP101G	Introduction to Exceptionalities	3	0	3
TCHP104G	Foundations of Education	3	0	3
ENGL110G	College Composition I	4	0	4
	Math Elective 145G/147G, 150G/152G (or higher)	4/5	0	4/5
<b>Semester Total:</b>		<b>14-15</b>	<b>0</b>	<b>14-15</b>

<b>Spring Semester</b>		<b>TH</b>	<b>LAB</b>	<b>CR</b>
	Math Elective	4	0	4
	Educational Transfer Focus Elective*	3	0	3
	Social Science Elective	3	0	3
	English Literature Course	3	0	3
	Foreign Language/Humanities/Fine Arts Elective**	3	0	3
<b>Semester Total:</b>		<b>16</b>	<b>0</b>	<b>16</b>
<b>First Year Total:</b>		<b>30-31</b>	<b>0</b>	<b>30-31</b>

<b>DEGREE PROGRAM SECOND YEAR</b>				
<b>Fall Semester</b>		<b>TH</b>	<b>LAB</b>	<b>CR</b>
	Educational Transfer Focus Elective*	3	0	3
	Educational Transfer Focus Elective*	3	0	3
	Lab Science Elective	3	3	4
PSYC110G	Introduction to Psychology	3	0	3
	Foreign Language/Humanities/Fine Arts Elective**	3	0	3
<b>Semester Total:</b>		<b>15</b>	<b>3</b>	<b>16</b>

<b>Spring Semester</b>		<b>TH</b>	<b>LAB</b>	<b>CR</b>
	Social Science Elective	3	0	3
	Educational Transfer Focus Elective*	3	0	3
	Educational Transfer Focus Elective*	3	0	3
	Foreign Language/Humanities/Fine Arts Elective**	3	0	3
<b>Semester Total:</b>		<b>15</b>	<b>3</b>	<b>16</b>
<b>Second Year Total:</b>		<b>30</b>	<b>6</b>	<b>32</b>
<b>Degree Total:</b>		<b>60-61</b>	<b>6</b>	<b>62-63</b>

\* Educational Transfer Focus Electives: Any course offered at The College with the exception of courses on the following list. These courses cannot be used for an Educational Transfer Focus elective: any course with an academic level less than 100, any cooperative course (Co-op), any internship, any practicum, any clinical or clinical affiliation, any externship, any self-assessment course, any senior project course, any internship seminar, any capstone course, any professional seminar, BTEC101G.

\*\*Theory, lab, and credit hours may vary depending on the elective course chosen.

## SPECIAL EDUCATION CERTIFICATE

**\*Please note: The Special Education Certificate program is in a teach-out phase and is no longer accepting new students.**

The Certificate in special education can be earned independently or as part of the Liberal Arts/Teacher Preparation Associate's Degree. This Certificate includes three courses that fulfill the requirements of the Education Focus Transfer electives described above. The Certificate is also useful for currently employed paraprofessionals seeking approval as highly qualified under federal No Child Left Behind requirements. Courses in this Certificate are:

<b>School Age: K-12</b>		<b>TH</b>	<b>LAB</b>	<b>CR</b>
<b>Fall Semester</b>				
TCHP101G	Introduction to Exceptionalities	3	0	3
TCHP104G	Foundations of Education	3	0	3
PSYC110G	Introduction to Psychology	3	0	3
<b>Spring Semester</b>				
TCHP201G	The Teaching and Learning Process	3	0	3
PSYC210G	Human Growth and Development	3	0	3
TCHPXXXG	Education Elective**	3	0	3
<b>Summer Semester</b>				
TCHP215G	Behavior Challenges in the Classroom	3	0	3
TCHPXXXG	Education Elective**	3	0	3
		<b>TOTAL CREDITS – 24</b>		
<i>**Education Elective (TCHP105G, 202, 203, 205, 207, 220, or 225).</i>				

Gainful Employment disclosure information is available at:

[http://greatbay.edu/sites/default/files/media/ProgramSheet\\_LiberalArts-SpecialEDCert.pdf](http://greatbay.edu/sites/default/files/media/ProgramSheet_LiberalArts-SpecialEDCert.pdf)

# ENGINEERING

## BIOENGINEERING

### ASSOCIATE IN SCIENCE

The Bioengineering Associate in Science degree is a transfer program which meets a majority of the first and second year baccalaureate requirements for math, chemistry, biology, and physics, as well as the engineering principles which are the foundation of a bioengineering program of study. The transfer program has been developed in consultation with the University of New Hampshire's College of Engineering and Physical Sciences to align program requirements for transfer purposes. The core courses in the program are also common to most undergraduate bioengineering programs.

This program improves upon the previous Liberal Arts concentration in the following ways:

- 1) Students may transfer with true junior status upon completion of this degree, subject to GPA requirements.
- 2) Students who place into 100-level or developmental mathematics may still complete the program but will require up to ten (10) additional math credits.
- 3) General education requirements do not exceed Discovery program requirements at the University of New Hampshire with careful choice of courses.

#### Program Outcomes:

- Students will access, generate, process, and transfer information using appropriate technologies.
- Students will understand mathematics and become mathematically confident by communicating and reasoning mathematically, by applying mathematics in real-world settings, and by solving problems through the integrated study of number systems, geometry, algebra, and trigonometry.
- Students will understand and apply scientific concepts, principles, and theories pertaining to the physical world and recognize the historical development of ideas in science.
- Students will apply technological knowledge and skills to design, construct, use, and evaluate products and systems.
- Students will understand the relationships and common themes that connect mathematics, science, and technology and apply the themes to other areas.
- Students will apply the knowledge and skills of mathematics, science, and technology to real-life problems and make informed decisions.
- After completing the program, students will be prepared to begin using mathematical analysis, scientific inquiry, and engineering design, as appropriate, to pose questions, seek answers, and develop solutions.

#### Technical Standards:

1. Basic computer skills including software such as web browsers and office applications
2. Good manual dexterity; adequate (basic) keyboarding skills
3. Vision for reading on computer screen and printed material
4. Critical thinking ability
5. Ability to work independently as well as in small groups

6. Ability to communicate effectively verbally and in writing, as in an office/work environment

**Transfer Credit Policy:** In addition to Great Bay transfer credit policies, transfer of courses in the Bioengineering program that are designated MAJOR courses more than 10 years old will be evaluated by the program coordinator on an individual basis.

**DEGREE PROGRAM FIRST YEAR**

**Fall Semester**

		<b>TH</b>	<b>LAB</b>	<b>CR</b>
FYE114G	First Year Seminar: Engineering*	1	0	1
CHEM115G	General Chemistry I	3	3	4
MATH210G	Pre-Calculus**	4	0	4
ENGL110G	College Composition I	4	0	4
<b>Semester Total:</b>		<b>12</b>	<b>3</b>	<b>13</b>

**Spring Semester**

		<b>TH</b>	<b>LAB</b>	<b>CR</b>
CHEM116G	General Chemistry II	3	3	4
BIOL108G	General Biology I	3	3	4
MATH230G	Calculus I	4	0	4
SOCI120G	Society and Technological Change	3	0	3
<b>Semester Total:</b>		<b>13</b>	<b>6</b>	<b>15</b>

**First Year Total: 25 9 28**

*\*Recommended. Any one-credit FYE course fulfills this requirement.*

*\*\*Students who place directly into MATH230G may replace MATH210G with another Liberal Arts elective for transfer as a Discovery elective.*

If MATH150G/152G is needed, students will need to take the course in the summer *prior to year one* in order to be on track.

**DEGREE PROGRAM SECOND YEAR**

**Fall Semester**

		<b>TH</b>	<b>LAB</b>	<b>CR</b>
CHE 501 (UNH)	Introduction to Chemical Engineering I	3	0	3
CHEM200G	Organic Chemistry	3	3	4
MATH250G	Calculus II	4	0	4
PHYS290G	University Physics I	3	3	4
	Humanities/Fine Arts Elective^	3	0	3
<b>Semester Total:</b>		<b>16</b>	<b>6</b>	<b>18</b>

**Spring Semester**

		<b>TH</b>	<b>LAB</b>	<b>CR</b>
CHE 502 (UNH)	Introduction to Chemical Engineering II	3	0	3
BIOL210G	Microbiology or	3	3	4
(BIOL220G)	(Principles of Genetics) or	(3)	(3)	(4)
(BTEC220G)	(Biomanufacturing)	(2)	(6)	(4)
MATH235G	Statistics for Engineers and Scientists	4	0	4
MATH265G	Introduction to Differential Equations	4	0	4
<b>Semester Total:</b>		<b>13-14</b>	<b>3-6</b>	<b>15</b>

**Second Year Total: 29-30 9-12 33**

**Degree Total: 54-55 18-21 61**

*^Theory, lab, and credit hours may vary depending on the elective course chosen.*

# ENGINEERING SCIENCE

## ASSOCIATE IN SCIENCE

The Engineering Science Associate in Science degree is a transfer program which meets a majority of the first and second year baccalaureate requirements for math, chemistry, biology and physics. These courses are the foundation of an engineering or applied mathematics program of study. The transfer program has been developed in consultation with the University of New Hampshire's College of Engineering and Physical Sciences to align program requirements for transfer purposes. The core courses in the program are also common to most undergraduate engineering programs; however, there are a wide variety of engineering-oriented programs that students have to choose from. This program offers students flexibility in the final year of the program to allow a direct path toward a career in an engineering or applied mathematics discipline.

This program improves upon the previous Liberal Arts concentration in the following ways:

- 1) Students may transfer with true junior status upon completion of this degree, subject to GPA requirements and choice of electives matching with the student's desired transfer degree program.
- 2) Students have greater flexibility in selecting engineering, engineering technology, math or computer science electives with a view toward the desired program for the next phase.
- 3) Students wishing to pursue a bachelor's degree in mathematics or applied mathematics can do so with this degree.
- 4) Students who place into 100-level or developmental mathematics may still complete the program, but will require up to ten (10) additional math credits.
- 5) General education requirements do not exceed Discovery program requirements at the University of New Hampshire with careful choice of courses.

### Program Outcomes:

- Students will access, generate, process, and transfer information using appropriate technologies.
- Students will understand mathematics and become mathematically confident by communicating and reasoning mathematically, by applying mathematics in real-world settings, and by solving problems through the integrated study of number systems, geometry, algebra, and trigonometry.
- Students will understand and apply scientific concepts, principles, and theories pertaining to the physical world and recognize the historical development of ideas in science.
- Students will apply technological knowledge and skills to design, construct, use, and evaluate products and systems.
- Students will understand the relationships and common themes that connect mathematics, science, and technology and apply these themes to other areas.
- Students will apply the knowledge and skills of mathematics, science, and technology to real-life problems and make informed decisions.
- After completing the program, students will be prepared to begin using mathematical analysis and scientific inquiry, as appropriate, to pose questions, seek answers, and develop solutions.

## Technical Standards:

1. Basic computer skills including software such as web browsers and office applications
2. Good manual dexterity; adequate (basic) keyboarding skills
3. Vision for reading on computer screen and printed material
4. Critical thinking ability
5. Ability to work independently as well as in small groups
6. Effectively communicate verbally and in writing, as in an office/work environment

**Transfer Credit Policy:** In addition to Great Bay transfer credit policies, transfer of courses in the Engineering Science program that are designated MAJOR courses more than 10 years old will be evaluated by the program coordinator on an individual basis.

**Please Note:** This degree includes several **major elective sequences**. Students may select an elective sequence based on educational and career goals. Students must complete *all courses within the chosen sequence* in order to satisfy the degree. **Please see the Guide to Major Elective Sequences at the end of this section.**

\*If MATH150G/MATH152G is needed, it is strongly recommended that students complete this course **prior to beginning the Engineering Science program** in order to stay on track.

**Please Note:** The Engineering Science degree is a rigorous program. Students are expected to spend additional time beyond the minimum to complete the requirements and achieve success. Students are also expected to have college-level reading, writing, and math skills as soon as possible after declaring this major.

### DEGREE PROGRAM FIRST YEAR

#### Fall Semester

		TH	LAB	CR
FYE114G	First Year Seminar: Engineering*	1	0	1
CHEM115G	General Chemistry I	3	3	4
MATH210G	Pre-Calculus	4	0	4
ENGL110G	College Composition I	4	0	4
<b>Sequence A:</b>				
ACM120G	Blueprint Reading	1	2	2
<b>Sequence B:</b>				
CIS112G	Introduction to Object-Oriented Programming	2	2	3
<b>Sequence C:</b>				
DATA210G	Elements of Data Science	3	0	3
*Recommended. Any one-credit FYE course fulfills this requirement.				
<b>Semester Total:</b>		<b>13-15</b>	<b>3-5</b>	<b>15-16</b>

#### Spring Semester

		TH	LAB	CR
ENGLXXXG	English Elective^	3	0	3
	Social Science Elective^	3	0	3
MATH230G	Calculus I	4	0	4
CHEM116G	General Chemistry II	3	3	4
<b>Sequence A:</b>				
	Humanities/Fine Arts Elective^	3	0	3
<b>Sequence B:</b>				
	Humanities/Fine Arts Elective^	3	0	3
<b>Sequence C:</b>				



DATA220G	Data Analysis with R	3	0	3
<b>Semester Total:</b>		<b>16</b>	<b>3</b>	<b>17</b>

**First Year Total: 29-31 6-8 32-33**

*^Theory, lab, and credit hours may vary depending on the course chosen.*

**DEGREE PROGRAM SECOND YEAR**

**Fall Semester**

		<b>TH</b>	<b>LAB</b>	<b>CR</b>
MATH250G	Calculus II	4	0	4
PHYS290G	University Physics I	3	3	4
	Liberal Arts Elective	3	0	3
<b>Sequence A:</b>				
	<b>4-Credit</b> Liberal Arts Elective	4	0	4
<b>Sequence B:</b>				
MATHXXXG	Math Elective	4	0	4
<b>Sequence C:</b>				
ARTS125G	Visual Language	3	0	3
<b>Semester Total:</b>		<b>13-14</b>	<b>3</b>	<b>14-15</b>

**Spring/Summer Semester**

		<b>TH</b>	<b>LAB</b>	<b>CR</b>
MATH235G	Math Elective	4	0	4
(or higher)				
PHYS295G	University Physics II	4	0	4
<b>Sequence A:</b>				
ACM215G	Applied Composites	2	4	4
ACM253G	Bonding and Finishing Operator	0	4	2
ACM257G	High Performance Composites Fabrication	0	4	2
<b>Sequence B:</b>				
CIS177G	Introduction to Python	2	2	3
	<b>4-Credit</b> Liberal Arts Elective	4	0	4
<b>Sequence C:</b>				
CIS177G	Introduction to Python	2	2	3
	<b>4-Credit</b> Liberal Arts Elective	4	0	4
DATA225G	Analytics Capstone	2	0	2
<b>Semester Total:</b>		<b>10-16</b>	<b>2-12</b>	<b>15-17</b>
<b>Second Year Total:</b>		<b>23-30</b>	<b>5-15</b>	<b>29-32</b>
<b>Degree Total:</b>		<b>52-61</b>	<b>11-23</b>	<b>61-65</b>

**Guide to Major Elective Sequences:**

**Sequence A – Advanced Composites Option:** ACM120G, ACM215G, ACM253G, and ACM257G.

**Sequence B – Applied Math/Programming Option:** MATH170G *or* MATH215G, CIS177G, and CIS112G *or* CIS148G.

**Sequence C – Practical Data Science Certificate Option:** DATA215G, CIS177G, DATA220G, and DATA225G (along with MATH235 and ARTS125 electives).

**Sequence D** – Students may transfer the following from other CCSNH colleges: Computer Aided Design (CAD), Engineering Statistics, and Engineering Dynamics *or* Strength of Materials.

# ENGLISH

## ASSOCIATE IN ARTS

The English major at Great Bay encompasses the study of a wide range of literary periods, styles, and genres. The requirements provide students with a broad background in American, British, and continental literature written in English, as well as the analytical tools and skills necessary for the serious academic study of literature. Students can pursue specialized literary or writing interests through their major electives. The program provides a strong foundation for further study of English and the humanities at four-year colleges and universities.

An English associate's degree emphasizes solid, adaptable communication skills for students who love literature and language and the exploration and development of complex ideas. The English major also builds important research, writing, and critical thinking skills that translate into valuable workplace contributions in a wide variety of fields. Specific career areas may include: teaching, writing, communications, editing, publishing, journalism, education, and the law.

It is recommended that students take ENGL110G College Composition I, CRIT150 Critical Thinking in the Humanities, and an introductory literature course (such as ENGL114G Introduction to Poetry, ENGL115G Introduction to Film Studies, or ENGL120G Introduction to African American Literature and Culture) in their first semester. ENGL 127G Introduction to Literary Analysis is best taken in the second semester. Students are also encouraged to make Lab Science, Math, Humanities/Foreign Language/Fine Arts, and Social Science Elective choices based upon particular four-year college's transfer requirements and general education cores.

### Program Outcomes

Students graduating with the Associate of Arts degree in English will be able to:

- Understand a comprehensive variety of stylistic periods and genres, as well as the scope and significance of literature written in English.
- Develop skills of analysis and interpretation using different theoretical approaches to study and analyze literature and language within the broad range of human experience.
- Examine how texts are written and received within literary, cultural, and socio-historical contexts while recognizing that literature and language reflect and impact cultural change.
- Develop the ability to write effectively, persuasively, and analytically for a wide range of audiences.
- Qualify for transfer to a four-year college or university with the necessary foundation in English and/or related fields such as Writing, History, the Humanities, or Political Science.

### Transfer Credit Policy

In addition to Great Bay transfer credit policies, Liberal Arts and Science courses will be considered for transfer regardless of when they were taken as long as they meet minimum grade requirements. See individual department policies for program exceptions on general education requirements. In the case of English and math course transfers, it may be recommended that the student take portions of the Accuplacer Placement Test to demonstrate the skill level required for success in subsequent classes within the program. Transfer of a course to this institution does not guarantee transfer of that same course to subsequent institutions. SAT testing may be required by some transfer institutions.

## DEGREE PROGRAM FIRST YEAR

Fall Semester		TH	LAB	CR
ENGL 110G	College Composition I	4	0	4
CRIT 150G	Critical Thinking in the Humanities	3	0	3
MATH145G/147G*	Quantitative Reasoning/Plus	4/5	0	4/5
ENGL 1XXG	100 Level English Elective (any except ENGL 117)	3	0	3
<b>Semester Total:</b>		<b>14-15</b>	<b>0</b>	<b>14-15</b>

*\*Or higher, in the Applied Math/Statistics Pathway.*

Spring Semester		TH	LAB	CR
ENGL 214G	Intro. to Creative Nonfiction	3	0	3
MATHXXXG	MATH Elective(225, 215, or 170*)	4	0	4
ENGL 127G	Intro. to Literary Analysis	3	0	3
ENGL 2XXG	200 Level Survey Elective	3	0	3
<b>Semester Total:</b>		<b>13</b>	<b>0</b>	<b>13</b>

*\*ENGL Survey Course Electives choices are ENGL209G American Literature through the Civil War, ENGL220G American Literature after the Civil War, ENGL223G British Literature to 1800, and ENGL224G British Literature from 1800 to the Present.*

Summer Semester		TH	LAB	CR
	Social Science Elective	3	0	3
<b>Semester Total:</b>		<b>3</b>	<b>0</b>	<b>3</b>
<b>First Year Total:</b>		<b>30-31</b>	<b>0</b>	<b>30-31</b>

## DEGREE PROGRAM SECOND YEAR

Fall Semester		TH	LAB	CR
ENGL 2XXG	200 Level Survey Elective	3	0	3
ENGL 2XXG	200 Level English Elective	3	0	3
	Lab Science Elective	3	2/3	4
	Social Science Elective^	3	0	3
	Foreign Lang./Hum./Fine Arts Elective^	3	0	3
<b>Semester Total:</b>		<b>15</b>	<b>2-3</b>	<b>16</b>
Spring Semester		TH	LAB	CR
ENGL 2XXG	200 Level Survey Elective	3	0	3
ENGL 2XXG	200 Level English Elective	3	0	3
ENGL 2XXG	200 Level English Elective	3	0	3
	Social Science Elective^	3	0	3
	Lab Science Elective	3	2/3	4
<b>Semester Total:</b>		<b>15</b>	<b>2-3</b>	<b>16</b>
<b>Second Year Total:</b>		<b>30</b>	<b>4-6</b>	<b>32</b>
<b>Degree Total:</b>		<b>60-61</b>	<b>4-6</b>	<b>62-63</b>

*^ Theory, lab, and credit hours will vary depending on the elective course chosen.*

# **ENVIRONMENTAL SCIENCE**

## **ASSOCIATE IN SCIENCE**

The Environmental Science Degree is intended for students who wish to transfer to a four-year institution, to pursue a degree in environmental studies, environmental policy, environmental science, ecology, natural resources management, or related fields. It is configured as a diverse environmental science foundation and is designed to provide a solid scientific and social scientific substance for students with a broad range of interests related to the environment. The degree of Associate in Science with a major in Environmental Science will be awarded upon completion of all requirements.

### **Expected Student Outcomes**

Students graduating with the A.S. degree in Environmental Science will be able to:

- Understand general ecological laws and principles regarding the systemic nature of the planet
- Understand and be able to execute a wide variety of laboratory and field science techniques in Environmental Science, Chemistry, and Biology
- Understand the holistic nature of environmental issues stemming from anthropogenic sources, geological sources, biological sources, and the biogeochemistry of the Earth
- Understand and integrate the selected sub-disciplines of environmental science and environmental studies at a more advanced undergraduate level
- Understand and appreciate the overlap of science, public policy, and ethics when exploring environmental and social issues
- Use critical thinking and critical inquiry to analyze and explore ethical, scientific, and policy issues in environmental science
- Employ aforementioned skills to analyze, interpret, and explain scientific data regarding the systems of the earth and be able to present conclusions in formal writing and presentations
- Qualify for transfer to a four-year college or university

### **Technical Standards**

Students enrolling in Liberal Arts Environmental Studies degree program must, in addition to meeting the specific pre-requisite requirements for each course, meet the following general, technical standards:

- Students must be able to comprehend the English language, both oral and written, and must have sufficient manual dexterity to produce legible written documents in a timely manner.
- Students must be able to sit or stand at a desk/laboratory bench, and also be able to conduct work in the field.
- Students must possess the necessary focus to stay on task for extended periods of time.
- Students must be able to comprehend and follow instructions in the classroom and laboratory in a timely manner.
- Students must possess the necessary manual dexterity to carry out assigned laboratory and field work tasks.
- Students must be able to perform required classroom, field and laboratory operations, including mathematical operations, without reference to notes, as directed.

### Transfer Credit Policy

In addition to Great Bay transfer credit policies, transfer of courses more than ten years old will be evaluated by the department chair or program coordinator on an individual basis.

<b>DEGREE PROGRAM FIRST YEAR</b>				
<b>Fall Semester</b>		<b>TH</b>	<b>LAB</b>	<b>CR</b>
ENGL110G	College Composition I	4	0	4
MATH150G*	College Algebra	4	0	4
NATR100G	Natural Resource Management	3	2	4
BIOL109G	General Biology II	3	3	4
	<b>Semester Total:</b>	<b>14</b>	<b>5</b>	<b>16</b>
<b>Spring Semester</b>		<b>TH</b>	<b>LAB</b>	<b>CR</b>
CHEM115G	General Chemistry I	3	3	4
NATR105G	Sustainable Agriculture and Food Systems	3	2	4
ENGL214G	Introduction to Creative Nonfiction	3	0	3
BTEC205G	Bioethics	3	0	3
	Open Elective^	3	0	3
	<b>Semester Total:</b>	<b>15</b>	<b>5</b>	<b>17</b>
	<b>First Year Total:</b>	<b>29</b>	<b>10</b>	<b>33</b>
<i>^Theory, lab, and credit hours may vary depending on the elective course chosen.</i>				

<b>DEGREE PROGRAM SECOND YEAR</b>				
<b>Fall Semester</b>		<b>TH</b>	<b>LAB</b>	<b>CR</b>
BIOL160G	Introduction to Environmental Science	3	3	4
BIOL230G	General Ecology	3	3	4
MATH210G**	Pre-Calculus	4	0	4
	Social Science Elective	3	0	3
	<b>Semester Total:</b>	<b>13</b>	<b>6</b>	<b>15</b>
<b>Spring Semester</b>		<b>TH</b>	<b>LAB</b>	<b>CR</b>
NATR299G	Contemporary Conservation Issues	3	3	4
CHEM116G	General Chemistry II	3	3	4
	Humanities/Fine Arts Elective^	3	0	3
	Open Elective^	3	0	3
	<b>Semester Total:</b>	<b>12</b>	<b>6</b>	<b>14</b>
	<b>Second Year Total:</b>	<b>25</b>	<b>12</b>	<b>29</b>
	<b>Degree Total:</b>	<b>54</b>	<b>22</b>	<b>62</b>
<i>^Theory, lab, and credit hours may vary depending on the elective course chosen.</i>				

\*Students must opt into one of the following pathways: Calculus Sequence (150G/210G). Students who do not test directly into MATH150G may substitute MATH152G. Students with appropriate test scores may substitute a higher level course from the direct calculus math pathway: MATH210G, MATH230G, MATH235G, MATH250G.

\*\*Students intending to transfer should select courses that will transfer appropriately to their intended institution.

\*\*\* Students with appropriate test scores may substitute a higher level course from the direct calculus math pathway: MATH210G, MATH230G, MATH235G, MATH250G.

# **FINE ARTS**

## **ASSOCIATE IN ARTS**

The Associate in Arts Degree in Fine Arts provides students with a foundation in fine arts and is designed to facilitate transfer into a four-year fine arts program. A variety of studio experiences in two- and three-dimensional mediums are offered as well as art history and the inclusion of digital media electives. The program is designed to develop traditional technical skills in studio art, while inspiring creative problem solving, the ability to express visual thinking in oral and written work, the ability to critique art as well as self-assess, an awareness of contemporary culture, and the exploration of personal artistic expression. The program will prepare students for transfer into a degree in studio art, art education, art history or digital art. Several articulation agreements currently exist for transfer into four-year BFA programs at New England institutions. The student will be responsible for purchasing the necessary art supplies, a list of which will be provided with the syllabus of each course.

### **Transfer Credit Policy**

In addition to Great Bay transfer credit policies, Liberal Arts and Science courses will be considered for transfer regardless of when they were taken, as long as they meet minimum grade requirements.

See individual department policies for program exceptions on general education requirements. In the case of English and math course transfers, it may be recommended that the student take portions of the Accuplacer Placement Test to demonstrate the skill level required for success in subsequent classes within the program.

Transfer of a course to this institution does not guarantee transfer of that same course to subsequent institutions. SAT testing may be required by some transfer institutions.

### **Program Outcomes**

Graduates will demonstrate the following:

- Render realistic and expressive images in a variety of media.
- Present a portfolio of images that demonstrates artistic skill, direction and a consistent personal style.
- Transform an idea into a finished work of art.
- Demonstrate technical expertise in a variety of two- and three-dimensional media.
- Situate personal work within contemporary culture.
- Understand major art periods and movements from Ancient to Modern periods of Art History.
- Understand the role of the artist in the 21st century.
- Identify and explore careers in the arts.
- Demonstrate creative problem solving.
- Demonstrate the ability to critique the work of others in written and oral formats.
- Demonstrate the ability to reflect, describe and assess one's own work.
- Demonstrate the use of visual vocabulary in oral and written work.
- Demonstrate the ability to use art materials appropriately, safely and responsibly.



## Technical Standards

This program requires work with a variety of art materials in a lab setting. Students must therefore be able to:

- Physically hold and utilize art materials, including but not limited to paintbrushes, pencils and x-acto knives.
- Have sufficient vision to safely use the materials noted as well as visually inspect their own work and that of others.
- Remain seated or standing for focused activity at a work station for a minimum of 2 hours at a time.

### Degree Program First Year

Fall Semester		TH	LAB	CR
FYE115G	First Year Seminar: Fine Arts*	1	0	1
ENGL110G	College Composition I	4	0	4
MATH145G/147G	Quantitative Reasoning/Plus**	4/5	0	4/5
ARTS123G	Drawing I	2	3	3
ARTS125G	Visual Language	3	0	3
<b>Semester Total:</b>		<b>14-16</b>	<b>3</b>	<b>15-16</b>

Spring Semester		TH	LAB	CR
ENGL214G	Introduction to Creative Nonfiction	3	0	3
	Math Elective^	4	0	4
ARTS223G	Drawing II	2	3	3
	One Art History (Choose from ARTS117G, 127G or 137G)	3	0	3
	Social Science Elective^	3	0	3
<b>Semester Total:</b>		<b>15</b>	<b>3</b>	<b>16</b>

**First Year Total: 29-31 6 31-32**

### Degree Program Second Year

Fall Semester		TH	LAB	CR
	Lab Science Elective^	3	3	4
	Social Science Elective^	3	0	3
	Fine Arts Elective^***	3	0	3
	Fine Arts Elective^***	3	0	3
	Fine Arts Elective^***	3	0	3
<b>Semester Total:</b>		<b>15</b>	<b>3</b>	<b>16</b>

Spring Semester		TH	LAB	CR
	Lab Science Elective^	3	3	4
	Social Science Elective^	3	0	3
	Fine Arts Elective^***	3	0	3

Fine Arts Elective <sup>^***</sup>	3	0	3
Fine Arts Elective <sup>^***</sup>	3	0	3
<b>Semester Total:</b>	<b>15</b>	<b>3</b>	<b>16</b>
<b>Second Year Total:</b>	<b>30</b>	<b>6</b>	<b>32</b>
<b>Degree Total:</b>	<b>59-61</b>	<b>12</b>	<b>62-63</b>

*^Theory, lab, and credit hours may vary depending on the elective course chosen.*

*\*Recommended. Any one-credit FYE course fulfills this requirement.*

*\*\*Or higher, in the Applied Math/Statistics pathway, or suitable transfer credit as determined by the Math Department.*

*\*\*\*Choose from the following: ARTS117G, ARTS127G, ARTS137G, ARTS225G, ARTS220G, ARTS230G, ARTS124G, ARTS126G, ARTS235G.*

# HISTORY

## ASSOCIATE IN ARTS

The Associate in Arts in History provides students with a broad range of historical and political perspectives. This degree allows students to explore various views and concepts from our own country and around the world. Students will develop research skills through the use of primary and secondary sources. The coursework is designed to transfer to a baccalaureate program where students may continue on pathway to a career in law, public policy, education, government, or historic preservation.

### Program Outcomes

Upon graduation, students will be able to:

- Discuss historical and political perspectives and concepts.
- Develop strong communication skills that can be applied to a variety of disciplines.
- Analyze primary and secondary sources to complete research.
- Build academic skills to prepare for transfer to other institutions or to work in the field.
- Experience history through interactive assessments, travel, and guest speakers.

### DEGREE PROGRAM FIRST YEAR

Fall Semester		TH	LAB	CR
MATH145G/147G	Quantitative Reasoning/Plus (or higher)	4/5	0	4/5
	History Elective*	3	0	3
ENGL110G	College Composition I	4	0	4
	Social Science Elective	3	0	3
<b>Semester Total:</b>		<b>14-15</b>	<b>0</b>	<b>14-15</b>

Spring Semester		TH	LAB	CR
MATH225G	Probability and Statistics or	4	0	4
(MATH215G)	(Finite Math)	(4)	(0)	(4)
	History Elective*	3	0	3
	Social Science Elective	3	0	3
	English Literature Course	3	0	3
	Foreign Language/Humanities/Fine Arts	3	0	3
	Elective^			
<b>Semester Total:</b>		<b>16</b>	<b>0</b>	<b>16</b>
<b>First Year Total:</b>		<b>30-31</b>	<b>0</b>	<b>30-31</b>

### DEGREE PROGRAM SECOND YEAR

Fall Semester		TH	LAB	CR
	History Elective*	3	0	3
	History Elective*	3	0	3
	Lab Science Elective	3	3	4
	Social Science Elective	3	0	3
	Foreign Language/Humanities/Fine Arts	3	0	3
	Elective^			

	<b>Semester Total:</b>	<b>15</b>	<b>3</b>	<b>16</b>
<b>Spring Semester</b>		<b>TH</b>	<b>LAB</b>	<b>CR</b>
History Elective*		3	0	3
History Elective*		3	0	3
History Elective*		3	0	3
Lab Science Elective^		3	3	4
Foreign Language/Humanities/Fine Arts Elective^		3	0	3
	<b>Semester Total:</b>	<b>15</b>	<b>3</b>	<b>16</b>
	<b>Second Year Total:</b>	<b>30</b>	<b>6</b>	<b>32</b>
	<b>Degree Total:</b>	<b>60-61</b>	<b>6</b>	<b>62-63</b>

\*History Electives: AMER110G, ENGL214G, GEOG110G, HISTXXXG(all), POLXXXG(all), or SOC1120G

^ Theory, lab, and credit hours may vary depending on the elective course chosen.

# **HOMELAND SECURITY CERTIFICATE**

The market for homeland security jobs is growing at all levels in the public and private sectors. Earning a Certificate in Homeland Security at Great Bay can provide emergency response professionals the skills and expertise necessary to effectively plan for, prepare for, and respond to a potential terrorist attack. Students pursuing a Criminal Justice degree may also take the Homeland Security Certificate to enhance their potential employment opportunities.

## **Program Outcomes:**

Upon completion of the Homeland Security Certificate at Great Bay, graduates will be able to:

- Examine the historical and evolving concept of homeland security within the broader political and national security system of the contemporary nation-state.
- Recognize the detailed mitigation, planning, response, and recovery phases to and from a homeland security incident.
- Differentiate among the various homeland security threats to include those that are man-made, technological, and natural.
- Discuss the strategic, operational, and tactical threats presented by chemical, nuclear, and biological agents to include agent characteristics and delivery systems.
- Distinguish among and assess the various homeland security approaches, techniques, and processes, such as analytics, indications, warnings, and forecasting.
- Explain the key administrative and command and control elements of the evolving homeland security relationships among the intelligence community, Department of Homeland Security, interagency processes and institutions; federal, state, and local intergovernmental relations; and a comprehensive U.S. homeland security strategy.
- Be able to assess the risk of threat and utilize crisis management strategies to develop a plan and minimize organization and community vulnerability.

## **Technical Standards**

Applicants should be aware that thorough background checks are completed by potential employers prior to obtaining any position with arrest or detention powers, and typically, even before being accepted for an internship. Applicants who have had involvement with the law may not be employable. Due to the possible negative impact on future employability, applicants are strongly advised to discuss any concerns with the Department Chair prior to applying to the program.

To be successful in the Homeland Security field, one must demonstrate the emotional stability required to exercise sound judgment and accept direction and guidance from a supervisor. One must also be able to establish rapport and maintain sensitive interpersonal relationships with employees, customers, and clients. Overall opportunities within Homeland Security will be favorable for individuals who meet psychological, physical, and personal qualifications.

### Transfer Credit Policy

In addition to Great Bay transfer credit policies, transfer of courses in Homeland Security more than 10 years old will be evaluated by the program coordinator on an individual basis.

<b>CORE REQUIREMENTS</b>				
		<b>TH</b>	<b>LAB</b>	<b>CR</b>
HMSC110G	Introduction to Homeland Security	3	0	3
HMSC115G	Crisis Planning, Operations, and Management	4	0	4
HMSC120G	Introduction to Terrorism	3	0	3
	<b>Total:</b>	<b>10</b>	<b>0</b>	<b>10</b>
<b>Students must also select two additional courses from the following list:</b>				
		<b>TH</b>	<b>LAB</b>	<b>CR</b>
CRMJ121G	Criminal Procedure	4	0	4
CRMJ123G	Criminal Law	4	0	4
CRMJ150G	Criminology	3	0	3
POLS220G	Public Administration	3	0	3
IST161G	Introduction to Information Assurance	2	2	3
	<b>Certificate Total:</b>			<b>16-18</b>

Gainful Employment disclosure information is available at:

<http://greatbay.edu/sites/default/files/GE/homeland-sec/43.9999-Gedt.html>

# HOSPITALITY MANAGEMENT

## ASSOCIATE IN SCIENCE

### CERTIFICATES

The Hospitality Management Associate in Science Degree and related Certificate programs prepare students for a wide variety of positions with hotels, resorts, country clubs, restaurants, cruise lines, travel and tourism organizations, event planning and convention services, commercial recreation facilities, and more.

Great Bay is located in one of New Hampshire's premier tourism regions. Our students have access to a variety of internship and job placement opportunities, which provide them with a distinct advantage in the marketplace. A few of our Hospitality Management partners include: Wentworth by the Sea Hotel & Spa, The Chamber Collaborative of Greater Portsmouth, Strawberry Banke Museum, and The Walt Disney Company.

Students interested in Hospitality Management have three concentrations to choose from. The **Hospitality Management – Direct Career** option is recommended for students who plan to begin a professional career immediately after graduation. It is designed to provide students with the flexibility to sample a wide range of elective alternatives in order to tailor the program to individual career interests.

The **Hospitality Management – Tourism & Events** option appeals to the service-oriented student who is passionate about integrating sustainable approaches to planning and managing meaningful travel, tourism, and event experiences. This program culminates with a student-designed educational trip, in which students take an active role in making a positive impact on the host community's environment, culture, and local economy. This option offers several pathways for students to begin a career after graduation, start a small business, or transfer to a four-year institution.

The **Hospitality Management - University Transfer** option is specifically designed to prepare students for transfer to a four-year college or university. The pre-determined course selections not only provide students with a solid foundation in business and hospitality, but also offer maximization of transfer credits. This option ensures seamless transfer into the Hospitality Management programs at UNH, SNHU, GSC, and other universities.

Certificate programs in **Event & Meeting Planning Management**, **Hotel/Restaurant Management**, and **Spa Management**, offer students an opportunity to specialize in a particular area of hospitality. Most credits in each certificate program may be applied toward a degree in Hospitality Management. The certificate may also serve as a stand-alone certificate for professionals preparing for a career change or advancement opportunities.

Great Bay Hospitality students may also earn several industry-recognized certifications including the Cvent Certificate for event planners, the Delphi Certificate for sales and catering, and AHLEI's Managing Front Office Operations Certificate for hotel professionals.

#### Program Outcomes

Graduates of the Hospitality Management program will be able to:

- Identify the fundamental components, historical developments, and current and future trends of the global hospitality industry.
- Explain the significance of the guest-host relationship inherent to the hospitality industry and the strategies used to achieve service excellence.

- Display the necessary written and oral communication skills required to be successful in the hospitality industry, including nonverbal techniques and an appreciation of cultural differences.
- Realize and appreciate the importance of professional, ethical, legal, and social issues and responsibilities related to the hospitality industry.
- Demonstrate a solid understanding of effective hospitality sales, marketing, and management practices.
- Develop and apply problem solving, decision making, team building and critical thinking skills to practical hospitality management situations.
- Broaden career perspectives and enhance personal and professional development opportunities for a successful career in the hospitality industry.
- Qualify for transfer to a four-year college or university having completed the necessary requirements in hospitality, business, and general education for upper level study in Hospitality Management.

### Technical Standards

Students in the Hospitality Management Degree and related Certificate programs must be able to demonstrate the ability to:

- Communicate effectively using written and oral techniques, including the use of technology;
- Conduct themselves in a professional manner;
- Work independently and in teams;
- Work with frequent interruptions, respond appropriately to unexpected situations, and cope with variations in workload and stress levels.

### Health and Internship Considerations

Participation in an internship requires the student to follow the College Immunization Policy. See page 50. Depending upon the site, the student may be required to possess and maintain professional liability insurance. For unpaid internships, the student must possess and maintain accident insurance. See page 64 for purchase options available through the College.

### Transfer Credit Policy

In addition to Great Bay transfer credit policies, transfer of courses in Hospitality Management more than ten years old will be evaluated by the program coordinator on an individual basis.

<b>DEGREE PROGRAM <i>Direct Career</i> - FIRST YEAR</b>				
<b>Fall Semester</b>		<b>TH</b>	<b>LAB</b>	<b>CR</b>
FYE111G	First Year Seminar-BUS/HOSP <sup>^</sup>	1	0	1
HOS110G	Introduction to Hospitality Management	3	0	3
MATH145G/147G*	Quantitative Reasoning/Plus (or higher)	4/5	0/0	4/5
ENGL110G	College Composition I	4	0	4
HOS150G	Hotel Operations	3	0	3
<b>Semester Total:</b>		<b>15-16</b>	<b>0</b>	<b>15-16</b>
*Prerequisite: placement in MATH145G or higher				
<sup>^</sup> Recommended. Any one-credit FYE course fulfills this requirement.				

<b>Spring Semester</b>		<b>TH</b>	<b>LAB</b>	<b>CR</b>
ACCT113G	Accounting and Financial Reporting I	3	0	3
ENGL214G	Introduction to Creative Nonfiction	3	0	3
HOS175G	Hospitality Marketing & Sales	3	0	3
	Hospitality Elective	3	0	3



CIS110G/CIS156G CIS107G**	Intro to Computers/Computer Applications in Business/Essentials of Computer Literacy	2	2/4	3/4
<b>Semester Total:</b>		<b>14</b>	<b>2-4</b>	<b>15-16</b>
<b>First Year Total:</b>		<b>29-30</b>	<b>2-4</b>	<b>30-32</b>

\*\* Prerequisite: placement in CIS107G, CIS110G or CIS156G

<b>DEGREE PROGRAM <i>Direct Career</i> - SECOND YEAR</b>				
<b>Fall Semester</b>		<b>TH</b>	<b>LAB</b>	<b>CR</b>
SOCI250G	Multi-Ethnic Cross Cultural Relations	3	0	3
HOS275G	Professional Development	3	0	3
BUS114G	Management	3	0	3
HOS210G	Customer Service	3	0	3
	Science Elective*	4	0	4
<b>Semester Total:</b>		<b>16</b>	<b>0</b>	<b>16</b>

\*A 3 credit science elective may be accepted in transfer to fulfill this requirement. Theory, lab, and credit hours may vary depending on the course chosen.

<b>Spring Semester</b>		<b>TH</b>	<b>LAB</b>	<b>CR</b>
GEOG110G	World Geography	3	0	3
	Business Elective* (ACCT, BUS, ECON, HOS, or MKTG)	3	0	3
MKTG201	Business Relationship Management	3	0	3
HOS225G	Hospitality Law	3	0	3
HOS280	Hospitality Internship or (Hospitality Elective)	0 (3)	9 (0)	3 (3)
<b>Semester Total:</b>		<b>12-15</b>	<b>0-9</b>	<b>15</b>
<b>Second Year Total:</b>		<b>28-31</b>	<b>0-9</b>	<b>31</b>
<b>Degree Total:</b>		<b>57-61</b>	<b>2-13</b>	<b>60-63</b>

### **Hospitality Management Associate Degree – *Direct Career* and *Tourism & Events* Elective Options**

In order to complete the degree program, students may select two to three of the following elective course options. These electives may also apply to Hospitality Management Certificates. See below for more information.

- HOS211G Sports Tourism and Events
- HOS111G Tourism and Sustainable Practices
- HOS201G Tour and Cruise Operations
- HOS202G Educational Travel Experience
- HOS250G Event Planning
- HOS215G Planning Meetings & Conventions
- HOS230G Restaurant Development & Strategic Planning
- HOS235G Food & Beverage Operations
- HOS244G Introduction to the Spa Industry
- HOS255G Catering Sales & Event Management

### **DEGREE PROGRAM *Tourism and Events* - FIRST YEAR**

<b>Fall Semester</b>		<b>TH</b>	<b>LAB</b>	<b>CR</b>
HOS110G	Introduction to Hospitality Management	3	0	3
HOS150G	Hotel Operations	3	0	3
ENGL110G	College Composition I	4	0	4
MATH145G/147G	Quantitative Reasoning/Plus (or higher)	4/5	0	4/5
<b>Semester Total:</b>		<b>14-15</b>	<b>0</b>	<b>14-15</b>

<b>Spring Semester</b>		<b>TH</b>	<b>LAB</b>	<b>CR</b>
HOS111G	Tourism and Sustainable Practices	3	0	3
HOS175G	Hospitality Marketing and Sales	3	0	3
HOS211G	Sports Tourism and Events or	3	0	3
(HOS250G)	(Event Planning)	(3)	(0)	(3)
GEOG110G	World Geography	3	0	3
BUS110G	Introduction to Business	3	0	3
<b>Semester Total:</b>		<b>15</b>	<b>0</b>	<b>15</b>
<b>First Year Total:</b>		<b>29-30</b>	<b>0</b>	<b>29-30</b>

<b>DEGREE PROGRAM <i>Tourism and Events</i> - SECOND YEAR</b>				
<b>Fall Semester</b>		<b>TH</b>	<b>LAB</b>	<b>CR</b>
HOS210G	Customer Service	3	0	3
HOS201G	Tour and Cruise Operations	3	0	3
HOSXXXG	Hospitality Elective	3	0	3
BIOL160G	Introduction to Environmental Science	3	3	4
(BIOL150G)	(Nutrition)	(3)	(2)	(4)
NATR100G	Natural Resources Stewardship or	3	2	4
(NATR105G)	(Sustainable Agriculture and Food Systems) or	(3)	(2)	(4)
	(Liberal Arts Elective*)	(3)	(0)	(3)
<b>Semester Total:</b>		<b>15</b>	<b>2-5</b>	<b>16-17</b>

<b>Spring Semester</b>		<b>TH</b>	<b>LAB</b>	<b>CR</b>
HOS202G	Educational Travel Experience or	2	2	3
(HOS280G)	(Hospitality Internship)	(0)	(9)	(3)
	BUS/MKTG/ECON/ACCT/HOS Elective*	3	0	3
	Foreign Language/Humanities/Fine Arts Elective*	3	0	3
HOS225G	Hospitality Law	3	0	3
MKTG201	Business Relationship Management	3	0	3
<b>Semester Total:</b>		<b>12-14</b>	<b>2-9</b>	<b>15</b>
<b>Second Year Total:</b>		<b>27-29</b>	<b>4-14</b>	<b>31-32</b>
<b>Degree Total:</b>		<b>56-59</b>	<b>4-14</b>	<b>60-62</b>

<b>DEGREE PROGRAM <i>University Transfer</i> - FIRST YEAR</b>				
<b>Fall Semester</b>		<b>TH</b>	<b>LAB</b>	<b>CR</b>
HOS110G	Introduction to Hospitality Management	3	0	3
MATH145G/MATH147G or CIS110G/156G	Quantitative Reasoning/Plus  (Intro to Computers/Computer Applications in Business [if placed into MATH215])	4/5  (2)	0/0  (2)	4/5  (3)
ENGL110G	College Composition I	4	0	4
HOS150G	Hotel Operations	3	0	3
		<b>Semester Total:</b>	<b>12-15</b>	<b>0-2</b>
<i>*Students placing directly into MATH215G may take CIS110G or CIS156G in place of MATH145G/MATH147G.</i>				

<b>Spring Semester</b>		<b>TH</b>	<b>LAB</b>	<b>CR</b>
ACCT113G	Accounting and Financial Reporting I	3	0	3
ENG214G	Intro to Creative Nonfiction	3	0	3
HOS175G	Hospitality Marketing & Sales	3	0	3
HOS235G	Food & Beverage Operations	3	0	3
GEOG110G	World Geography	3	0	3
		<b>Semester Total:</b>	<b>15</b>	<b>0</b>
		<b>First Year Total:</b>	<b>27-30</b>	<b>0-2</b>
			<b>28-30</b>	

<b>DEGREE PROGRAM <i>University Transfer</i> - SECOND YEAR</b>				
<b>Fall Semester</b>		<b>TH</b>	<b>LAB</b>	<b>CR</b>
SOC1120G	Society and Technological Change	3	0	3
MATH215G	Finite Mathematics	4	0	4
ECON234G	Macroeconomics	3	0	3
HOS215G	Planning Meetings & Conventions	3	0	3
ACCT123G	Accounting & Financial Reporting II	3	0	3
		<b>Semester Total:</b>	<b>16</b>	<b>0</b>

<b>Spring Semester</b>		<b>TH</b>	<b>LAB</b>	<b>CR</b>
ECON235G	Microeconomics	3	0	3
HOS250G	Event Planning	3	0	3
HOS280G	Hospitality Internship	0	9	3
or (HOS244G)	(Intro to Spa Industry)	(3)	(0)	(3)
HOS275	Professional Development	3	0	3
Select One:	Transferable Science Elective	3	2/3	4
BIO106G	The Human Body			
BIOL109G	General Biology II			
BIOL150G	Nutrition			
BIOL160G	Introduction to Environmental Science			
		<b>Semester Total:</b>	<b>12-15</b>	<b>0-12</b>
		<b>Second Year Total:</b>	<b>28-31</b>	<b>0-12</b>
		<b>Degree Total:</b>	<b>55-61</b>	<b>0-14</b>
				<b>60-62</b>

## HOSPITALITY MANAGEMENT CERTIFICATE PROGRAMS

These Certificate programs are designed for students wishing to specialize in one area of hospitality: Hotel/Restaurant Management, Spa Management, or Event & Meeting Planning Management. Most credits in each certificate program may be applied toward fulfilling requirements for a degree in Hospitality Management. Certificates may also serve stand-alone credentials for professionals preparing for a career change or advancement opportunities.

### Event & Meeting Planning Management

This certificate prepares students for employment in event and meeting planning management for large hotels, resorts, conference or convention centers, attractions, private catering operations, event management companies, nonprofit organizations, and independent event and wedding planners. Students who love working with people, enjoy planning social events, and are creative and detail oriented, should consider this rapidly growing field.

Event & Meeting Planning Management		TH	LAB	CR
HOS110G	Introduction to Hospitality Management	3	0	3
HOS210G	Customer Service	3	0	3
HOS255G	Catering Sales & Event Management	3	0	3
HOS175G	Hospitality Marketing & Sales or	3	0	3
(HOS225G)	(Hospitality Law)	(3)	(0)	(3)
HOS215G	Planning Meetings & Conventions	3	0	3
HOS250G	Event Planning	3	0	3
HOS280G	Hospitality Internship or	0	9	3
(HOS275G)	(Professional Development) or	(3)	(0)	(3)
(HOS235G)	(Food and Beverage Operations)	(3)	(0)	(3)
<b>Certificate Total:</b>		<b>18-21</b>	<b>0-9</b>	<b>21</b>

Gainful Employment disclosure information is available at:

<http://greatbay.edu/sites/default/files/GE/event/52.0907-Gedt.html>

### Hotel/Restaurant Management

This certificate prepares students for a variety of career options in lodging and food service. Students with a desire to help people and assist in daily management and operations in a fast paced service industry will find a multitude of job opportunities with hotels, resorts, restaurants, casinos, clubs, convention centers, and cruise lines.

Hotel/Restaurant Management Certificate		TH	LAB	CR
HOS110G	Introduction to Hospitality Management	3	0	3
HOS210G	Customer Service	3	0	3
HOS150G	Hotel Operations or	3	0	3
(HOS230G)	(Restaurant Development & Strategic Planning)	(3)	(0)	(3)
HOS235G	Food and Beverage Operations	3	0	3
HOS255G	Catering Sales & Event Management	3	0	3
HOS175G	Hospitality Marketing & Sales or	3	0	3
HOS225G	(Hospitality Law)	(3)	0	(3)
HOS280G	Hospitality Internship or	0	9	3
(HOS275G)	(Professional Development) or	(3)	(0)	(3)
(HOS215G)	(Planning Meetings & Conventions)	(3)	(0)	(3)

	<b>Certificate Total:</b>	<b>18-21</b>	<b>0-9</b>	<b>21</b>

Gainful Employment disclosure information is available at:  
<http://greatbay.edu/sites/default/files/GE/hotel/52.0909-Gedt.html>

### Spa Management

The spa and wellness industry is growing rapidly as people focus more on healthy living. This certificate prepares students for career opportunities in a variety of spa facilities including hotels, resorts, cruise ships, day spas, salons, medical spas, and fitness centers. Students will develop skills to supervise day-to-day operations, oversee massage and skin therapists, nutritionists and other health and wellness specialists while ensuring that clients feel pampered in a relaxed atmosphere. This certificate also complements the Massage Therapy Certificate. With just five additional courses, these students can earn a second credential to prepare them for a supervisory or management role in the spa industry.

<b>Spa Management</b>		<b>TH</b>	<b>LAB</b>	<b>CR</b>
HOS110G	Introduction to Hospitality Management	3	0	3
HOS244G	Introduction to the Spa Industry	3	0	3
MASS150G	Physiology of Wellness	2	0	2
HOS210G	Customer Service	3	0	3
HOS175G	Hospitality Marketing & Sales or	3	0	3
(HOS225G)	(Hospitality Law)	(3)	(0)	(3)
BIOL150G	Nutrition	3	3	4
HOS280G	Hospitality Internship or	0	9	3
(HOS275G)	(Professional Development) or	(3)	(0)	(3)
(HOS150G)	(Hotel Operations)	(3)	(0)	(3)
	<b>Certificate Total:</b>	<b>17-20</b>	<b>3-12</b>	<b>21</b>

Gainful Employment disclosure information is available at:  
<http://greatbay.edu/sites/default/files/GE/spa/52.0999-Gedt.html>

# **INFORMATION SYSTEMS TECHNOLOGY**

## **ASSOCIATE IN SCIENCE CERTIFICATE**

The Department of Information Systems Technology offers coursework in computer hardware repair, computer networking, network security and network management. This coursework opens the door to career changes, career enhancements, and career opportunities. The demand for IT professionals continues to rise. IT professionals are being sought after with higher salaries as an incentive. Continuing education opportunities are available for IST graduates through current articulation agreements with four-year colleges. Courses will be offered on a rotating semester basis. Students should work with their advisors to plan course selections to optimize program completion time.

### **Program Outcomes**

Students will be able to:

- Design local area networks using multiple sub-networks
- Configure networking devices to forward traffic throughout a local area network
- Configure networking devices to connect to internet service provider network
- Configure and maintain personal computers in a networked environment
- Configure and maintain network servers
- Install and test physical layer infrastructure to include copper, fiber-optic, and wireless media
- Install and configure Windows workstations and servers
- Establish and maintain basic network security policies and procedures
- Configure and maintain advanced network security devices
- Configure and implement virtualization of the desktop and network
- Prepare for selected industry recognized certifications

### **Technical Standards**

Students who enroll in the program should comprehend the English language, both oral and written, and have sufficient keyboarding skills to produce electronic documents in a timely manner. They should be able to sit or stand at a desk or workstation and stay on task for extended periods of time. They should be detail-oriented, able to read small print, and able to perform basic mathematical operations. Successful employees in the field demonstrate the emotional stability required to exercise sound judgment, accept direction and guidance from a supervisor, and establish rapport and maintain sensitive interpersonal relationships with employees, customers, and clients.

### **Health and Internship Considerations**

The College must ensure that stakeholders at internship and service learning sites are not adversely affected by students during learning experiences. Therefore, students participating in internship and field experiences must demonstrate the emotional stability required to exercise sound judgment, accept direction and guidance from a supervisor or faculty member, and establish rapport and maintain sensitive interpersonal relationships with employees, customers, and clients.

Participation in an internship requires the student to follow the College's Immunization Policy. See page 50. Depending upon the site, the student may be required to possess and

maintain professional liability insurance. For unpaid internships, the student must possess and maintain accident insurance. See page 64 for purchase options available through the College.

**Transfer Credit Policy**

In addition to Great Bay transfer credit policies, all Information Systems Technology transfer credits will be evaluated by the IST chairperson or his/her designee.

<b>DEGREE PROGRAM FIRST YEAR</b>				
<b>Fall Semester</b>		<b>TH</b>	<b>LAB</b>	<b>CR</b>
ENGL110G	College Composition I	4	0	4
MATH150G	College Algebra	4	0	4
IST122G	Introduction to Networks	2	2	3
IST123G	Routing and Switching Essentials	2	2	3
<b>Semester Total:</b>		<b>12</b>	<b>4</b>	<b>14</b>
<b>Spring Semester</b>		<b>TH</b>	<b>LAB</b>	<b>CR</b>
Math170G	Discrete Mathematics	4	0	4
	Lab Science Elective*	3	3	4
IST222G	Scaling Networks	2	2	3
IST223G	Connecting Networks	2	2	3
<b>Semester Total:</b>		<b>11</b>	<b>7</b>	<b>14</b>
<b>Summer Semester</b>		<b>TH</b>	<b>LAB</b>	<b>CR</b>
	IST Elective*	2	2	3
	IST Elective*	2	2	3
	Foreign Language/Humanities/Fine Arts Elective*	3	0	3
<b>Semester Total:</b>		<b>7</b>	<b>4</b>	<b>9</b>
<b>First Year Total:</b>		<b>30</b>	<b>15</b>	<b>39</b>
<b>DEGREE PROGRAM SECOND YEAR</b>				
<b>Fall Semester</b>		<b>TH</b>	<b>LAB</b>	<b>CR</b>
	IST/CIS Elective*	2	2	3
	IST/CIS Elective*	2	2	3
	IST/CIS Elective*	2	2	3
	Social Science Elective*	3	0	3
<b>Semester Total:</b>		<b>9</b>	<b>6</b>	<b>12</b>
<b>Spring Semester</b>		<b>TH</b>	<b>LAB</b>	<b>CR</b>
	IST/CIS Elective*	2	2	3
	IST/CIS Elective*	2	2	3
	IST/CIS Elective*	2	2	3
	IST/CIS Elective*	2	2	3
<b>Semester Total:</b>		<b>8</b>	<b>8</b>	<b>12</b>
<b>Second Year Total:</b>		<b>17</b>	<b>14</b>	<b>24</b>
<b>Degree Total:</b>		<b>47</b>	<b>29</b>	<b>63</b>

*\*Theory, Lab, and Credit hours may vary depending on the course chosen.*

*\*\*Approved substitutions for MATH150G are MATH152G, MATH210G, MATH230G, MATH250G*

At least 18 credits must be at the 200 level. Up to 15 CIS or DGMT credits may be applied at either the 100 or 200 level in fulfillment of IST degree requirements.

**INFORMATION SYSTEM TECHNOLOGY ELECTIVES**

IST112G	Applied Logic	2	2	3
IST113G	IT Essentials PC Hardware & Software	2	2	3
IST142G	Virtualization Essentials	2	2	3
IST150G	Network Operating Systems Fundamentals	2	2	3
IST151G	Windows Network Operating System	2	2	3
IST161G	Intro to Information Assurance	2	2	3
IST163	Legal Issues in Information Security	3	0	3
IST200G	Communications Electro-optics	2	2	3
IST212	Mobile Systems Architecture	2	2	3
IST221G	Advanced Switching	2	2	3
IST228G	Network Implementation	2	2	3
IST242G	Advanced Virtualization	2	2	3
IST245G	Information Storage and Management	2	2	3
IST251G	Windows NOS Services	2	2	3
IST253G	Windows Server 2008 Active Directory	2	2	3
IST262G	Advanced Network Security	2	2	3
IST264G	Configuration of Security Appliance	2	2	3
IST266G	Security+	2	2	3
IST275G	Network Protocols & Services	2	2	3
IST281G	Internship	1	8	3



## INFORMATION SYSTEMS TECHNOLOGY CERTIFICATE

The 24-credit IST Certificate is designed to prepare the student for a place in the Information Technology workplace with a 24-credit milestone. The eight-course requirement is flexible, with a maximum of fifteen 100-level credits in courses with IST designations and a minimum of nine 200-level credits in courses with IST designations.

The eight-course sequence of the IST Certificate program provides some preparation for industry-recognized certifications such as the CompTIA A+, CompTIA Net+, Cisco Certified Network Associate (CCNA), FOA Certified Fiber Optic Technician (CFOT), FOA Fiber To The Premises (CFxT), the Microsoft Technology Associate, and EMC2 ISM.

Students may then choose to finish the Associate in Science Degree and further their education at a four-year college. Students who already have a degree may choose this Certificate to redirect their expanding networking skills and prepare them for the rapidly changing and ever-challenging world of Information Technology.

Up to nine credits may be taken under the CIS or DGMT designation and applied to the IST Associate in Science Degree or IST Certificate programs.

### Curriculum Recommendations

Students are encouraged to explore the topic areas of networking devices, network infrastructure, PC maintenance and support, security, and Windows network operating systems during their 100 level course experiences and focus on their specific areas of interest when selecting their 200 level coursework.

The course sequence of IST122G, IST123G, IST222G, and IST223G comprise the entire Cisco Certified Network Associate (CCNA) Academy. These courses are offered in 8 week/8 week format over a semester to allow students to complete the CCNA Certification preparation track over two semesters.

The IST200G course offers the Fiber Optic Association CFOT, and CFxT, certification exams as part of the course assessments. (See [www.thefoa.org](http://www.thefoa.org) for details.) Other industry certification exams such as the Cisco (CCNA), Microsoft (MTA), CompTIA, and EMC2 ISM certifications are not included within the IST program. However, the IST curriculum is designed to provide foundation preparation for these industry certification exams. Students wishing to pursue these certifications must arrange to take these exams on their own.

Gainful Employment disclosure information is available at:

<http://greatbay.edu/sites/default/files/GE/information-systems/11.0901-Gedt.html>

### INFORMATION SYSTEMS TECHNOLOGY CERTIFICATE\*

*\*Choose 24 credits from the following:*

		TH	LAB	CR
IST112G	Applied Logic	2	2	3
IST113G	IT Essentials PC Hardware & Software	2	2	3
IST122G	Introduction to Networks	2	2	3
IST123G	Routing and Switching Essentials	2	2	3
IST142G	Virtualization Essentials	2	2	3

IST150G	Network Operating Systems Fundamentals	2	2	3
IST151G	Windows Network Operating System	2	2	3
IST161G	Introduction to Information Assurance	2	2	3
IST200G	Communications Electro-optics	2	2	3
IST211G	PC Technician	2	2	3
IST212G	Mobile Systems Architecture	2	2	3
IST220G	Advanced Routing	2	2	3
IST221G	Advanced Switching	2	2	3
IST222G	Scaling Networks	2	2	3
IST223G	Connecting Networks	2	2	3
IST227G	Advanced Troubleshooting	2	2	3
IST228G	Network Implementation	2	2	3
IST242G	Advanced Virtualization	2	2	3
IST245G	Information Storage and Management	2	2	3
IST251G	Windows NOS Services	2	2	3
IST253G	Windows Server 2008 Active Directory	2	2	3
IST262G	Advanced Network Security	2	2	3
IST264G	Configuration of Security Appliance	2	2	3
IST266G	Security +	2	2	3
IST275G	Network Protocols & Services	2	2	3
IST281G	Internship	1	8	3
IST291G	IST Project	1	8	3
<b>Certificate Total:</b>				<b>24</b>

## **LIBERAL ARTS ASSOCIATE IN ARTS**

The Liberal Arts Associate in Arts degree program of study provides a solid core of courses in arts and sciences, allowing students to transfer with confidence to Baccalaureate programs at four-year colleges and universities. A wide variety of course choices exists for students to explore content areas in arts and sciences. American Studies courses offer an interdisciplinary approach to topics related to American society. English selections include writing courses, Literature, Communications, and Technical Writing. Social Science selections include Anthropology, Economics, History, Geography, Political Science, Psychology, and Sociology. Foreign Language selections include American Sign Language and Spanish. Humanities selections include courses in Western Civilization, Humanities, Literature, Philosophy, Communications and Creative Writing, and American Studies. Fine Arts selections include arts courses in Drawing and Painting. Math courses are offered in two pathways: Applied Mathematics/Statistics and the Calculus sequence. Science selections can include Biology, Biotechnology, Chemistry, Earth Science, Environmental Science, and Physics. Students wishing to focus their Liberal Arts studies in a specific discipline are able to concentrate their 21 Liberal Arts and open elective credits in that discipline. Each student's program is developed in consultation with an academic advisor.

In addition to fulfilling the mission of Baccalaureate transfer, the program will also provide the core of general education requirements for all degrees at this College.

### **Program Outcomes**

The primary objective of the Liberal Arts degree program is transfer. The program is representative of the first two years of a baccalaureate program. Its academic format emphasizes access to various disciplines of knowledge, critical thinking, and the principles and techniques of research within academic subject areas. Students will find the program flexible enough to allow them to select courses based on the requirements of the four-year colleges to which they plan to transfer or use their course selections to clarify their educational goals and to explore career opportunities and interests. This broad experience provides students with the academic exposure relevant to intellectual, personal, and social growth.

- Completion of a degree program based upon the discovery and development of academic interests.
- Exposure to a variety of courses that satisfy general education requirements at GBCC and transfer institutions.
- Involvement in or completion of Associate of Arts concentrations that prepare students to transfer to specific baccalaureate degrees at four-year institutions.
- Participation in elective offerings in the Arts and Science disciplines that support intellectual enrichment and continued study in a variety of fields.

Through their involvement in a variety of Arts and Sciences courses, students will develop the skills necessary to interpret facts, solve problems, evaluate issues, appreciate aesthetics, develop multiple perspectives, and think critically and creatively.

### **Transfer Credit Policy**

In addition to Great Bay transfer credit policies, Liberal Arts and Science courses will be considered for transfer regardless of when they were taken as long as they meet minimum grade requirements. See individual department policies for program exceptions on general

education requirements. In the case of English and Math course transfers, it may be recommended that the student take portions of the Accuplacer Placement Test to demonstrate the skill level required for success in subsequent classes within the program.

Transfer of a course to this institution does not guarantee transfer of that same course to subsequent institutions. SAT testing may be required by some transfer institutions.

<b>DEGREE PROGRAM FIRST YEAR</b>				
<b>Fall Semester</b>		<b>TH</b>	<b>LAB</b>	<b>CR</b>
ENGL110G	College Composition I	4	0	4
	Math Elective*	4	0	4
CRIT150G	Critical Thinking in the Humanities	3	0	3
ANTH105G	Introduction to Ethnography: The World of Work	4	0	4
	<b>Semester Total:</b>	<b>15</b>	<b>0</b>	<b>15</b>
<b>Spring Semester</b>		<b>TH</b>	<b>LAB</b>	<b>CR</b>
ENGL214G	Introduction to Creative Nonfiction	3	0	3
	Lab Science Elective*	4	3	4
	Math Elective*	4	0	4
	Foreign Language/Humanities/Fine Arts Elective*	3	0	3
	Open Elective	3	0	3
	<b>Semester Total:</b>	<b>17</b>	<b>3</b>	<b>17</b>
	<b>First Year Total:</b>	<b>32</b>	<b>3</b>	<b>32</b>
<b>DEGREE PROGRAM SECOND YEAR</b>				
<b>Fall Semester</b>		<b>TH</b>	<b>LAB</b>	<b>CR</b>
	Foreign Language/Humanities/Fine Arts Elective*	3	0	3
	Lab Science Elective*	4	3	4
	Social Science Elective*	3	0	3
	200-Level Liberal Arts Elective*	3	0	3
	Open Elective*	3	0	3
	<b>Semester Total:</b>	<b>16</b>	<b>3</b>	<b>16</b>
<b>Spring Semester</b>		<b>TH</b>	<b>LAB</b>	<b>CR</b>
	Social Science Elective*	3	0	3
	100-Level Liberal Arts Elective*	3	0	3
	200-Level Liberal Arts Elective*	3	0	3
	200-Level Liberal Arts Elective*	3	0	3
	Open Elective*	3	0	3
	<b>Semester Total:</b>	<b>15</b>	<b>0</b>	<b>15</b>
	<b>Second Year Total:</b>	<b>31</b>	<b>3</b>	<b>31</b>
	<b>Degree Total:</b>	<b>63</b>	<b>6</b>	<b>63</b>

*\*Theory, lab, and credit hours may vary depending on the elective course chosen.*

Liberal Arts electives (American Studies, Art, English, Geography, History, Humanities, Languages, Math, Natural Resources, Social Sciences, and Sciences) can include three Open Electives, as appropriate to the prerequisite requirements of other programs.

A computer literacy course can be included within the Open Electives area. Electives must include at least 3 Liberal Arts courses at the 200 level.

# **MASSAGE THERAPY**

## **CERTIFICATE**

Over the years, Massage Therapy has become integral to conventional healthcare, complementary healthcare and alternative healthcare environments. Massage Therapy is frequently used in sports medicine, hospitals, physical therapy, physicians' offices, as well as in chiropractic offices, spa/resort settings, gyms, and acupuncture clinics. Massage Therapy also complements the Spa Management Certificate by providing students with additional skills which will make them more valuable in the spa industry.

Our curriculum is approved by the State of New Hampshire Massage Therapy Board, The National Certification Board of Therapeutic Massage and Bodywork and by the State of New Hampshire Department of Education, Post-Secondary Education Division. Upon successful completion of our program, students will be prepared to take the Massage and Bodywork Licensing Exam (MBLEx), which is required by the state of New Hampshire and many other states for licensure.

The Massage Therapy Certificate program is designed to be completed within one year. Students must attend full time to continue in the program. Massage lecture teaches the theory of massage. The lab allows for direct application of the concepts covered in theory as well as proper posture and body positioning. Students will partner with each other to practice proper massage technique.

### **Program Outcomes**

Graduates from the Massage Therapy program will be able to:

- Demonstrate a full body massage designed specifically for the client.
- Identify major muscles and muscle groups.
- Determine if massage is indicated or contraindicated for various conditions.
- Apply the skills learned in a variety of environments.
- Write SOAP notes and explain a treatment plan to the client.
- Develop a business plan and properly apply and interview for jobs.

### **Technical Standards**

The successful Massage Therapist is emotionally and psychologically stable. He/she is sensitive to the needs of the client, is able to set priorities, and perform in emergency situations in a quick, accurate, detail-oriented manner should these arise. He/she should be flexible, and possess manual dexterity and physical stamina. The massage therapy program is physically and mentally strenuous and requires occasional heavy lifting such as assisting a physically challenged client in getting on and off the massage table. Massage Therapists work with a diverse clientele to include all cultural backgrounds, individuals of various shapes, sizes and personalities. Individuals who cannot meet the professional, mental, physical and customer service demands may have difficulty meeting course objectives and the requirements of the field.

Licensed Massage Therapists must be American Heart Association Heart Saver, or American Red Cross or National Safety Council certified for adult/infant-child CPR and First Aid. We highly recommend that Certification be obtained before entering the program or within the first term, as it is required before beginning Clinical courses. Student liability insurance is

required and must be obtained by the first week of your first class that requires practical demonstration. Insurance is purchased through the College at a discounted rate of \$20 per year (July 1- June 30).

### **Admissions Criteria**

The application preferred deadline is July 1st for the fall semester. After the deadline, applications will be accepted until the program is filled.

### **Admissions Requirements for Certificate in Massage Therapy**

1. Complete an application to the program.
2. Provide proof of high school completion or equivalent and submit an official copy of college transcripts (if applicable).

### **Clinical Requirements**

After acceptance and prior to the first week of classes, all Massage Therapy students must:

1. Submit a form (provided by the college and completed by the student's physician) stating they are in good physical condition and have no contraindications to giving or receiving massage. Hepatitis B immunizations are at the discretion of the physician but are highly recommended.
2. Complete a Level I criminal background check using our approved vendor (\$60) prior to the first day of class.
3. Possess and maintain professional liability insurance prior to the first week of any class that requires practical demonstration. Insurance is purchased through the college at the One Stop (\$20/year, July 1-June 30).
4. Possess and maintain certification in adult/infant/child CPR and First Aid prior to clinical assignments.
5. Test into college level reading.

### **Massage Therapy Program Suspension Information**

Students matriculated in the Therapeutic Massage program who do not achieve the required minimum grade of "C" (excluding W and WP grades) in any required course will be suspended from Massage Therapy Program.

### **Massage Therapy Readmission Policy**

Students matriculated in the Massage Therapy Program who withdraw or are suspended may be eligible for readmission consideration. A student may be readmitted to the program one time only. Students who have failed a course because of lack of professionalism or unsafe practice involving actions or non-actions are not eligible for readmission to the Massage Therapy Program. Readmissions are contingent upon space availability. The student applying for readmission will be required to meet the curriculum requirements in effect at the time of readmission and must have maintained a C or better in all MASS designated and science courses. If two or more semesters have passed before readmission, the student will be required to successfully complete competency exams for prior courses.

In order to be reconsidered for admission the student must submit a written, dated letter requesting readmission consideration to the Massage Therapy Program Coordinator. In this letter, the student should briefly outline the reasons he/she was unable to continue in the program and identify the massage therapy course and level to which he/she is requesting

readmission. Students who have requested readmission consideration will be ranked according to their prior Massage Therapy course average, as space availability is determined. Students will then be readmitted based on their ranking order and at the discretion of the Therapeutic Massage Program Coordinator. Students will then be notified of the status of the request in writing by the Admissions Department.

### Transfer Credit Policy

In addition to Great Bay Community College transfer credit policy, credit for Human Anatomy and Physiology I and II, and Kinesiology for Massage Therapists cannot be more than ten years old at the time of acceptance. Transfer credits for Massage Therapy courses must be from an accredited school and will be at the discretion of the Massage Therapy Program Coordinator.

<b>CERTIFICATE REQUIREMENTS</b>				
<b>Fall Semester</b>		<b>TH</b>	<b>LAB</b>	<b>CR</b>
MASS150G	Physiology of Wellness	2	0	2
MASS161G	Principles of Massage Therapy	2	0	2
MASS162G	Essentials of Massage Application	0	4	2
MASS171G	Structural Anatomy and Physiology	3	2	4
MASS181G	Pathology and Massage I	2	0	2
<b>Semester Total:</b>		<b>9</b>	<b>6</b>	<b>12</b>
<b>Spring Semester</b>		<b>TH</b>	<b>LAB</b>	<b>CR</b>
MASS251G	Advanced Theory and Techniques	3	4	5
MASS261G	Kinesiology for Massage Therapists	3	4	5
MASS191G	Clinical Experience I	0	4	1
MASS281G	Ethics for Massage Therapists	1	0	1
<b>Semester Total:</b>		<b>7</b>	<b>12</b>	<b>12</b>
<b>Summer Semester</b>		<b>TH</b>	<b>LAB</b>	<b>CR</b>
MASS271G	Therapeutic Massage Specialties	2	2	3
HOSP244G	Intro to Spa Industry	3	0	3
MASS192G	Clinical Experience II	0	4	1
MASS172G	Visceral Anatomy and Physiology	3	2	4
MASS182G	Pathology and Massage II	2	0	2
<b>Semester Total:</b>		<b>10</b>	<b>8</b>	<b>13</b>
<b>Certificate Total:</b>		<b>26</b>	<b>26</b>	<b>37</b>

### Curriculum Recommendations

- The Certificate Program is designed to be completed in 3 semesters during the day. Part time attendance is not allowed.
- It is highly recommended that after the first week of MASS161G the student purchase a massage table and massage chair in order to practice at home.

Gainful Employment disclosure information is available at:  
<http://greatbay.edu/sites/default/files/GE/massage/51.3501-Gedt.html>



# MEDICAL OFFICE ADMINISTRATIVE ASSISTANT CERTIFICATE

**\*Please note: The College is exploring the deactivation of this certificate and therefore is not accepting new applications for this program at this time.**

Medical office assistants perform administrative tasks to keep the offices of health practitioners running smoothly. The duties of medical assistants vary from office to office, depending on the location and size of the practice and the practitioner's specialty. In small practices, medical assistants usually do many different kinds of tasks, handling administrative and clinical duties and reporting directly to an office manager, physician, or other health practitioner. Those in large practices tend to specialize in a particular area, under the supervision of department administrators. The Medical Office Administrative Assistant program focus is on the administrative duties.

Medical office administrative assistants update and file patients' medical records, fill out insurance forms, and arrange for hospital admissions and laboratory services. They also perform tasks less specific to medical settings, such as answering telephones, greeting patients, handling correspondence, scheduling appointments, and handling billing and bookkeeping.

Medical office administrative assistants deal with the public; therefore, they must be neat and well-groomed and have a courteous, pleasant manner. They must be able to put patients at ease and explain physicians' instructions. They must respect the confidential nature of medical information.

According to the department of Labor, employment of medical assistants is expected to grow 22% between 2016 and 2026, much faster than the average for all occupations.

## **Program Outcomes**

Students completing the program are prepared to work for doctors, hospitals and other healthcare facilities, medical billing companies or in related fields. They will develop skills in medical software, CPT-4, HCPCs and ICD-10 coding, medical terminology, medical insurance form preparation, and other related administrative office procedures. Successful completion of this Certificate will prepare students to take the NHA Certified Medical Administrative Assistant Exam (CMAA). This is an independent national certification exam, and the cost is not included in the fees associated with the College.

## **Technical Standards**

1. Basic computer skills
2. Good manual dexterity
3. Sufficient vision for reading information
4. Critical thinking ability
5. Ability to communicate well as a professional in a health facility
6. Ability to work independently

## **Admissions Criteria**

1. Complete an application to the program.
2. Provide proof of high school completion or equivalent.

3. Take placement testing for computers and reading. Students must place into college-level reading.

**Transfer Credit Policy**

In addition to Great Bay transfer credit policies, transfer of courses in Medical Office Administrative Assistant program more than ten years old will be evaluated by the program coordinator on an individual basis.

<b>CERTIFICATE REQUIREMENTS</b>				
<b>Fall Semester</b>		<b>TH</b>	<b>LAB</b>	<b>CR</b>
AHLT110G	Medical Terminology	3	0	3
AHLT112G	Pathophysiology for Allied Health	3	2	4
MOAA120G	Medical Office for the Administrative Assistant	3	0	3
<b>Semester Total:</b>		<b>9</b>	<b>2</b>	<b>10</b>
<b>Spring Semester</b>		<b>TH</b>	<b>LAB</b>	<b>CR</b>
MOAA130G	Medical Coding I	3	0	3
MOAA210G	Medical Coding II	3	0	3
CIS110G	Introduction to Computers	2	2	3
<b>Semester Total:</b>		<b>8</b>	<b>2</b>	<b>9</b>
<b>Summer Semester</b>		<b>TH</b>	<b>LAB</b>	<b>CR</b>
MOAA212G	Insurance for the Medical Office	2	2	3
MOAA220G	Advanced Coding	2	0	2
<b>Semester Total:</b>		<b>4</b>	<b>2</b>	<b>5</b>
<b>Certificate Total:</b>		<b>21</b>	<b>6</b>	<b>24</b>

Gainful Employment disclosure information is available at:  
<http://greatbay.edu/sites/default/files/GE/med-office/51.0716-Gedt.html>

# MOTORCYCLE MAINTENANCE AND REPAIR CERTIFICATE

## Program Description

The 24-credit Motorcycle Technology program will prepare students for entry-level positions in service, repair, and maintenance of motorcycles. Topics will include pre-delivery inspection (PDI), tires, wheel bearings, brakes, scheduled service, oil change, moving motorcycles, road tests, model theories, understanding and managing shop workflow, establishing a strong work ethic, conducting multi-point inspections, state inspections, and related lifelong learning.

## Program Outcomes

The goal of the Motorcycle Technician program is to prepare students to work in the increasingly sophisticated and complex field of motorcycle technology through a combination of classroom instruction and hands-on skill development. Technicians must be able to work with electronic diagnostic equipment, read and understand technical manuals, investigate to find the cause of a problem, and connect effectively with the customer. Students will use a variety of tools, including both manual and high tech equipment, to assess and identify problems and perform repairs.

After successful completion of the program, students will be able to:

- Demonstrate skills and knowledge required to assume the role of a qualified, entry-level motorcycle maintenance professional, including pre-delivery inspection (PDI), tires, wheel bearings, brakes, scheduled service, oil changes, moving motorcycles, road testing, shop workflow, multi-point inspections, and state inspections.
- Demonstrate safe and appropriate use and care of tools and equipment in the motorcycle maintenance lab.
- Diagnose, repair and document motorcycle systems including powertrains, electrical systems, wheels, tires, and brakes.
- Inspect a vehicle, use a diagnostic approach to determine cause of operating problems, and decide action to take; complete a NH State Motorcycle Inspection.
- Compare and contrast alternate actions to determine whether to repair or replace a part.
- Use appropriate software and digital equipment to retrieve information, diagnose and analyze problems, and report outcomes.
- Communicate effectively with coworkers and customers.

## Technical Standards

This program includes work in a motorcycle lab and requires participants to physically perform functions that require the following:

- Normal vision for reading instructions and performing tasks, including inspecting parts for quality (corrective vision is acceptable).
- Mobility and strength for performing tasks that require reaching, walking, standing, and safely lifting and moving motorcycles of varying sizes and weights.
- Ability to hear sounds of equipment, for equipment operation and safety.

## Admission Requirements

- Complete an application for the program.
- Provide proof of high school completion or equivalent.

- Provide Admissions with your valid driver's license with motorcycle endorsement. Contact Admissions for information on motorcycle operator training.

### Health and Safety Considerations

The program includes work in a motorcycle technology lab where potentially hazardous equipment and materials are used. Students will be taught industry standards for safety and will be expected to follow all safety procedures. Personal protective equipment including safety glasses and footwear must be worn while in the lab.

### Tools and Equipment

Hand tools and personal protective equipment are to be supplied by students at their own expense. The following is the required tool list. The list is subject to change. Students are advised to wait until meeting with the instructor before purchasing new tools. All tools need to be in the lab no later than the 3<sup>rd</sup> week of class.

Item Num	Description	Item Qty	List Price x Qty	Total Amount	% Disc.
A128	3/8"F-1/4"M ADAPTER	1	\$17.99	\$8.99	50%
A1612	1/2"F-3/8"M ADAPTER	1	\$19.99	\$9.99	50%
BDP038-D2	12V 3/8 DRILL KIT	1	\$249.99	\$124.99	50%
BH16AV	16OZ AV BALL PEEN HAMMER	1	\$45.99	\$22.99	50%
DDC6027	DIAL CALIPER 0"-6"	1	\$82.99	\$41.49	50%
DH193AV	3LB ANTIVIBE DRILLING HAMMER	1	\$55.99	\$27.99	50%
DMC100	MICROMETER 0"-1" RANGE	1	\$39.99	\$19.99	50%
DT150-38CV	DIGITAL TIRE GAUGE W/CHUCK	1	\$51.99	\$25.99	50%
E032900	22 PIECE 1/2" SD SOCKET SET MM	1	\$119.99	\$59.99	50%
EM721	DIGITAL MULTIMETER	1	\$309.99	\$154.99	50%
FG002	25BLD UNIV MSTR FEELER GAGE ST	1	\$9.99	\$4.99	50%
FPS5S	5PC NEXT GEN PLIER KIT SM	1	\$129.99	\$64.99	50%
M3U	1/4 DR UNIVERSAL JOINT	1	\$38.99	\$19.49	50%
MR590K	1/4"DRIVE5"METALHANDLE	1	\$74.99	\$37.49	50%
PK490Q	4-PC 90 DEG SNAP RING SET	1	\$109.99	\$54.99	50%
SCB15K2KS	15PC KS2 COMBO WR SET 12PT	1	\$449.99	\$224.99	50%
SDB8CR	8PC COMB SCREWDRIVER SET	1	\$149.99	\$74.99	50%
SHKL13PH	SET 13 PROHOLD BALL L-KEYS IN	1	\$49.99	\$24.99	50%
SHKML9PH	SET 9PC MM PROHOLD BALL L-KEYS	1	\$39.99	\$19.99	50%
SID13BA	13 PC. IMPACT DRIVER SET	1	\$156.99	\$78.49	50%
SMB14KKS	14PC KS2 MM COMBO WR SET 12PT	1	\$359.99	\$179.99	50%
SMEW5PT	5PC WOBBLE EXTENSION SET	1	\$109.99	\$54.99	50%
SMM446BR	44PC DELUXE SOCKET SET 1/4" DR	1	\$469.99	\$234.99	50%
SMXVHT50B	50 PC BIT SOCKET SET	1	\$299.99	\$149.99	50%

SPK9-SET	9 PC. SPARK PLUG SOCKET SET	1	\$137.99	\$68.99	50%
ST230	PRO SUPER TORCH	1	\$93.99	\$46.99	50%
SVE5PT	5PC 1/2" DR EXTENSION SET	1	\$169.99	\$84.99	50%
SX446BR	44PC DELUXE SOCKET SET	1	\$679.99	\$339.99	50%
SXEK5PT	5PC KNURLED EXTENSION SET 3/8	1	\$126.99	\$63.49	50%
TWX100FDA	3/8 ELEC TW 100 FT/LB	1	\$389.99	\$194.99	50%
V3U	1/2" UNIVERSAL JOINT	1	\$55.99	\$27.99	50%
VR1890FK	1/2"DRIVE18"METALHANDLEFLEX	1	\$179.99	\$89.99	50%
X3U	UNIVERSAL JOINT	1	\$44.99	\$22.49	50%
XR1390FPA	3/8"DRIVE13"COMFORTHANDLEFLEX	1	\$139.99	\$69.99	50%
		<b>34</b>	<b>\$5,465.66</b>	<b>\$2,732.66</b>	

*\*Prices are approximate and subject to change.*

### CERTIFICATE PROGRAM

<b>Fall Semester</b>		<b>TH</b>	<b>LAB</b>	<b>CR</b>
MOTR110G	Product, PDI, and Dealer Experience	2	4	4
MOTR120G	Powertrains: Engine, Drivetrain, and Transmission	2	4	4
MOTR130G	Electrical Systems and Electrical Service Procedures	2	4	4
<b>Semester Total:</b>		<b>6</b>	<b>12</b>	<b>12</b>
<b>Spring Semester</b>		<b>TH</b>	<b>LAB</b>	<b>CR</b>
MOTR140G	Wheels, Tires, and Brakes	2	4	4
MOTR150G	Capstone: Servicing Motorcycle Families	4	8	8
<b>Semester Total:</b>		<b>6</b>	<b>12</b>	<b>12</b>
<b>Certificate Total:</b>		<b>12</b>	<b>24</b>	<b>24</b>

Gainful employment disclosure is available at:

<http://greatbay.edu/sites/default/files/GE/motorcycle/47.0611-Gedt.html>

# NONDESTRUCTIVE TESTING CERTIFICATE

Nondestructive testing (NDT) is the examination, test, or evaluation of a part without destroying or altering the part in any way, for the purpose of determining whether conditions exist that might have an effect on the usefulness of the part. The goal of this certificate program is to prepare students for employment as high-quality entry-level technicians within the diverse industries that NDT serves. This program will provide technical training in the inspection methods most commonly used in the industries in Southern and Seacoast NH: radiography (RT), ultrasonic (UT), and liquid penetrant (PT), as well as visual inspection. The NDT courses are developed using the American Society for Nondestructive Testing, Inc., and National Aerospace Standard (NAS) to meet formal training requirements. Industry certification as an NDT Technician must be provided by the employer. Requirements for certification as an NDT Technician include a specific number of classroom (formal) training for each inspection method, plus a specific number of hours of experience on the job. This program is designed to meet the requirements of **classroom hours** for level II technicians without previous level 1 certification. On the job experience must be completed after being hired by the company who will do the actual certification.

## Program Outcomes:

The goal of the NDT Technology certificate is to prepare students for entry-level jobs in nondestructive testing. Students completing the program may continue to earn an Associate Degree in Technical Studies. After successful completion of the program, students will be able to:

- Meet the number of hours of classroom training required for certification once on the job training is done with an employer.
- Explain the skills, knowledge, ability, and qualifications required of the NDT technician.
- Understand the origins and classifications of discontinuities.
- Demonstrate proficiency with the principles and practices of the applicable test method and techniques, including ability to process parts, document results, and perform equipment standardization in accordance with approved work instructions.
- Demonstrate ability to properly perform a field calibration test and adjustment, evaluation for acceptance or rejection determinations according to written instructions, and record results.
- Demonstrate the ability to carry out the duties of an entry level NDT technician or NDT trainee.
- Select and explain appropriate testing methods for various situations and explain advantages and limitations of that method.

## Technical Standards

This program includes work in manufacturing labs and requires participants to physically perform the functions of reaching, walking, climbing, and standing, safely lifting up to 20lbs, the ability to hear equipment and alarms, and ability to visually inspect parts.

## Admissions Requirements

1. Complete an application for the program.
2. Provide proof of high school completion or equivalent.
3. Provide an official copy of prior college transcripts if appropriate.
4. Test into MATH080G\*.
5. Test into CIS107G or higher\*.
6. College level reading.

\*refers to Accuplacer testing

Prior experience or knowledge of manufacturing is recommended.

### Health and Safety Considerations

The program includes work in a nondestructive testing lab where potentially hazardous equipment and materials are used. Students will be taught industry standards for safety and will be expected to follow all safety procedures. Personal protective equipment must be worn. Students will provide their own safety glasses and boots or shoes.

### Transfer Credit Policy

In addition to Great Bay transfer credits policies, transfer of courses in the NDT program will be evaluated by the program coordinator on an individual basis.

### Dual enrollment

Students enrolled in the NDT Certificate program may elect to enroll in the Associate Degree in Technical Studies. Dual enrollment is contingent upon active or graduate status of the certificate. Completion of the NDT certificate satisfies the requirement for the technical specialty core of the Technical Studies degree.

<b>CERTIFICATE PROGRAM FIRST SEMESTER</b>		<b>TH</b>	<b>LAB</b>	<b>CR</b>
ACM120G	Technical Blueprint Reading	1	2	2
MATH145G/147G	Quantitative Reasoning/Plus	4/5	0	4/5
NDT110G	Intro to Nondestructive Testing	2	2	3
CIS110G (CIS107G)	Introduction to Computers or (Essentials of Computer Literacy)	2 (2)	2 (4)	3 (4)
ACM230G	Manufacturing Ethics	1	0	1
<b>Total:</b>		<b>10-11</b>	<b>6</b>	<b>13-15</b>

<b>ADDITIONAL COURSEWORK</b>		<b>TH</b>	<b>LAB</b>	<b>CR</b>
ACM254G	Quality Inspection and CMM	2	2	3
<b>NDT Methods Courses:</b>				
NDT212G	Ultrasonic Inspection	3	2	4
NDT214G	Radiographic Testing	3	2	4
NDT210G	Liquid Penetrant Testing	1	2	2
<b>Total:</b>		<b>9</b>	<b>8</b>	<b>13</b>
<b>Certificate Total:</b>		<b>19-20</b>	<b>14</b>	<b>26-28</b>

### Curriculum Recommendations

A higher level CIS course may be substituted for CIS110G Introduction to Computers. Recommended substitutions are CIS111G Computer Technologies, or CIS156G Computer Applications in Business.

A higher MATH course may be substituted for MATH145G Quantitative Reasoning. NDT Certificate students continuing with the Technical Studies A.S. Degree may select Technical Electives including, but not limited to:

<b>ACM TECHNICAL ELECTIVES</b>		<b>TH</b>	<b>LAB</b>	<b>CR</b>
MANF112G	Topics in Manufacturing	2	2	3
MANF260G	Advanced Print Reading and GD&T	2	2	3

Gainful Employment disclosure information is available at:  
<http://greatbay.edu/sites/default/files/GE/nondes-testing/15.0799-Gedt.html>



# NURSING

## ASSOCIATE IN SCIENCE

The Associate Degree Nursing Program is accredited by the Accreditation Commission for Education in Nursing (ACEN) and approved by the New Hampshire Board of Nursing (NHBON). Upon satisfactory completion of the program, the graduate is eligible to apply to the New Hampshire Board of Nursing (NHBON) and Pearson VUE NCLEX Candidate Services for the National Council Licensing Examination for Registered Nurses (NCLEX-RN).

### NCLEX Passage Rates: Program Performance 2012-2017

Performance on Licensure Exam: NCLEX-RN					
	2013	2014	2015	2016	2017
GBCC	90.7%	88.24%	93%	94.12%	87.5%
NH Pass Rate	83.17%	85.53%	87.02%	90.31%	90.85%
National Pass Rate	83.04%	81.78%	84.51%	84.56%	87.12%
GBCC Program Average x 5 years					90.71%

Program Retention Rates	
Year	% completed (within 150% of the time of program stated length)
2017	80%
2016	75%
2015	77%
2014	91%
2013	75%
<b>Average x5 years</b>	<b>79.6%</b>

Program Employment Rates	
Year	% Employed (1 year of grad)
2016	100%
2015	100%
2014	100%
2013	100%
2012	75%
<b>Average x5 years</b>	<b>95%</b>

Prior to meeting all program course requirements, the matriculated Nursing students may be eligible to apply to the NHBON for additional licensure after successful completion (defined as achieving a minimum course grade of "C+" ) of the following Nursing courses:

- Nursing I: Apply for additional licensure as a Licensed Nursing Assistant (LNA)
- Nursing III: Apply for additional licensure as a Licensed Practical Nurse (LPN)

The New Hampshire Board of Nursing's licensing regulations may restrict candidates who have been involved in civil or criminal legal proceedings. Questions about licensing restrictions should be addressed to the New Hampshire Board of Nursing, 121 South Fruit Street Suite 102, Concord, NH 03301. Questions about the status of accreditation for the Nursing program should be addressed to the Accreditation Commission for Education in Nursing (ACEN) 3343 Peachtree Road, NE, Suite 850, Atlanta, GA 30326. Phone: (404) 975-5000, Fax (404) 975-5020.

### End of Program Student Learning Outcomes

1. Communicate professionally and collaboratively with individuals, families and members of the interdisciplinary healthcare team to promote mutual respect and shared decision making. (Communication/Collaboration and Teamwork)

2. Utilize information and technology to manage information, minimize error and support decision making. (Informatics & Technology)
3. Embrace the leadership role, promote change and foster achievement that will facilitate the realization of shared goals. (Leadership)
4. Incorporate principles and theories from humanities, sciences and social sciences; demonstrate accountability for the delivery of standard-based nursing care that is consistent with moral, legal, ethical and regulatory principles. (Professionalism & Knowledge)
5. Provide safe, compassionate, holistic patient centered care in collaboration with diverse patients and their families making practice decisions using the best current evidence to meet their individual preferences, values and needs. (Evidence Based Practice / Patient-Centered Care)
6. Demonstrate an awareness of the overall components of the health care system through the effective utilization of resources to optimize outcomes in various health care delivery settings. (Systems Based Practice)
7. Utilize quality initiatives and quality indicators to deliver safe patient centered care. (Quality Improvement/ Safety)

The goal of the Associate Degree Nursing Program is to prepare the student to provide direct care to clients in acute care, long-term care, and other structured settings. As a member of the discipline, the student collaborates with the healthcare team to provide and manage the care of clients. The student utilizes the nursing process as a basis for decision making in caring for well clients and clients with possible or actual health problems.

Learning experiences and clinical practice may vary in time and in locations including days, evenings, and/or weekends. The program may be completed on a full-time or part-time basis. Classroom and clinical components of the Nursing courses must be completed concurrently. All nursing courses must be completed within four years of the date of entry into the first nursing course. Students admitted to or re-entering the program must meet current requirements necessary for graduation. Advanced Placement and Transfer are possible through transfer credit and testing. Students may enroll in Liberal Arts and Science courses prior to admission to the Nursing program. Enrollment in these courses does not guarantee acceptance into the Nursing program. Students admitted into the Nursing program must take nursing courses in sequence, and must achieve a minimum grade of C+ (76.67%) in all major theory and science courses (Nursing, Human Anatomy & Physiology I & II, and Microbiology) and a grade of "Pass" in clinical courses in order to continue in the program. Human Anatomy & Physiology I and II and Microbiology must be taken within a five year period from the time of acceptance into the Nursing program or concurrently as scheduled with the Nursing core courses. Students who do not successfully achieve the minimum grade in the major theory, science and other co-requisite courses as outlined in the program course sequencing will be Program Suspended from Nursing. Transportation to and from the practicum site is the responsibility of the student.

### **Technical Standards**

This program is physically strenuous and requires some heavy lifting. Individuals must be able to meet the general health demands of the program in order to satisfy course/clinical objectives and the requirements of the field.

### **Admissions Criteria**

A review of all **COMPLETED** Admission files will begin in March. Nursing program applications must be completed by February 28 to be considered for acceptance in the fall class.

## Admissions Requirements

1. Complete an application for the program.
2. Provide proof of high school completion or equivalent.
3. Provide an official copy of prior college transcripts if seeking transfer credit.
4. Provide proof of completion of high school algebra, biology, and chemistry or equivalent with a grade of "C" or greater or proof of registration in a course with projected date of completion by June 30th of the current year.
5. Complete the ATI TEAS V Pre-Entrance exam\* with minimum or greater adjusted individual scores as indicated in each of the four areas of the test:

Reading	74.5
Math	68.8
Science	55.3
English and Language Usage	66.7
Applicants are permitted to take the TEAS V exam 3 times per 12 month period. Test dates must be at least 6 weeks apart. Exams must be taken no later than two weeks prior to the application deadline.	

6. Provide two professional references on the official form provided by The College (Alternative formats are not accepted).
7. Special Consideration points are given to applicants who:
  - A. have completed college level Human Anatomy Physiology I and/or II prior to the February 28th deadline with a grade of "C+" within the past 5 years from the time of acceptance.
  - B. are LNAs or Health Occupation students in a CTE high school program prior to the February 28th deadline.

*\*The ATI TEAS V Pre-Entrance Exam is designed to identify areas that may need strengthening before a prospective student begins the major course of study in Nursing. To receive information regarding the ATI TEAS V Pre-Entrance Exam or to register for a specific exam date, contact ATI at [www.atitesting.com](http://www.atitesting.com).*

## Clinical Requirements

After acceptance and prior to the first week of classes, all nursing students must:

1. Submit a current (within 1 year prior to beginning first Nursing course) GBCC Health Report Form including all required health screening and immunizations.
2. Submit documentation of initial and/or annual testing for Tuberculosis (TB).
3. Submit documentation of Hepatitis B vaccine or a signed waiver.
4. Submit documentation of Influenza vaccine or a signed waiver by October.
5. Possess and maintain personal health and accident insurance.
6. Possess and maintain professional liability insurance (purchased at The College).
7. Possess and maintain verification of current CPR: AHA Basic Life Support (BLS) or American Red Cross BLS for Health Care Providers. (Must include adult, child and infant rescue and AED use.)
8. Complete a criminal background check through approved vendor. Students may be required to perform more than one criminal background check throughout the course of the program based on clinical facility requirements. Participation in clinical experiences may be restricted or denied based on results of criminal record check and therefore would affect the ability of the student to meet course objectives and successfully complete the program.
9. Complete drug testing through approved vendor. Students may be required to perform more than one drug test throughout the course of the program based on clinical facility requirements. Participation in clinical experiences may be restricted or

denied based on results of drug testing and therefore would affect the ability of the student to meet course objectives and successfully complete the program.

### **Nursing Program Suspension Information**

Students matriculated in the Nursing program who are withdrawn or who do not successfully achieve the minimum grade in the major theory, science and other co-requisite courses as outlined in the program course sequencing will be Program Suspended from Nursing.

### **Nursing Readmission Policy**

Students matriculated in the Nursing program who withdraw or are Program Suspended may be eligible for readmission consideration. A student may be readmitted to the Nursing program one time only. Students who have failed a Nursing course because of unsafe practice involving actions or non-actions are not eligible for readmission to the Nursing program. Readmissions are contingent upon space availability. The student applying for readmission will be required to meet the curriculum requirements in effect at the time of readmission. In order to be reconsidered for admission, the student must:

Submit a written, dated letter requesting readmission consideration to the Chair of the Department of Nursing. In this letter, briefly and generally outline the reason(s) you were previously unable to continue in the program and identify the Nursing course to which you are requesting readmission. Students who have requested readmission consideration will be ranked according to their Nursing course average. As space availability is determined, students will be readmitted based on their ranking order. Students will then be notified of the status of their request, in writing by the Admissions Department. Students who are granted readmission will need to complete and submit a new Application for Admission to the College. Additionally, students will have to successfully complete course content, competency testing, and other requirements determined by faculty once they have been notified of their readmission status.

### **Advanced Placement or Transfer**

In addition to the admissions requirements (excluding item #5 the ATI TEAS V Preadmission Entrance Exam), students seeking Advanced Placement or Transfer must have completed all prerequisite coursework by examination, challenge or transfer credit.

**Advanced Placement:** A student must be a currently licensed practical nurse (LPN). In addition, in order to be considered for advanced placement into NURS211G, Nursing III, a student must successfully complete the NLN Nursing Acceleration Challenge Exam (NACE) I: Foundations of Nursing with a required overall percent correct score of 74% or better within the past two years in order to be granted credit. Please contact the Department of Nursing Chair for specific information about this exam.

Students accepted for Advanced Placement into the senior year are required to take NURS200G Advanced Placement Seminar prior to the start of the senior year. Nursing Advanced Placement applications must be completed by May 1st to be considered for acceptance in the fall Nursing III class. In addition to meeting all requirements, admission is on a space-available basis.

**Transfer:** In order to be considered for Transfer from another Nursing program into NURS112G, Nursing II, students must have successfully completed (defined as achieving a minimum course grade of "C+") a Nursing Fundamentals course while matriculated in another nursing program and the ATI Fundamentals exam. A minimum or greater adjusted individual score of 63.3% is required on this exam within the past two years in order to be granted credit. Nursing Transfer applications must be completed by December 1st to be considered for acceptance in the spring Nursing II class. In addition to meeting all requirements, admission is on a space-available basis.

**Nursing Transfer Credit Policy:** In addition to specific nursing course transfer policies noted above and other Great Bay Community College transfer credit policies, a minimum grade of C+ (76.67%) must have been achieved in Human Anatomy & Physiology I and II and Microbiology within a five year period from the time of acceptance into the Nursing program in order to have these courses meet the Nursing curriculum requirements.

<b>DEGREE PROGRAM FIRST YEAR</b>				
<b>Fall Semester</b>		<b>TH</b>	<b>LAB*</b>	<b>CR</b>
FYE116G ^	First Year Seminar- Nursing	1	0	1
NURS111G	Nursing I	6	9	9
BIOL110G	Human Anatomy & Physiology I	3	3	4
PSYC110G	Introduction to Psychology	3	0	3
<b>Semester Total:</b>		<b>13</b>	<b>12</b>	<b>17</b>

<b>Spring Semester</b>		<b>TH</b>	<b>LAB*</b>	<b>CR</b>
NURS112G	Nursing II	4	15	9
BIOL120G	Human Anatomy & Physiology II	3	3	4
PSYC210G	Human Growth & Development	3	0	3
<b>Semester Total:</b>		<b>10</b>	<b>18</b>	<b>16</b>
<b>First Year Total:</b>		<b>23</b>	<b>30</b>	<b>33</b>

<b>DEGREE PROGRAM SECOND YEAR</b>				
<b>Fall Semester</b>		<b>TH</b>	<b>LAB*</b>	<b>CR</b>
NURS211G	Nursing III	4	15	9
BIOL210G	Microbiology	3	3	4
ENGL110G	College Composition I	4	0	4
<b>Semester Total:</b>		<b>11</b>	<b>18</b>	<b>17</b>

<b>Spring Semester</b>		<b>TH</b>	<b>LAB*</b>	<b>CR</b>
NURS212G	Nursing IV	3	18	9
MATH145G**	Quantitative Reasoning	4	0	4
	Foreign Language/Humanities/Fine Arts Elective	3	0	3
	English Elective	3	0	3
<b>Semester Total:</b>		<b>13</b>	<b>18</b>	<b>19</b>
<b>Second Year Total:</b>		<b>24</b>	<b>36</b>	<b>36</b>
<b>Degree Total:</b>		<b>47</b>	<b>66</b>	<b>69</b>

*^Recommended. Any one-credit FYE course fulfills this requirement.*

\*Lab/Clinical consists of the following components: the simulation learning laboratory, the health care setting, ATI proctored testing, NURS212 Seminar and other activities designated as clinical by faculty.

\*\*MATH145 or higher meets the math requirement.

# PSYCHOLOGY

## ASSOCIATE IN ARTS

The Associate of Arts in Psychology offers students a foundation of the principles of psychology and direct application of theory. This degree is designed to allow students to transfer to a four-year degree program or to begin a career connected to the field of psychology. Students will have the opportunity to use their skills in the community and design their own research.

### Program Outcomes

Upon graduation, students will be able to:

1. Apply communication skills in a variety of situations.
2. Utilize knowledge from a foundation of psychological theories and concepts.
3. Analyze and apply psychological theories to real world situations.
4. Gather and analyze data within their own research.

### Internship Considerations

Students completing an internship program will be required to submit proof of immunizations to the College (see page 50), along with any other information needed by the assigned site.

### Transfer Credit Policy

In addition to the Great Bay transfer credit policies, transfer of courses in psychology more than ten years old will be evaluated by the Department Chair on an individual basis. In the case of English and math course transfers, it may be recommended that the student take portions of the Accuplacer Placement Test to verify the skill level required in order to be successful in subsequent classes with the program.

### Technical Standards

In order to transfer to a four-year institution or pursue a career in psychology, students should possess strong written and verbal communication skills; collaborate effectively with others; conduct themselves in a professional manner; demonstrate empathy, integrity, concern for others, interpersonal skills, interest, and motivation; adapt to a variety of situations; and use critical thinking skills to solve problems.

<b>DEGREE PROGRAM FIRST YEAR</b>				
<b>Fall Semester</b>		<b>TH</b>	<b>LAB</b>	<b>CR</b>
ENGL110G	College Composition I	4	0	4
PSYC110G	Introduction to Psychology	3	0	3
FYE112G	First Year Seminar: Psychology <sup>^</sup>	1	0	1
	Social Science Elective	3	0	3
	Math Elective*	4	0	4
	Foreign Language/Humanities/Fine Arts Elective*	3	0	3
<b>Semester Total:</b>		<b>18</b>	<b>0</b>	<b>18</b>

<b>Spring Semester</b>		<b>TH</b>	<b>LAB</b>	<b>CR</b>
	Psychology Elective	3	0	3
	Psychology Elective	3	0	3
	Liberal Arts Elective	3	0	3
	Math Elective*	4	0	4
	English Elective	3	0	3
<b>Semester Total:</b>		<b>15</b>	<b>3</b>	<b>16</b>

		<b>First Year Total:</b>	<b>25</b>	<b>3</b>
				<b>34</b>

<b>DEGREE PROGRAM SECOND YEAR</b>				
<b>Fall Semester</b>		<b>TH</b>	<b>LAB</b>	<b>CR</b>
	Psychology Elective	3	0	3
	Psychology Elective	3	0	3
	Social Science Elective	3	0	3
	Lab Science Elective*	3	3	4
	Foreign Language/Humanities/Fine Arts/Elective*	3	0	3
	<b>Semester Total:</b>	<b>15</b>	<b>3</b>	<b>16</b>

<b>Spring Semester</b>		<b>TH</b>	<b>LAB</b>	<b>CR</b>
PSYC241G	Social Science Research Methods	3	0	3
	Psychology Elective	3	0	3
	Social Science Elective	3	0	3
	Lab Science Elective*	3	3	4
	Foreign Language/Humanities/Fine Arts/Elective*	3	0	3
	<b>Semester Total:</b>	<b>15</b>	<b>3</b>	<b>16</b>
	<b>Second Year Total:</b>	<b>30</b>	<b>6</b>	<b>32</b>
	<b>Degree Total:</b>	<b>55</b>	<b>9</b>	<b>66</b>

<sup>^</sup>Recommended. Any one-credit FYE course fulfills this requirement.

\*Theory, lab, and credit hours may vary depending on the elective course chosen.

<b>PSYCHOLOGY ELECTIVES</b>				
		<b>TH</b>	<b>LAB</b>	<b>CR</b>
PSYC205G	Crisis Intervention	3	0	3
PSYC210G	Human Growth and Development	3	0	3
PSYC215G	Abnormal Psychology	3	0	3
PSYC230G	Educational Psychology	3	0	3
PSYC235G	Health Psychology	3	0	3
PSYC281G	Psychology Internship	0	9	3
PSYC140G	Introduction to Social Work	3	0	3
PSYC150G	Social Welfare and Policy	3	0	3



# **SURGICAL TECHNOLOGY**

## **ASSOCIATE IN SCIENCE**

The Surgical Technology Program at Great Bay Community College is the only Associate in Science degree program of its kind in the area. The program is accredited by the Accreditation Review Committee on Education in Surgical Technology – a collaborative effort of the Association of Surgical Technologists and the American College of Surgeons, under the auspices of the Commission on Accreditation of Allied Health Education Programs (CAAHEP) and approved by the Association of Surgical Technologists (AST). The goal of the program is to prepare competent entry-level surgical technologists with the cognitive (knowledge), psychomotor (skills), and affective (behavior) domains needed to be successful in their careers. Prior to graduation, students will sit for the national certification exam by taking a nationally administered written exam through the National Board of Surgical Technology and Surgical Assisting (NBSTSA).

Questions about the status of accreditation for the Surgical Technology program should be addressed to the Accreditation Review Council on Education in Surgical Technology and Surgical Assisting, 6 W. Dry Creek Circle, Suite #110 Littleton, CO 80120 Phone: 303-694-9262 Fax: 303-741-3655 Email: [info@arcstsa.org](mailto:info@arcstsa.org) Website: [www.arcstsa.org](http://www.arcstsa.org)

Commission on Accreditation of Allied Health Education Programs, 1361 Park Street Clearwater, Florida 33756 Phone: 727.210.2350 Fax: 727.210.2354 Website: [caahep.org](http://caahep.org)

Questions about certification should be addressed to the National Board of Surgical Technology and Surgical Assisting 6 West Dry Creek Circle, Ste. 100 Littleton, CO 80120 Toll Free: 1.800.707.0057 FAX: 303.325.2536 Website: [www.nbstsa.org](http://www.nbstsa.org)

Surgical technologists are highly skilled members of the surgical team qualified by classroom education and supervised clinical experience. They work closely with the surgeon, anesthesiologist, registered nurse, and other surgical personnel to deliver the highest level of care for the surgical patient before, during, and after surgery. Surgical technologists work under the supervision of a surgeon to facilitate the safe and effective conduct of surgical procedures, ensuring that the operating room environment is safe, that equipment functions properly, and that the operative procedure is conducted under conditions that maximize patient safety. Surgical technologists possess expertise in the theory and application of sterile and aseptic techniques and combine the knowledge of human anatomy, surgical procedures, and implementation of tools and technologies to facilitate a physician's performance of invasive therapeutic and diagnostic procedures.

Surgical technologists have an understanding of the procedure being performed and anticipate the needs of the surgeon. They have the necessary knowledge and ability to ensure quality patient care before and during the operative procedure and are constantly on vigil for maintenance of the sterile field. The surgical technologist handles the instruments, supplies, and equipment necessary during the surgical procedure. Duties include setting up a sterile field, gowning and gloving other sterile team members, maintaining the highest standard of sterile technique during procedure, and assisting the surgeon during surgery. With advanced training, surgical technologists may become first assistants who assist in complex surgical procedures such as open heart surgery. With additional education, they may become surgical nurses or instructors. Some surgical technologists assume management positions in hospital central supply departments or business firms such as sterile-supply services and operating-room equipment distributions.

The Surgical Technology program includes classroom courses in liberal arts, basic sciences, and surgical technology, along with clinical laboratory and supervised clinical experiences in

community hospital operating rooms. Students may enroll in Liberal Arts and Science courses prior to admission in the Surgical Technology program. Students admitted into the Surgical Technology program must take surgical technology courses in sequence. Students must be able to complete and successfully pass Competency Based Objectives embedded within Surgical Technology courses in order to continue with the program. In order to continue in the program all students must achieve a minimum of "C" in all major theory and science courses (Surgical Technology, Human Anatomy and Physiology I & II, and Microbiology) and a "Pass" in all clinical courses. Surgical Technology students must be CPR certified by the time of their first clinical practicum and maintain certification throughout their senior year. Transportation to and from the practicum site is the responsibility of the student. Hospital regulations may restrict candidates from attending clinical practice who have been involved in civil or criminal legal proceedings. Questions may be directed to the student's assigned clinical site.

### **Program Outcomes**

Surgical Technology Students will be able to:

- Incorporate knowledge of Anatomy and Physiology, Pathophysiology, and Microbiology into the practice of surgical technology
- Assess at appropriate levels for progress in the program
- Demonstrate surgical and aseptic safe practice at all times. Recognize unsafe practice in all aspects and immediately report it, per hospital policy
- Practice at all times with a surgical conscience
- Apply ethical, legal, moral and medical values related to the patient and or team during all levels of the perioperative procedure
- Understand elements, actions, and use of all medications, anesthetic agents used during perioperative procedure
- Perform in sequence all perioperative requirements
- Understand, value, and demonstrate professional attributes of a surgical technologist
- Implement actions, behaviors, decisions and characteristics/qualities of a surgical technologist:
  - Psychomotor – skill
  - Cognitive – learned
  - Affective – behavior domains

If at any time during the program the student does not demonstrate/practice the above, they may be placed on suspension from the program with the possibility of not being readmitted to the program.

### **Technical Standards**

Surgical Technology requires the ability to:

- Recognize, report and correct unsafe practice by self or by team member
- Communicate professionally, appropriately and effectively in different situations
- Advocate for the patient's safety, legal and moral rights
- Function as a team member
- Perform effectively in high stress situations
- Stand for long periods of time
- Hold uncomfortable positions for extended periods of time
- Lift heavy objects/patients safely
- Remain calm and alert in stressful and tiring situations
- Work effectively with both hands (manual dexterity)
- Focus for extended periods of time
- Perform in a quick, accurate, and detailed-oriented manner

- Follow orders and directions as instructed, regardless of the manner in which they are delivered
- Handle constructive criticism with a positive and professional attitude
- Be flexible both physically and mentally
- Be honest and ethical
- Continue education after graduation to maintain continuing education credits for certification
- Develop effective strategies for controlling bodily functions (sweat, urination, etc.)
- Understand risks (physical and health) of job (HIV, Hep C, etc.). Take necessary precautions to avoid these risks. Treat every patient as if they have some risks to pass on.
- Handle physical, emotional, mental, smells and sights of the operating room (all sensory aspects and/or unexpected outcomes in the operating room).

If at any time during the program the student does not demonstrate/practice the above, they may be placed on suspension from the program with the possibility of not being readmitted to the program. Also, if at any time the student demonstrates unethical practices or does not follow the College's Code of Ethics, the student will be suspended from the program and will not be readmitted to the program.

### **Admission Criteria**

Surgical Technology program applications must be completed by April 1st to be considered for acceptance in the fall semester.

### **Admissions Requirements:**

1. Complete an application to the program.
2. Provide proof of high school completion or equivalent.
3. Provide proof of completion of high school biology, or equivalent with a grade of "C" or greater or proof of registration in a course with a projected completion date of August 30th of the current year. Computer background strongly recommended.
4. Place into college level Math, Reading and Writing or demonstrate equivalent competencies through a college transcript or SAT scores.

### **Clinical Requirements:**

1. Prior to Orientation to Surgical Clinical, applicants must:
  - Possess and maintain professional liability insurance (available at The College).
  - Submit a report of a current physical examination including all program required health screenings and immunizations.
  - Certify in American Heart Association CPR Healthcare Provider or Red Cross equivalent (BLS).
  - Have a baseline eye exam before first clinical practicum and after last clinical practicum if they have worked with lasers.
2. Possess/maintain health/accident insurance.
3. Complete a Level I criminal background check and drug screen.
4. Submit and pass a 12 panel drug screen.

### **Surgical Technology Program Suspension Information**

Students matriculated in the Surgical Technology Program who are withdrawn or do not achieve the required minimum grade of a "C" in all major Surgical Technology and science courses will not be able to continue in the program. In addition, students are required to achieve the required minimum grade of "C" in BIOL110G, BIOL120G and BIOL210G, as designated in the chart below.

<b>Requirement</b>	<b>Prior to Core Course Registration:</b>
BIOL110G "C" or higher	SURG215G & SURG210G
BIOL120G & BIOL210G "C" or higher	SURG224G & SURG225G

Students who do not pass their Competency Based Objectives (CBO) will not be allowed to retake the CBO. A student who fails their CBO, will not be able to continue in the program.

### **Surgical Technology Readmission Policy**

Students matriculated in the Surgical Technology program who withdraw or are Program Suspended may be eligible for readmission consideration. A student may be readmitted to the program one time only. Students who have failed a course because of lack of professionalism or unsafe practice involving actions or non-actions may be suspended from the program without eligibility for readmission consideration. Unsafe practice includes actions or non-actions that may cause injury, damage or harm to the surgical client or others.

Readmissions are contingent upon space availability. The student applying for readmission will be required to meet the curriculum requirements in effect at the time of readmission. In order to be reconsidered for admission, the student must:

- Submit a written, dated letter requesting readmission consideration to the Program Director of Surgical Technology
- Briefly outline the reasons they were unable to continue in the program and identify the surgical technology course to which they are requesting readmission. Students need to have successfully completed with a C or better BIOL110G, BIOL120G, and BIOL210G within the past five years from the time of readmission to the program.
- Students who have requested readmission consideration will be ranked according to their surgical technology course average as space availability is determined.
- Students will be readmitted based on their ranking order. Students will then be notified of the status of the request in writing by the Admissions department.
- If a request for readmission is granted, the student must complete a new application.
- If the student is coming back and has completed the requirements for SURG119G and 122G, they will need to pass Competency Based Objectives (CBO), outlined in SURG119G and SURG122G lab syllabi, to demonstrate that they are ready for clinical and have retained skills taught during these labs.

### **Advanced Placement:**

In addition to the general admission criteria, students seeking advanced placement must have completed and passed with a C grade or better all prerequisite coursework by examination, challenge or transfer credit. They must pass Competency Based Objectives (CBO), outlined in SURG119G and/or SURG122G lab syllabi. Students applying to the Surgical Technology Program will be required to have a personal interview with the program director.

### **Surgical Technology Transfer Credit Policy**

In addition to Great Bay Community College transfer credit policies, transfer courses in Human Anatomy and Physiology I, Human Anatomy and Physiology II, and Microbiology cannot be more than five years old at the time of acceptance.

<b>DEGREE PROGRAM FIRST YEAR</b>				
<b>Fall Semester</b>		<b>TH</b>	<b>LAB</b>	<b>CR</b>
SURG118G	Introduction to Surgical Technology Fundamentals Theory	6	0	6
SURG119G	Introduction to Surgical Technology Fundamentals Lab	0	3	1
SURG115G	Basic Instruments, Supplies and Equipment	0	3	1
AHLT110G	Medical Terminology	3	0	3
BIOL110G	Human Anatomy & Physiology I	3	3	4
MATH145G/147G	Quantitative Reasoning/Plus	4/5	0	4/5
<b>Semester Total:</b>		<b>16-17</b>	<b>9</b>	<b>19-20</b>

<b>Spring Semester</b>		<b>TH</b>	<b>LAB</b>	<b>CR</b>
SURG116G	Advanced Instruments, Supplies and Equipment	0	3	1
SURG121G	Surgical Procedures I Theory	3	0	3
SURG122G	Surgical Procedures I Lab	0	3	1
BIOL120G	Human Anatomy & Physiology II	3	3	4
ENGL110G	College Composition	4	0	4
PSYC110G	Introduction to Psychology	3	0	3
<b>Semester Total:</b>		<b>13</b>	<b>9</b>	<b>16</b>

<b>Summer Semester</b>		<b>TH</b>	<b>LAB</b>	<b>CR</b>
SURG123G	Orientation to Surgical Clinical	0	6	2
<b>Semester Total:</b>		<b>0</b>	<b>6</b>	<b>2</b>
<b>First Year Total:</b>		<b>29-30</b>	<b>24</b>	<b>37-38</b>

<b>DEGREE PROGRAM SECOND YEAR</b>				
<b>Fall Semester</b>		<b>TH</b>	<b>LAB</b>	<b>CR</b>
SURG210G	Surgical Procedures II	3	0	3
SURG215G	Surgical Clinical I	0	32	8
BIOL210G	Microbiology	3	3	4
<b>Semester Total:</b>		<b>6</b>	<b>27</b>	<b>15</b>

<b>Spring Semester</b>		<b>TH</b>	<b>LAB</b>	<b>CR</b>
SURG224G	Surgical Procedures III/Special Considerations	4	0	4
SURG225G	Surgical Clinical II	0	24	8
	English Elective*	3	0	3
	Foreign Language/Humanities/Fine Arts Elective*	3	0	3
<b>Semester Total:</b>		<b>10</b>	<b>24</b>	<b>18</b>
<b>Second Year Total:</b>		<b>16</b>	<b>51</b>	<b>33</b>
<b>Degree Total:</b>		<b>45-46</b>	<b>75</b>	<b>70-71</b>

\*Theory, lab, and credit hours may vary depending on the course chosen.

Course expectations include computer work. Students unfamiliar with computers are encouraged to take the Accuplacer Assessment in Computer Literacy or take Introduction to Computers (CIS110G) (or CIS107G) before entering the program.

*Upon acceptance, applicants must participate in an operating room tour at a hospital affiliated with the program. This experience will be under the supervision of the program director or designee and will occur prior to the start of the fall semester. Specific dates will be provided to each student.*

# **TECHNICAL STUDIES**

## **ASSOCIATE IN SCIENCE**

The Technical Studies program provides pathways for skilled workers to earn Associate Degrees by offering credit for recognized, technical specialties. The program allows students to build on previous success in areas of technical expertise through the choice of electives that complement the technical specialties. The Technical Studies degree is designed as an individualized program of study in an area not otherwise offered at the College. Students from recognized apprenticeship programs or students with certificates in technical fields (in areas in which Great Bay does not offer a degree) may complete the Associates degree in Technical Studies. Students with industry training and certifications equivalent in hours to 24 credits and documented by certification exams may receive credit for the Technical Specialty core. Credit will be awarded through the College's Credit for Prior Learning-Experiential Learning process. Fees apply.

### **Admissions Criteria**

- Each applicant must receive approval from Academic Affairs to participate in the Technical Studies program.
- Complete a paper application indicating Technical Studies as choice of major.
- Provide proof of high school completion or equivalent and college transcripts.

### **Program Outcomes**

Students in the Technical Studies Program will:

- Build on applied expertise through selected coursework, gaining knowledge and skills in a specific discipline or clearly articulated interdisciplinary area.
- Attain proficiency in the concepts, theories, and methods of inquiry pertinent to the courses chosen as related technical electives.
- Integrate knowledge of their technical specialty fields with new knowledge from their chosen related technical electives.
- Advance in the development of skills necessary to interpret facts, solve problems, evaluate issues, develop multiple perspectives, and think critically and creatively.

### **Technical Standards**

The Technical Standards of the related, technical electives and open electives chosen apply. See individual degree programs associated with chosen coursework.

### **Transfer Credit Policy**

In addition to Great Bay transfer credit policies, transfer of courses into the Technical Studies Program will be evaluated by the applicable department or program and according to each department's currency requirements.

### **Degree Program**

#### **Technical Specialty Core 20-24 Credits**

In addition to Experiential Credit evaluated and awarded through a portfolio, Experiential Credit is also awarded for Completed/Industry Training/Certification, US Department of Labor Registered Apprenticeships, and CCSNH Certificate programs which are not in an area in which Great Bay offers an Associates Degree. These experiences may be documented by Certification exams, certificates that show number of hours completed and grades, and/or Apprenticeship transcripts.

**Related Technical Elective Courses: 12-16 Credits**

Students will work with their advisor to choose courses that complement their technical specialty and career pathway. Course selections must follow program prerequisite requirements. Students will take 12-16 credits depending on how many credits are awarded for their Technical Core.

**Open Elective: 3 Credits**

Students can choose any course that the College offers with a course number of at least 100, provided the student has met the prerequisite; exceptions are courses which have admission to the program as a prerequisite to the course.

<b>DEGREE PROGRAM</b>		<b>CR</b>
Technical Specialty Courses		20-24
Related Technical Elective Courses		12-16
Open Elective		3
<b>GENERAL EDUCATION REQUIREMENTS</b>		
		<b>CR</b>
ENGL110G	College Composition I	3-4
	Lab Science Elective	4
	Foreign Language/Humanities/Fine Arts Elective*	3
	Social Science Elective*	3
	Math Elective*	3-4
	Liberal Arts Elective*	3
<b>Total Degree Credits:</b>		<b>60</b>

*\*Credit hours may vary depending on the course chosen.*



# **VETERINARY PRACTICE MANAGEMENT CERTIFICATE**

There is a need for educated managers in the veterinary profession. Veterinarians want to practice their medical skills, leaving the small business and management tasks to someone they can trust. This certificate program prepares a student to work as a Veterinary Practice Manager, Office Manager or Hospital Manager within the veterinary office. In addition to business, management and accounting courses, the program offers courses in veterinary medical terminology and law.

Graduates of the Veterinary Technology program or students who are currently in the program may take these courses to add to their training. Working technicians or individuals who are employed in an office setting can improve their potential with this certificate.

The program prepares the student for certification through the Veterinary Hospital Manager's Association (VHMA). To become a Certified Veterinary Practice Manager (CVPM), one has to have been active as a practice manager for 3 of the last 7 years, have a minimum of 18 credits of management related courses, and complete 48 hours of continuing education to be eligible to sit for the practice manager's exam.

## **Program Outcomes**

Graduates from the Veterinary Practice Management Certificate will:

- Perform human resource functions such as staffing, scheduling, and employee management.
- Prepare financial statements and other business monitoring analyses.
- Prepare marketing strategies for a veterinary practice.
- Comply with veterinary and medical laws and regulations such as rabies compliance, controlled substance compliance, and veterinary practice act compliance.
- Review and utilize simple business contracts.
- Perform operational functions in a veterinary business such as inventory, ordering, scheduling, and client communications.
- Utilize veterinary practice software to perform these tasks.

## **Technical Standards**

The successful Veterinary Manager will be emotionally and psychologically stable. In addition, graduates will be expected to establish priorities, be detail oriented, function effectively in emergency situations, and communicate in a professional manner.

## **Admissions Criteria**

1. Complete an application to the program.
2. Provide proof of high school completion or equivalent.
3. Place into college level Math, Reading and Writing or demonstrate equivalent competencies through a college transcript or SAT scores.
4. Show documented work experience (ex: a letter from the applicant's supervisor or pay stubs) of at least 2 years in one of the following: veterinary clinic, animal care business, or medical or business office, or acceptance into the Veterinary Technology Program. Graduation or enrollment in another AVMA accredited Veterinary Technology program will fulfill this requirement.

### Transfer Credit Policy

In addition to Great Bay Community College transfer credit policies, transfer of courses in Veterinary Practice Management more than ten years old will be evaluated by the program coordinator on an individual basis.

<b>CERTIFICATE PROGRAM</b>		<b>TH</b>	<b>LAB</b>	<b>CR</b>
ACCT113G	Accounting and Financial Reporting I	3	0	3
BUS114G	Management	3	0	3
BUS224G	Human Resource Management	3	0	3
MKTG101G	Principles of Marketing	3	0	3
VETN110G	Introduction to Veterinary Technology	2	0	2
VETN112G	Computer Applications in Veterinary Medicine	1	0	1
VETN225G	Veterinary Practice Law	2	0	2
<b>Choose one of the following:</b>				
ACCT123G	Accounting and Financial Reporting II	3	0	3
BUS116G	Organizational Behavior	3	0	3
BUS205G	Small Business Management	3	0	3
ECON234G	Macroeconomics	3	0	3
MKTG210G	Advertising	3	0	3
<b>Certificate Total:</b>		<b>20</b>	<b>0</b>	<b>20</b>

Gainful Employment disclosure information is available at:

<http://greatbay.edu/sites/default/files/GE/vet-practice/51.0716-Gedt.html>

# **VETERINARY TECHNOLOGY**

## **ASSOCIATE IN SCIENCE**

As the field of veterinary medicine becomes increasingly complex, there is a growing need for skilled, educated paraprofessionals who can perform a variety of duties. Veterinary technicians work as a team with veterinarians providing medical, surgical, and laboratory procedures. They offer comprehensive support to clients as well as general healthcare to the animal patient. The Veterinary Technology program is accredited by the American Veterinary Medical Association (AVMA). The program provides education in the basic sciences and liberal arts as well as in veterinary technology.

Hands-on experience is obtained during clinical affiliations at local animal hospitals, service learning sites, and spay/neuter clinics. Transportation to and from off-campus sites is the responsibility of the student. Clinical Affiliation experiences may vary in time and in locations including days, evenings, and/or weekends. Students are required to purchase, through the college approved vendor, a scrub top and bottom, and a lab coat in their first semester in the program. Scrubs will be worn in lab courses at the college and during clinical affiliations. Lab coats will be worn in anatomy and clinical pathology lab courses. Veterinary courses including Veterinary Anatomy and Physiology I and II must be successfully completed with a minimum grade of C+ before enrollment in Clinical Affiliations and the following semesters.

The goal of the program is to provide our students with a comprehensive academic foundation emphasizing technical skills, integrity, and professionalism. The program may be completed on a full-time or part-time basis. All veterinary technology courses must be completed within four years of the date of entry to the program. Students admitted to or re-entering the program must meet current requirements necessary for graduation.

Successful completion of this degree program provides students the opportunity to seek employment in veterinary hospitals and other related fields. They are also eligible to take the Veterinary Technician National Exam (VTNE) to become certified or licensed. In the last three years, 93 graduates were eligible first-time candidates for the VTNE. Of those 93, 70 graduates sat for the VTNE with a 3 year average pass rate of 61%. Graduates may find jobs in veterinary hospitals, medical laboratories, pet-related industries, zoos, research facilities, and the pharmaceutical industry.

### **Program Outcomes**

Based on curriculum standards set by the American Veterinary Medical Association, the program partners with New England veterinary facilities to create skilled medical professionals qualified for employment in many areas of the veterinary healthcare field.

### **Technical Standards**

The program is physically strenuous, requiring lifting animals up to 50 lbs. and working with large animals. Sufficient manual dexterity and vision is necessary to perform clinical and microscopic procedures. Students will be expected to establish priorities, function effectively in emergency situations, comply with safety regulations, and communicate in a professional manner during clinical affiliations. Individuals who cannot meet these standards may have difficulty satisfying course objectives and becoming successful as a Veterinary Technician.

### **Admissions Criteria**

The deadline for completion of the application process, including the interview with the director, is April 30th. Early decision is possible for applicants with a strong academic history who complete their application prior to the deadline.

### Admissions Requirements

1. Complete an application to the program.
2. Provide proof of high school completion or equivalent.
3. Provide proof of completion of high school algebra, biology, and chemistry or equivalent of current enrollment.
4. Place into college level Math, Reading and Writing or demonstrate equivalent competencies through a college transcript or SAT scores.
5. Complete a personal interview with the program director.

*Applicants will be contacted by Admissions to set up interviews with the program director once the first four requirements have been met.*

### Clinical Requirements

Prior to participating in required service learning for VETN121G, students must:

1. Possess and maintain health insurance and professional liability insurance. (Professional liability insurance is available at the College; see page 64.)
2. Have documentation showing current rabies, tetanus, measles, mumps and rubella vaccinations.
3. Provide proof of a negative TB skin test.

Prior to the first clinical affiliation, students must also:

4. Purchase a radiology dosimeter badge (available at the College).

### Veterinary Technology Program Suspension Information and Readmission Policy

Students matriculated in the Veterinary Technology program who withdraw or do not achieve the minimum grade in the Veterinary Technology or Veterinary Anatomy and Physiology I and II courses will be allowed to retake the course(s) one time only. Should a student fail to achieve the minimum grade on the second attempt, they will be dismissed from the program and must re-apply if they choose. Students who have failed a Veterinary Technology course because of unsafe practice involving actions or non-actions are dismissed and not eligible for readmission to the Veterinary Technology Program.

### Advanced Placement:

Admission to the program for students transferring from another AVMA accredited Veterinary Technology program will be determined by the program director based upon courses that have been successfully completed and space availability. All students seeking advanced placement are subject to the same admission and program requirements.

### Transfer Credit Policy

In addition to Great Bay Community College transfer credit policies, there is a ten-year limitation on accepting the course equivalencies of all VETN courses, BIOL111G and BIOL121G. Exceptions may be made by the department chairperson.

<b>DEGREE PROGRAM FIRST YEAR</b>				
<b>Fall Semester</b>		<b>TH</b>	<b>LAB</b>	<b>CR</b>
VETN110G	Introduction to Veterinary Technology	2	0	2
VETN112G	Computer Application in Vet Med	1	0	1
BIOL111G	Veterinary Anatomy & Physiology I	3	3	4
ENGL110G	College Composition I	4	0	4
MATH145G/ MATH147G	Quantitative Reasoning/Plus***	4/5	0	4/5
<b>Semester Total:</b>		<b>14-15</b>	<b>3</b>	<b>15-16</b>

<b>Spring Semester</b>		<b>TH</b>	<b>LAB</b>	<b>CR</b>
VETN121G	Veterinary Clinical Methods I	3	3	4
BIOL121G	Veterinary Anatomy & Physiology II	3	3	4
VETN114G	Veterinary Pharmacology I	2	2	3
CHEM110G	Introduction to Chemistry*	3	3	4
PSYC110G	Oral Communications	3	0	3
<b>Semester Total:</b>		<b>14</b>	<b>11</b>	<b>18</b>

<b>Summer Semester</b>		<b>TH</b>	<b>LAB</b>	<b>CR</b>
VETN130G	Veterinary Clinical Affiliation I	0	24	4
<b>Veterinary Elective**</b>				
VETN225G	Veterinary Practice Law or	2	0	2
(VETN226G)	(Small Animal Behavior) or	(2)	(0)	(2)
(VETN227G)	(Veterinary Emergency Medicine)	(1)	(2)	(2)
<b>Semester Total:</b>		<b>1-2</b>	<b>24-26</b>	<b>6</b>
<b>First Year Total:</b>		<b>31</b>	<b>40</b>	<b>39-40</b>

<b>DEGREE PROGRAM SECOND YEAR</b>				
<b>Fall Semester</b>		<b>TH</b>	<b>LAB</b>	<b>CR</b>
VETN210G	Veterinary Clinical Methods II	3	3	4
VETN212G	Laboratory Animal Science	2	2	3
VETN215G	Large Animal Management	2	2	3
VETN220G	Veterinary Clinical Pathology I	2	3	3
VETN214G	Veterinary Pharmacology II	1	0	1
<b>Semester Total:</b>		<b>10</b>	<b>10</b>	<b>14</b>

<b>Spring Semester</b>		<b>TH</b>	<b>LAB</b>	<b>CR</b>
VETN221G	Veterinary Clinical Pathology II	2	3	3
VETN224G	Veterinary Diagnostic Imaging	1	3	2
VETN222G	Veterinary Clinical Affiliation II	0	18	6
	Foreign Language/Humanities/Fine Arts Elective^	3	0	3
<b>Semester Total:</b>		<b>6</b>	<b>24</b>	<b>14</b>
<b>Second Year Total:</b>		<b>16</b>	<b>34</b>	<b>28</b>
<b>Degree Total:</b>		<b>45-47</b>	<b>74</b>	<b>67-68</b>

\*Students planning to transfer to a four-year college may substitute CHEM115G.

\*\*Students must choose from one of the three VETN elective courses offered.

\*\*\*Students will enroll in one of these Math courses depending on Accuplacer testing or previous course work.

^Theory, lab, and credit hours may vary depending on the elective course chosen.

### Curriculum Recommendations

Students are encouraged to take the required program general education courses before they begin the Veterinary Technology program. Alternatively, they should take the general education courses as they appear in the recommended sequence above. If a student fails to complete a first-year general education course, they are encouraged to take it over the summer between first and second year along with their Clinical Affiliation I and VETN elective course. The student may not take the accrediting exam (VTNE) until all courses are complete and the student has graduated. Health insurance is recommended for the entirety of the program.

# WELDING TECHNOLOGIES

## CERTIFICATE

According to the American Welding Society (AWS), there are currently 600,000 welding jobs available in the U.S. With the lack of skilled workers, only half of those positions are currently filled. Employers are currently seeking a new skilled workforce with an understanding of fabrication, welding and repair techniques as well as other differentiated attributes. The welding career field has a variety of job levels and responsibilities. Common career opportunities include:

- Fitters: Welders that set up material, pipe or plate, for the certified welder.
- Tack Welders: Fitters that tack the weld joints prior to large weldments.
- Fabricators: Welders who use welding to fabricate items with metal.
- Welders: Welders usually in manufacturing industry, with only one process.
- Combination Welders: Welders that can weld with more than one process.
- Certified Welder: Welder with credentials that prove the ability to repeat 100% weld quality.
- Solders: Welders who work with low temperature material joining.
- Welder Inspector: Those certified to inspect the welding from other welders.
- Welding Engineer: A mechanical engineer certified in the welding specifications.
- Welding Sales: Individuals who work for the suppliers for the welding field.
- Shop Owners: Business owners that are established in the welding field.

The Certificate in Welding offered by Great Bay Community College, held at the Seacoast School of Technology in Exeter, New Hampshire, will provide graduates with the ability to meet the needs of entry and intermediate skill levels to acquire sustainable jobs in the field of welding. Upon completion of the program, students may be proficient in the use of welding equipment, set up, and operation for the five major processes; MIG, TIG, Stick, Oxy-fuel, and Plasma as well as many of the auxiliary processes such as; FCAW, Aluminum-TIG, Spool guns, etc. The curriculum will also provide students with a solid range of welding theory, blue print reading, electricity, and fabrication techniques. Upon completion of the program, students will also be prepared for AWS Certification Testing. The program, offered in the evening, will consist of three 12-week semesters.

Dual enrollment: Students enrolled in the Welding Certificate program may elect to enroll in the Associate Degree in Technical Studies. Dual enrollment is contingent upon active or graduate status of the certificate. Completion of the Welding certificate satisfies the requirement for the technical specialty core (24 credits) of the Technical Studies degree.

### Program Outcomes

Graduates of the Welding Technologies certificate program will:

- Possess basic competency in the five major welding processes.
- Demonstrate proficiency in the use of welding equipment, set up, and operation for the five major processes: MIG, TIG, Stick, Oxy-fuel, and Plasma.
- Demonstrate basic concepts and practices of technical drawing and blueprint reading in accordance with industry standards.
- Articulate safety guidelines and use of machine tools.
- Refine skills to meet code requirements and specifications.
- Demonstrate knowledge of material strengths and weaknesses.
- Articulate industrial quality control procedures.
- Demonstrate fabrication techniques and cost estimation.

### **Technical Standards**

This program includes work in a welding shop and requires participants to physically perform functions that require the following:

- Normal vision for reading instructions and for performing tasks (corrective vision is acceptable).
- Manual dexterity with both hands; good hand and eye coordination.
- No medical electronic implants such as pacemakers are allowed in the welding shop.

### **Health and Safety Considerations**

This program includes work in a welding shop where high temperatures and explosive gases are used. Students will be taught industry standards for safety of themselves and others in the shop, and will be expected to follow all safety procedures. Personal protective equipment must be worn in the shop at all times.

### **Admissions Criteria**

- Complete an application to the program.
- Provide proof of high school completion or equivalent.

### **Transfer Credit Policy**

In addition to Great Bay transfer credit policies, transfer of courses in the Welding program will be evaluated by the program coordinator on an individual basis.

<b>CERTIFICATE PROGRAM</b>		<b>TH</b>	<b>LAB</b>	<b>CR</b>
WELD100G	Basic Welding	5	3	6
WELD150G	Intermediate Welding	3	6	6
WELD200G	Advanced Welding	3	6	6
<b>Certificate Total:</b>		<b>11</b>	<b>15</b>	<b>18</b>

Gainful Employment disclosure information is available at:

<http://greatbay.edu/sites/default/files/GE/welding/48.0508-Gedt.html>

# COURSE DESCRIPTIONS

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All credit and noncredit courses at Great Bay are assigned a course number. Course numbers begin with a letter code designating the course's academic area. The following course descriptions are arranged alphabetically by academic code, beginning with "ACCT" (Accounting) and ending with "VETN" (Veterinary).

Courses with numbers between "0 – 99G" are considered developmental. Any credits awarded for developmental courses cannot be used toward graduation requirements, but are included in Cumulative Grade Point Average (CGPA). Courses with numbers between "100 – 199G" are considered beginning-level courses, and courses with numbers between "200 – 299G" are considered upper-level courses.

Prerequisites and Co-requisites for courses are identified after each description. Students may not waive courses within their program of study, but with Departmental Approval, students may waive course prerequisites. Course prerequisites may only be waived by the Department in which the actual course resides. A Prerequisite Waiver Form must be completed prior to registration. These forms can be obtained at College Services One Stop.

Prerequisite: A course that needs to be taken prior to registering for a designated course.

Co-requisite: A course that needs to be taken prior to or simultaneously with a designated course.

Please see page 72 for more information on the assignment of credits.

## **ACCT113G Accounting and Financial Reporting I** **3-0-3**

This course is an introduction to accounting as the language of business and the purpose of accounting in business. Students will develop an understanding of the concepts and use of the classification of assets, liabilities, equity, revenue and expense accounts. Students will be introduced to accounting procedures necessary to prepare financial statements utilizing current concepts and accounting principles. This includes journalizing transactions, preparation of a trial balance, accounting adjustments, closing journal entries, inventory, accounts receivable, accounts payable, special journals, payroll, cash receipts, disbursements, and banking procedures. **All semesters**

## **ACCT123G Accounting and Financial Reporting II** **3-0-3**

This course consists of a more in-depth study of accounting procedures and concepts. An emphasis is placed on accounts from the balance sheet such as accounts and notes receivable; plant, property and equipment; and current and long-term liabilities. This course will also involve comparing and contrasting sole proprietorships, partnerships and corporations, as well as capital stock and stock transactions. Students will learn to use financial ratios to measure financial strength, profitability and liquidity. Prerequisite: ACCT113G. **All semesters**



**ACCT213G Cost Accounting I****3-0-3**

Cost Accounting is concerned with how accounting data is used within an organization. Managers need information to carry out three essential functions in an organization: (1) planning operations, (2) controlling activities, and (3) making decisions. The student will study what kind of information is needed, where this information can be obtained, and how this information can be used in planning, controlling, and decision-making responsibilities. Budgeting, standard cost, cost of goods sold, job order and process costing, cost-volume-profit formulas and equivalent topics are examined. Prerequisite: ACCT123G. **Fall semester**

**ACCT215G Cost Accounting II****3-0-3**

This course is designed as a continuation of the concepts covered in ACCT213G, where the student was introduced to the recording, classification and reporting of costs management use to plan, control, and make decisions. The student will build on this foundation with a more in-depth analysis and reporting of costs. This analysis and reporting will include performance measures, financial statement analysis, capital budgeting and service department costing methods, as well as a further detailed analysis of activity-based costing and process costing. Prerequisite: ACCT213G. **Spring semester**

**ACCT216G Software Systems Applications****2-2-3**

This course offers an introduction to an integrated accounting software package. It includes an evaluation of common software characteristics and features, and the review of internal controls for computerized accounting systems. The student will become proficient in processing transactions in a computerized accounting environment using a popular software package. Modules introduced are general ledger, financial statement preparation, accounts receivable, accounts payable, payroll, inventory, time and billing, fixed assets and depreciation, cost control, budgeting, and reporting. Prerequisites: ACCT123G and CIS110G or CIS107G. **Spring semester**

**ACCT223G Intermediate Accounting I****3-0-3**

An extension of topics covered in Accounting and Financial Reporting I and II. Further emphasis is placed on the study and application of generally accepted accounting principles. The student will encounter an in-depth study of accounting concepts, balance sheet, income statement, and retained earnings. Included are detailed applications of accounting theory with the preparation and analysis of the financial statements. The student will also cover an in-depth analysis of cash, receivables, inventory valuation, property, plant and equipment, asset purchase and disposal, depreciation, and time value of money. Prerequisite: ACCT123G. **Fall semester**

**ACCT233G Intermediate Accounting II****3-0-3**

Intermediate Accounting II is a continuation of the intensive examination begun in Intermediate Accounting I. It provides a closer look at investments, leases, statement of cash flows, bonds, stock, income taxes, intangible assets, current and long-term liabilities, earnings per share, and stockholders' equity. Guidelines of revenue recognition are discussed, and an evaluation of accounting changes and error analysis. Prerequisite: ACCT223G. **Spring semester**

**ACCT243G Federal Income Taxes-Individual****3-0-3**

A detailed presentation of Federal Income Tax Laws focusing on Internal Revenue Service procedures and court rulings as related to the tax preparation of individual taxpayers and sole proprietorships. Applicable tax forms are prepared in conjunction with rules and regulations. Prerequisite: ACCT123G. **Fall semester**

**ACM103G Project Based Composites Manufacturing****2-2-3**

In this hands-on class, students will experience the full range of skills needed to manufacture a composite project, from design, to infusion, and finishing. Class objectives will include the use of current events and advancements in the field of advanced composites. Focus will be on quality, fabrication using infusion process, and finishing techniques. Students will learn tool use, measurement and quality inspection, basic composite fabrication techniques, and explore possible careers in the field. **Summer semester**

**ACM110G Introduction to Advanced Composites****2-3-3**

This course focuses on occupations in composites manufacturing today and examines critical skills required. Topics include materials, technology, and processes. A unit on composites for the aerospace industry will include topics in regulatory compliance and terminology. Technical documentation will be introduced, and workplace safety will be stressed. Students will have an opportunity to earn the OSHA 10 hour certification at the end of the course. Instruction will incorporate hands-on lab work, discussion, demonstration, lecture, and assigned readings. Prerequisite: Acceptance into the Advanced Composites Manufacturing Certificate program. Co-requisite: ACM115G. **All semesters**

**ACM115G Applied Math & Measurement for Manufacturing****1-2-2**

This course is designed to help students successfully transfer knowledge of math to the manufacturing floor. The focus will be on solving lab problems that require the use of math, including measurements and calculations. Students will work in both metric and U.S. standard measurement systems independently before learning conversions, building comfort with the language and instruments for measurement. Students will work in teams to find solutions to common plant problems and will work individually to advance math skills. Students will develop a course notebook that contains notes, formulas, and examples that will become a reference book as they proceed through lab courses in their training and to assist them on the job. Prerequisite: Acceptance into the Advanced Composites Manufacturing Certificate program. Co-requisite: ACM110G. **All semesters**

**ACM120G Technical Blueprint Reading****1-2-2**

Students will learn to read blueprints and develop an understanding of how blueprints provide information necessary to control the manufacturing operation and quality outputs. Topics include terminology, standard abbreviations, the different types of lines on a blueprint, and reading different views. Major concentration will be towards ISO standards and geometric definitions, including profiles, parallelism, and true position. Focus will be on both paper and electronic formats. Students will be introduced to CAD environment processes throughout the course. The English inch and Metric dimensional examples will be included. Prerequisite: Placement into CIS110G or CIS107G or higher. **All semesters**

**ACM210G Fundamentals of Composites Manufacturing****3-2-4**

This course reinforces learning from ACM110G while providing a study of topics fundamental to manufacturing, including quality assurance processes and statistical process control; production systems with a focus on lean processes; and personal effectiveness skills including time management and adapting to change. An introduction to polymer chemistry and the physics of strength of materials will make students familiar with elementary concepts of composites manufacturing. Additional topics will be introduced, creating a broad awareness of all advanced composites manufacturing aspects. Prerequisites: C or better in ACM110G, C or better in ACM115G, and ACM120G. Co-requisite: One of 6 Manufacturing Operator Skills Courses. **All semesters**

**ACM215G Applied Composites: Science & Technology****2-4-4**

This is an accelerated course designed for engineers and other manufacturing personnel to increase their knowledge of advanced composites materials, processes, and techniques. Instruction will incorporate hands-on lab work, discussion, demonstration, lecture, and assigned readings. Focus is on applying knowledge of polymer chemistry and the physics of strength of materials and thermodynamics through hands-on projects in the lab to explain the concepts of composites manufacturing. Activities include infusion and prepreg; curing using ovens and autoclaves; and finishing using a variety of hand tools. Quality assurance processes are emphasized. Additional topics will be introduced to assure a broad awareness of advanced composites manufacturing. Prerequisites: MATH145G/147G or MATH150G/152G or higher, and PHYS135G or higher, and CHEM110G or higher. **Spring semester**

**ACM230G Manufacturing Ethics****1-0-1**

Ethics in manufacturing is meant to maintain high standards needed to ensure consumer safety. Compromise of process, standards, or conduct can threaten the welfare of consumers and society. In this course, students will explore how in some manufacturing processes even a slight error can cause danger, why standards are in place, and the importance of following a code of conduct. **All semesters**

**ACM250G Paint Operator****0-3-1**

This hands-on course prepares students for jobs where they will paint parts using a handheld paint sprayer within an industrial spray booth. Students will also mix paint-related ingredients, apply masking techniques, and practice rework skills. They will practice basic preventive maintenance and care of all paint equipment and the paint booth. Focus will be on safety, attention to detail, and ability to follow operating procedures. Co-requisite: ACM210G.

**ACM251G Weaving Technician and Preform Finishing****1-3-2**

This hands-on course prepares students for jobs where they will set up and operate equipment used in 3D composites fabric weaving, including a Jacquard loom. Topics will include loom operation and maintenance and troubleshooting. Students will learn proper use and documentation of measurement equipment, practice reading specialized engineered drawings and work instructions for weaving, and implement quality assurance procedures. Focus will be on safety, attention to detail, and ability to follow operating procedures.

**ACM252G Resin Transfer Molding Technician****0-4-2**

This hands-on course prepares students for jobs where they will operate the processes of resin transfer molding. Students will learn RTM tool preparation, safe operation of the resin injector, safe operation of the press, and equipment care and maintenance. Students will apply polymer chemistry, physics, curing methods, and other theories presented in Fundamentals of Manufacturing, and will keep a course notebook linking process to theory. Focus will be on attention to detail, and ability to follow operating procedures. Inspection of parts and quality assurance will be included. Co-requisite: ACM210G. **Fall/Spring semesters**

**ACM253G Bonding and Finishing Operator****0-4-2**

This hands-on course prepares students for jobs where they will operate equipment within the finishing processes for composites manufacturing. Students will learn to perform operations of bonding and vacuum bagging, to run an autoclave and record parameters, and to perform preventive maintenance on equipment. Students will be responsible for maintaining work area and equipment in clean and orderly condition. Tools include measurement tools such as micrometers and calipers. Focus will be on safety, attention to detail, and ability to follow operation procedures. Inspection of parts and quality assurance will be included. Co-requisite: ACM 210G. **All semesters**

**ACM254G Quality Inspection and CMM Operator****2-2-3**

This hands-on course prepares students for jobs as quality inspectors and CMM operators where they will inspect, test, or measure materials, products, or work for conformance to specifications. Students will use precision measuring instruments as they apply advanced quality inspection methods, processes, and standards. Students will be required to read and prepare technical documents and will use mathematical formulas to collect data and prepare reports. They will use critical thinking skills to use logic and reason to identify the strengths and weaknesses of alternative approaches to problems. Prerequisites: Accuplacer level testing into CIS110G and ACM120G Technical Blueprint Reading with a grade of C or better. **All semesters**

**ACM255G Composites CNC Milling and Set-up Operator****4-4-6**

This hands-on course prepares students for jobs where they will successfully operate a milling machine on CNC FANUC and Siemens controller, under the direction of the CNC supervisor. Focus is on developing the skills needed to use computer numerical control (CNC) to run a milling machine efficiently and within required quality standards. Students will be introduced to Solidworks and Mastercam, will learn the basics of writing CNC code, and will set up and run CNC milling machines. They will maintain cutting tools dedicated to composite manufacturing and perform machine maintenance. Prerequisites: ACM210G with a C or better; or MANF112G with a C or better; either may be taken concurrently. **All semesters**

**ACM256G Composites Repair Technician****0-4-2**

This course provides students with the comprehensive theoretical and hands-on skills to detect, analyze, and repair damage of composites structures. Students will be introduced to different typical failures of composites. Failures modes will be explored. NDT methods such as tap testing and light refraction will be used to detect damage, and other NDT/NDI methods and equipment will be reviewed. Methodical deconstruction of laminates, core materials and substructures and the reconstruction of same will be taught. Selection of the right tools,

abrasives, dust extraction and work area protection will be practiced. Reading and interpreting laminate plies, fiber orientations, core materials, will be reviewed. Students will design and execute repair plans for different types of damage and bonding failures. The use of standard repair manuals, as well as structured reporting and documenting of repairs in accordance with ISO and other standards will be emphasized. Adherence to inspection and classification society rules will be covered. Finishing of repaired structures will be taught. Prerequisite ACM253G and ACM257G.

### **ACM257G High Performance Composites Fabrication**

**0-4-2**

This course will teach students to use all the customary materials, tools and equipment for the manufacturing of high performance composites. The course covers composites processes, materials, equipment and supplies. Fundamentals of mechanical behavior of composites are taught. Processes covered in classroom and hands-on settings will include vacuum bagging, resin infusion, wet prepping and prepreg lay-ups with ambient, oven and/or autoclave cures and post cures, as well as concepts of filament winding and compression molding. Students will be introduced to the importance of fiber orientation, compaction, flow behavior, accessory materials, and supplies for different processes. Basics of composite tool making, lost mold and bladder techniques will be reviewed. Prerequisite ACM253G may be taken concurrently.

### **ACM265G Multi Axis CNC Milling**

**2-4-4**

In this course, students will continue to develop their understanding of theory and machine tool processes in both classroom and hands-on work. After a review of basic 3 axis machinery, students will learn multi axis CNC machinery, including advanced tooling and problem solving. This course will cover the laws of physics pertaining to various rotational and linear forces. Students will demonstrate mathematics needed to successfully manufacture parts, and write advanced CNC code. They will develop increasingly complex projects using a variety of materials and maintain quality procedures. Focus will be on work related skills including problem solving, safety, ability to follow work instructions, and time management. Prerequisite: ACM255G. **Fall semester**

### **AHLT110G Medical Terminology**

**3-0-3**

This course is designed to provide the student with the ability to communicate in a professional, effective manner in a variety of healthcare settings. Through a realistic approach, the student will learn the basic rules for building and defining medical terms, the correct pronunciation and spelling of medical terms, and the application of medical terminology as it relates to each body system. The student is introduced to various types of medical records and reports encountered in the healthcare setting and provided with the necessary skills to read and interpret these reports. A variety of activities will guide the student in the application of medical terminology as it relates to the clinical world. **Fall semester**

### **AHLT112G Pathophysiology for Allied Health**

**3-2-4**

Pathophysiology is the branch of medicine which deals with any disturbances of body functions, caused by disease or the onset of symptoms. This is a one semester course that introduces the structure and function of the human body to the Allied Health student. It includes the anatomy and physiology of each of the organ systems of the human body and practical discussion of disease and health. Students will discuss and identify diseased tissue, the various mechanisms by which human disease develops, and the common disorders

involving each of the major body systems. Prerequisite: Placement at College Level Reading.

**Fall semester**

**AMER110G Introduction to American Studies**

**3-0-3**

This course is designed to introduce students to the topics, materials and methods attendant to an interdisciplinary study of American culture, identity, and experience. Students will develop their critical, writing, and reading skills through a focused inquiry into particular American moments, places, and ideas, and in doing so, begin to address some of the large questions around which American Studies are centered. (Fulfills Humanities requirement.)

**Fall semester**

**AMER210G American Studies Seminar**

**3-0-3**

This seminar is designed to provide a collaborative praxis in which, as a class, students formulate and develop interdisciplinary American Studies research topic/problem. Using the class work as a model, students will then personalize an individual interdisciplinary American Studies research topic/problem and complete that project with peer and advisor support. Though final demonstration of the projects may vary, the project requirements will include: a topic centered on a particular defining moment, idea, or element of American culture; research; critical thinking; communications skills; and the use of at least two methodologies.

**Spring semester**

**ANTH101G Introduction to Anthropology**

**3-0-3**

This course is designed to be an introductory college course in anthropology. The student will primarily be introduced to cultural anthropology, its key concepts, terminology, theories and research, with some introduction of physical anthropology and linguistics. The course is designed to nurture students to develop a broader scope of understanding and respect for human variation. Fulfills Social Science requirement. **All semesters**

**ANTH105G Introduction to Ethnography: The World of Work**

**4-0-4**

Ethnography of Work introduces students to anthropological perspectives and social science research methods as they investigate a range of careers. The course approaches work as a cultural system invested with meanings, norms, values, customs, behavioral expectations, and social hierarchies. Through ethnographic techniques, students evaluate the myths and stereotypes about work, as well as gain insight into how and why work matters to individuals. Work life is examined in the context of contemporary dynamics of disruption, uncertainty, innovation, and diversity. Assignments encourage students to draw connections between the Self and work so they are prepared to make informed decisions about majors and career paths. This course is a requirement for all students in the liberal arts program who have not selected a concentration or major. This course also fulfills a Social Science elective. **All semesters**

**ANTH202G Introduction to Archaeology**

**3-0-3**

An introductory course to the field of archaeology. The course covers a wide variety of concepts and topics relevant to contemporary archaeological practices. How artifacts are analyzed and how archaeological sites are interpreted are examined. The large variety of specialized subfields is also examined. Critical concepts regarding chronology, the application of scientific techniques, methodology and fieldwork are discussed. The course will delve into a variety of topics explored by archaeologists – human origins and ancestry, populating the

world, the prevalence of hunting & gathering subsistence strategies through time and across the globe. In addition, the course examines major changes in human development – the domestication of plants and animals, the transition to food production, “settling” down, the increase and concentration of populations along with ancient urbanization. We will scrutinize the archaeological evidence highlighting the formulation of social and cultural complexity, and evaluate archaeological interpretations recognizing past religion, trade & exchange, warfare, early writing, social stratification, political and economic systems. **Fall semester**

**ARTS103G Fundamentals of Acting I**

**4-0-4**

This course will introduce students to the fundamentals of the creative process of acting. It will focus on developing and training the actor’s instrument. Through structured exercises and performance projects, the student will develop skills in relaxation and concentration, voice and movement, and script analysis. Students will also acquire basic theatre terminology, sharpen their observation skills, and gain an understanding of the rehearsal process. The course will culminate in the final presentation of a scene from a contemporary play. **Fall or Spring semester**

**ARTS105G Intro to Music**

**3-0-3**

This course is an introduction to western music. The student will listen to, read about, and discuss music from a variety of time periods, genres, and styles. The course will include some history and literature, and exposure to basic elements of music, as well as form and instrumentation. Primary emphasis will be on developing critical listening skills. (Fulfills Humanities requirement.) **Fall semester**

**ARTS107G Blues, Jazz, and Rock and Roll**

**3-0-3**

This course will survey the three most important developments in America in popular music during the 20<sup>th</sup> Century: Blues, Jazz, and Rock and Roll. Emphasis will be on active listening to representative works, engagement with supporting film and textual materials, and historical and cultural context. Written responses, and attendance at live performances will be required. (Fulfills Humanities requirement.) **Fall semester**

**ARTS117G Art History I**

**3-0-3**

This course surveys the history of art and design in Western and non-Western traditions from prehistoric to the 14th century including the Gothic period in Europe. The course emphasizes the connections among historical, political, social, religious and artistic developments, showing how artists and designers are influenced by the culture and time in which they live. (Fulfills Humanities requirement.) **Fall/Summer semesters**

**ARTS123G Drawing I**

**2-3-3**

Various drawing media and techniques are explored in this course. Assignments are designed to build drawing observation skills necessary for visual communications. (Fulfills Fine Arts requirement.) **All semesters**

**ARTS124G Art, Design, and Color**

**2-3-3**

Through the hands-on exploration of traditional media, this course focuses on the principles of design and color theory as they are applied to 2D and 3D projects. The art elements of line, shape, form, space, and texture, as well as the design principles of balance, proportion, perspective, contrast, focal point, white space, unity, and color theory will be demonstrated

in the layout of real-world graphic communication projects. Students will experience the design process from brainstorming to presentation, as they develop an understanding of the challenges inherent in integrating exemplary design through visual media. **Spring semester**

### **ARTS125G Visual Language**

**3-0-3**

Communication occurs through visual symbols as well as through verbal symbols or language. Through the ages, art has served to record visual data through images and symbolism. Art also conveys intense emotion, is used as propaganda or social commentary, is interpreted through cultural and religious contexts, and functions as storytelling. This course examines the bridge between language and images by exploring the vocabulary of the elements and principles of design, the history and function of art criticism, the terms used to describe major art movements and periods in Western art history, and the terminology related to the methods, processes and materials used to create art. Using observation, reflection and critical thinking, students will analyze, discuss and write about visual art. Prerequisite: ENGL110. (Fulfills Humanities requirement.) **Fall semester**

### **ARTS126G Typography**

**2-3-3**

This course will emphasize the design of projects that explore typographical structures, their characteristics, terminology, layout considerations, and the use of typography as a communication medium. This course uses both computer and hands-on methods to address the language of type and its effective use as a design element. By studying the language of type through its history and application, students will gain strong working knowledge of this essential element to graphic design. **Fall semester**

### **ARTS127G Art History II**

**3-0-3**

This course surveys the history of art and design in Western and non-Western traditions from the 14th century in Europe to the Postmodern era up to the year 2000. The course emphasizes the connections among historical, political, social, religious and artistic developments, showing how artists and designers are influenced by the culture and time in which they live. (Fulfills Humanities requirement.) **Spring semester**

### **ARTS137G Contemporary Art History**

**3-0-3**

This survey course will cover the movements in Modern (1880-1960) and Contemporary (1960-Present) art history. The history of art, architecture and design in Western and non-Western traditions will be analyzed for aesthetic developments and alignment to the corresponding historical, political, social and religious issues of the day. Emphasis will be on how artists define the culture and time in which they live, and the influence these movements have on artists of the present day. (Fulfills Humanities requirement.) **Fall semester**

### **ARTS203G Fundamentals of Acting II**

**4-0-4**

This course will build on the foundational skills developed in Fundamentals of Acting I. Through structured exercises and intense scene study, the student will develop skills in script analysis, scoring a role, partner work, voice and movement, and basic audition technique. Students will apply their skills in several performance projects. Prerequisite: ARTS103G or Permission of Instructor PERMXXXG.



**ARTS220G Painting I****2-3-3**

This course is an introduction to the processes of painting through the investigation of materials, theories and techniques. This course will explore painting media with an emphasis of color theory, color mixing, composition and paint application on a variety of surfaces. The focus will be on creative approaches to painting and observational work. Historical and contemporary aesthetic issues will be explored through assignments, slide lectures, discussions, critiques and museum/gallery visits. Prerequisite: ARTS123G or permission from the Program Coordinator. **Spring semester**

**ARTS223G Drawing II****2-3-3**

Students will continue developing drawing skills based on the knowledge and training acquired in Drawing I. More complex still-life, portrait, and life figure drawing will be created in classes. Further investigation of drawing materials and an introduction to more mediums will also be covered in this course. Prerequisite: ARTS123G. (Fulfills Fine Arts requirement.) **Spring semester**

**ARTS225G Watercolor Painting****2-3-3**

Through the exploration of traditional artist watercolor techniques, students will learn and apply watercolor processes, procedures and techniques to selected compositions and motifs such as landscapes, floral arrangements, skies, still life, seascape and abstraction. Techniques will include washes, color mixing, brush technique, masking, sponging, wet on wet and mixed media. Students will work from life when practical, learning composition, atmospheric perspective and color theory. Prerequisite: ARTS123G or ARTS124G or Permission of Instructor PERMXXXG. **Fall semester**

**ARTS230G Introduction to Printmaking****2-3-3**

This course provides an introduction to a variety of printmaking techniques including monotype, relief and intaglio processes. Students will create one of a kind prints and projects through the exploration of printmaking strategies and sequences while creatively and objectively addressing the historical and contemporary issues of the art form. Students will gain skills necessary to produce and evaluate aesthetic solutions for a variety of printmaking methods. Prerequisite: ARTS123G or permission from the Program Coordinator. **Fall semester**

**ARTS235G Sculpture and 3D Form****2-3-3**

This course is an introduction to the theory and practice of creating three dimensional forms and sculptures. Through the manipulation of various materials, the student will investigate the composition and processes necessary to construct free-standing, suspended and relief sculpture. Students will employ modeling, carving, casting and construction methods to create original sculptural works. The three dimensional elements of line, plane, surface, volume, mass and space will be utilized to create abstract and functional forms. Prerequisite: ARTS123G or ARTS124G. **Spring semester**

**ASL110G American Sign Language I****3-0-3**

This is an introductory course that provides non-native signers with the opportunity to study American Sign Language. Emphasis will be on the development of visual receptive and expressive skills necessary for effective communication with deaf and hard-of-hearing individuals. Through a variety of classroom experiences, students will learn to recognize and

produce both manual and non-manual behaviors that reflect an understanding of the language's grammatical, semantic, spatial, and cultural frameworks. (Fulfills Foreign Language requirement.) **Fall/Spring semesters**

### **ASL120G American Sign Language II**

**3-0-3**

Builds on the skills developed in American Sign Language I. Participants will be introduced to more advanced vocabulary and grammatical features inherent in the language of ASL. Emphasis is on conversational fluency. Students will also explore the historical and cultural evolution of ASL through a variety of learning mediums. Prerequisite: ASL110G. (Fulfills Foreign Language requirement.) **Spring semester**

### **AUTO110G Automotive Maintenance and Light Repair**

**2-4-4**

The Maintenance and Light Repair course prepares students for entry into the automotive repair industry. Students explore career opportunities and requirements of a professional service technician. Content emphasizes beginning transportation service skills and workplace success skills. Students study safety, tools, equipment, shop operations, vehicle service fundamentals, and basic technician skills. Instruction will incorporate hands-on lab work, discussion, demonstration, lecture, and assigned readings. Upon completion of the Maintenance and Light Repair course students will be eligible to take the MLR ASE Student Certification Exam. **Fall semester**

### **AUTO120G Automotive Engines (Mechanical)**

**2-6-4**

This course provides a comprehensive study of the theory, construction, design, and repair of the internal combustion engine. Topics discussed include engine classification, power and torque development, engine power-efficiency tests, engine performance parameters, and mechanical design and failure analysis. The mathematical solution of performance characteristics is demonstrated. Alternative engines and fuels are also discussed. The lab reinforces the lecture by providing engine mechanical diagnostic procedures, repair and overhaul procedures. System problem diagnosis and component failure analysis are continually stressed. Co-requisite: AUTO110G. **Spring semester**

### **AUTO125G Automotive Electronics I**

**3-3-4**

This course will introduce the student to general vehicle electrical and electronic principles, theory, and components. Topics include Ohm's Law, circuit analysis, basic circuits, diodes, transistors, relays, and solenoids. The lab will use electrical test equipment to analyze and troubleshoot basic electrical circuits including warning systems, electrical accessories, battery, starting, and charging systems. Co-requisite: AUTO110G. **Fall semester**

### **AUTO130G Automotive Electronics II**

**2-4-4**

Electricity/Electronics II. This course builds on the material covered in Electrical/Electronics I and includes communication and networking, body control systems, security systems, occupant safety systems, entertainment and audio systems and driver information and navigation systems. Students will practice diagnosis and repair using scan tools, oscilloscopes and multi-meters. Prerequisites: AUTO110G Automotive Maintenance and Light Repair with a C or better; and AUTO125G Automotive Electronics I with a C or better. **Spring semester**

**AUTO140G Braking Systems****2-4-4**

This course covers diagnosing, evaluating and servicing base brake systems, parking brake systems, anti-lock brake systems, and traction control systems. Students will machine drums and rotors using both on-car and off-car lathes, diagnose, evaluate and repair using pressure gauges, measuring tools, scan tools, oscilloscopes and multi-meters, and demonstrate safe use of all tools and equipment used in the course. Prerequisites: AUTO110G with a C or better.

**Summer semester****AUTO150G Suspension and Steering****2-6-4**

In this course students will diagnose, evaluate, repair and document steering and suspension systems, including both base and electronically controlled systems. They will replace steering and suspension components, practice 2 wheel and 4 wheel alignment, and document their work. Prerequisites: AUTO110G with a C or better. **Summer semester**

**AVTN150G Private Pilot I Ground****3-0-3**

This course provides the student pilot with the knowledge necessary to understand the basic forces and aerodynamics that act on a helicopter in flight. Instruction will be provided that covers stability and control, helicopter systems, basic flight maneuvers, regulations and emergency and hazardous conditions. This course also provides an introduction to the flight planning and aeronautical chart use. Prerequisite: Admission to the Aviation Technology Helicopter Program. Co-requisite: AVTN151G.

**AVTN151G Private Pilot I Flight****0-8-4**

This course provides the student pilot with the basic flight instruction necessary to safely control a helicopter in solo flight. Instruction will be provided that covers preflight inspections, taxiing, basic flight elements (straight and level, turns, climbs and descents), hovering, autorotation, use of sectional charts, airspace, collision avoidance, emergencies and steep turns. Prerequisite: Admission to the Aviation Technology Helicopter Program. Co-requisite: AVTN150G.

**AVTN160G Private Pilot II Ground****3-0-3**

This course provides the student pilot with the basic knowledge necessary to pass the FAA written knowledge exam for Private Pilot. It includes instruction in cross country flying, range calculations, navigation, aeromedical factors, night flying, flight planning, radio navigation and enroute navigation. Prerequisite: AVTN150G/152G or higher. Co-requisite: AVTN161G.

**AVTN161G Private Pilot II Flight****0-8-4**

This course provides the student pilot with the flight instruction necessary to perform cross-country maneuvers. The student will learn cross-country flight planning as well as receive the required dual and solo cross-country flight instruction required for the FAA Private Pilot certificate. Prerequisite: AVTN151G and MATH150G/152G or higher. Co-requisite: AVTN160G.

**AVTN170G Instrument Pilot Ground****3-0-3**

This course provides the student pilot with the ground instruction necessary to perform helicopter operations and maneuvers with reference solely to instruments. Upon successful completion of this course, the student will have successfully passed the FAA written knowledge exam for the Rotorcraft Instrument Rating. Prerequisite: AVTN160G. Co-requisite: AVTN171G.

**AVTN171G Instrument Pilot Flight****0-8-4**

This course provides the student pilot with the flight instruction necessary to control a helicopter in flight with reference solely to instruments. Instruction will be provided that covers instrument flight in straight-and-level, climbs, descents, acceleration, turns, steep turns, unusual attitudes, approaches, landings, holding, go-arounds, emergencies/loss of instruments, collision avoidance and cross-country navigation. Prerequisite: AVTN161G. Co-requisite: AVTN170G.

**AVTN250G Commercial Pilot Ground****3-0-3**

This course provides the student pilot with the ground instruction necessary to perform helicopter operations and maneuvers at the commercial level. The Student will receive instruction in systems, instruments, aerodynamics, performance and limitations, weight and balance, FARs, ADM and CRM. Upon successful completion of this course, the student will have successfully passed the FAA written knowledge exam for the Rotorcraft Commercial Rating. Prerequisite: AVTN170G. Co-requisites: AVTN251G and PHYS135G.

**AVTN251G Commercial Pilot Flight****0-10-5**

This course provides the student pilot with a review of the required private pilot helicopter maneuvers and improves precision of those maneuvers to the level necessary to meet FAA Commercial Pilot certification standards. Instruction is also provided in precision hovering, precision autorotations and simulated emergencies. Student also completes required instrument, cross-country and solo night flights. Prerequisite: AVTN171G. Co-requisites: AVTN250G and PHYS135G.

**AVTN252G Certified Flight Instructor Ground****1.5-0-1.5**

This course provides the student pilot with the ground instruction necessary to instruct helicopter operations and maneuvers up to and including at the commercial level. The Student will also create and assemble a complete lesson plan curriculum notebook for Private, Instrument and Commercial certification which will serve as an instruction tool once they begin work as a flight instructor. In Stage 2, the student will create lesson plans and present them in an instructor's role. Upon successful completion of this course, the student will have successfully passed the FAA written knowledge exam for the CFI Rotorcraft/Helicopter Rating. Prerequisite: AVTN 250G. Co-requisite: AVNT253G.

**AVTN253G Certified Flight Instructor Flight****0-4-2**

This course provides the student pilot with a review of helicopter maneuvers required of a commercial level pilot, precision hovering, precision auto rotations, simulated emergencies, cross-country flight and night flight. The course then teaches the students methods of teaching these skills and allows the student to demonstrate their ability to control the aircraft while teaching students to master these skills. Prerequisite: AVTN 251G. Co-requisite: AVNT252G.

**AVTN254G Certified Flight Instructor Instrument Ground****1.5-0-1.5**

This course provides the student pilot with the ground instruction necessary to instruct helicopter operations and maneuvers up to and including at the commercial and instrument level. The student will also create a complete lesson plan curriculum notebook for Private, Instrument and Commercial certification which will serve as an instruction tool once they begin work as a flight instructor. The student will create lesson plans and present them in an

instructor's role. Upon successful completion of this course, the student will have successfully passed the FAA written knowledge exam for the CFII Rotorcraft/Helicopter rating. Prerequisite: AVTN 252G. Co-requisite: AVNT255G.

**AVTN255G Certified Flight Instructor Instrument Flight** **0-4-2**

This course provides the student pilot with a review of helicopter maneuvers required of an instrument rated pilot to include attitude flying approach procedures and techniques, holding patterns, IFR cross country and inflight emergencies. The course then teaches the students methods of teaching these skills and allows the student to demonstrate their ability to control the aircraft while teaching students to master these skills. Prerequisite: AVTN 253G. Co-requisite: AVNT254G.

**BIOL041G Developmental Biology** **3-0-3**

This course will cover the main points of biology at the high school level. It is meant to replace or supplement students' background in biology if those students either never passed high school biology, or if they took the course too long ago to be prepared for further study of the life sciences. The course will give an overview of cell biology, the biology of organisms, and the biology of populations. These credits do not count toward graduation requirements.

**Fall/Spring semesters**

**BIOL101G Human Disease** **3-2-4**

This course covers basic microbiology and immunology and is a non-science-majors' course. It provides an introduction to historical concepts of the nature of microorganisms, microbial diversity, the importance of microorganisms in the biosphere, and their roles in human and animal diseases. Emphasis is on medical microbiology, infectious diseases, and public health. The lab covers the basics of culture and identification of bacteria as well as microbial ecology. Prerequisite: Successful completion of high school biology or BIOL041G.

**Fall/Spring semesters**

**BIOL106G The Human Body** **3-2-4**

This is a one-semester course that introduces the structure and function of the human body. It includes the anatomy and physiology of each of the organ systems of the human body and practical discussions of disease and health. The course includes a series of laboratory experiences designed to enhance and reinforce the concepts presented in lecture.

**Fall/Spring semesters**

**BIOL108G General Biology I** **3-3-4**

This college-level course covers the principles of cell biology, including cellular physiology, cellular metabolism, molecular biology, biochemistry and genetics. Laboratory exercises are designed to reinforce theoretical concepts presented in the lecture portion of the course. Prerequisite: Successful completion of high school biology or BIOL041G; successful completion of high school chemistry or CHEM043G is recommended but not required.

**Fall/Spring semesters**

**BIOL109G General Biology II** **3-3-4**

This college-level course covers principles of organismal biology, including comparative physiology, taxonomy, behavior, evolution and ecology. Laboratory exercises are designed to reinforce theoretical concepts presented in the lecture portion of the course. Students need

not have taken Biology I in order to enroll in Biology II. Prerequisite: Successful completion of high school biology or BIOL041G; successful completion of high school chemistry or CHEM043G is recommended but not required. **Fall/Spring semesters**

**BIOL110G Human Anatomy and Physiology I** **3-3-4**

This course is designed to give a student of any health or medical science a thorough background in anatomy and physiology. Current, in-depth information is presented on the structure and function of human cells, tissues and organ systems, including the skin, skeletal, muscular, nervous and sensory systems. Laboratory work augments lecture topics and includes exercises in microscopy, the study of fresh and preserved specimens, and exercises in human physiology. Prerequisites: Placement into college-level reading; C or better in high school biology or BIOL041G; successful completion of high school chemistry or CHEM043G recommended. **Fall/Spring semesters**

**BIOL111G Veterinary Anatomy and Physiology I** **3-3-4**

This course offers an in-depth study of the normal anatomy and physiology of domestic mammals with emphasis on the dog and cat. Major differences with respect to the larger domestic species are also covered. This is the first semester of a two semester course and covers basic organization, cells, tissues, the integument, skeletal, muscular, and nervous systems. Lab work augments lecture topics and includes the study of microscope slides as well as preserved specimens and models. Prerequisite: Admission to the Veterinary Technology program. **Fall semester**

**BIOL120G Human Anatomy and Physiology II** **3-3-4**

A continuation of Human Anatomy and Physiology I. This course includes current in-depth information of the structure and function of the endocrine, digestive, respiratory, blood, cardiovascular, lymphatic, urinary, and reproductive systems. Laboratory work augments lecture topics and includes exercises in microscopy, the study of fresh and preserved specimens, and physiological measurements on the human body. Prerequisite: C or better in BIOL110G. **Fall/Spring semesters**

**BIOL121G Veterinary A&P II** **3-3-4**

This course offers an in-depth study of the normal anatomy and physiology of domestic mammals with emphasis on the dog and cat. Major differences with respect to the larger domestic species are also covered. This course is a continuation of BIOL111G and covers the endocrine, reproductive, cardiovascular, respiratory, urinary, and digestive systems. Lab work augments lecture topics and includes the study of microscope slides as well as preserved specimens and models. Prerequisite: C+ or better in BIOL111G and VETN110G. **Spring semester**

**BIOL150G Nutrition** **3-2-4**

Biology 150G (Nutrition) is a course designed to offer students an understanding of the science of nutrition so that they can make healthy food choices in their daily lives. The processes of digestion, absorption, and transport of the macro- and micronutrients in the body will be studied. The function and sources of the major nutrients including carbohydrates, lipids, protein, vitamins, minerals and water will be analyzed. Also, the following will be discussed: energy balance, nutrition throughout the life cycle, sports nutrition, environmental food issues, hunger, food safety, and nutrition therapy for medical problems including

cardiovascular disease, cancer and diabetes. Each week selected activities, worksheets, and assignments will be completed. These are designed to engage and encourage students to apply what they are learning in lecture, in practical and personal contexts. Students will have the opportunity to work in formal Cooperative Learning Groups to complete the assignment in lab. The intent of group activity is to foster the learning of each member of the group from other members. The class will also engage in discussion on weekly topics. **Fall/Spring semesters**

**BIOL160G Introduction to Environmental Science** **3-3-4**

This course is designed to present the basics of environmental science and will focus on the earth as a living planet. Topics covered include: principles of ecology, human population effects, natural resource needs and management, energy resources, pollution/prevention issues, and sustainability. Although primarily a science course, ethical issues related to the above topics will also be explored. Lab exercises are designed to reinforce the material presented in the lecture. **All semesters**

**BIOL210G Microbiology** **3-3-4**

An introduction to the principles and practices of microbiology. Topics covered include: the nature and behavior of microorganisms; principles of growth and reproduction of microorganisms; identification of microorganisms using staining, pure culture, biochemical and antigenic techniques; and the epidemiology, clinical features, laboratory diagnosis and appropriate control measure for microbial diseases caused by viruses, bacteria, fungi, protozoa and helminthes. Prerequisite: C or better in BIOL108G or C or better in BIOL110G or Permission of Department Chair. **Fall/Spring semesters**

**BIOL220G Principles of Genetics** **3-3-4**

This course covers fundamentals of classical, molecular and population genetics. Topics include: chemical structure of the genetic material, Mendelian theory, gene recombination, chromosome mapping, genetic mutation, gene expression and regulation, applications of recombinant DNA technology, quantitative inheritance and the genetic basis of evolution. Laboratory exercises are designed to reinforce theoretical concepts presented in the lecture portion of the course. Prerequisites: BIOL108G and C- or better in MATH150G/152G (or higher level math class). **Spring semester**

**BIOL230G General Ecology** **3-3-4**

This course is for students who have already had some introduction to organismal biology. It focuses on physical and biological factors affecting distribution, abundance and adaptation of living organisms. Laboratory exercises emphasize fieldwork when possible, and are designed to reinforce the theoretical material presented in lecture. Prerequisites: BIOL109G and C- or better in MATH150G/152G (or higher level math course). **Fall semester**

**BTEC105G Introduction to Biotechnology** **3-3-4**

This course is designed to introduce students to the tools and applications of genetic engineering, as well as the ethical issues that these technologies raise. No prior experience is assumed. Students will acquire basic laboratory skills in such areas as solution preparation, but will also have a chance to experiment with techniques such as DNA isolation, DNA manipulation, and molecular cloning. Students will gain an understanding of how the biotechnology industry operates, and will also learn about options for careers and further

education in biotechnology. Prerequisites: Successful completion of high school biology or BIOL 041G. Co-requisite: MATH145G/147G or MATH150G/152G or higher. **Fall/Spring semesters**

### **BTEC205G Bioethics**

**3-0-3**

Biotechnology is any technique that uses living organisms (or parts of organisms) to make or modify products to improve plants and animals or to develop microorganisms for specific uses. This course will address the sociological, ethical, and legal issues arising from biotechnology. This new field is known as bioethics. During the first four weeks of the course, students will develop a tool kit based on sociological, ethical, and legal thought. During the remainder of the course, students will read bioethical cases, analyze them as to their social, ethical, and legal implications, and argue their opinions as they apply these tools to answer bioethical questions. **Fall/Spring semesters**

### **BTEC210G Biotechnology Research**

**2-6-4**

The first of two experiential, cornerstone courses in Biotechnology. The course begins by introducing the student to the field of biotechnology, the role of the technician in biotechnology, and GLP or good laboratory practices. The remainder of the course is a hands-on exposure to biotechnology research tools and protocols used for DNA isolation, gene mapping, DNA fingerprinting, gene cloning, gene expression regulation, protein identification, mRNA isolation, cDNA synthesis from mRNA, the production of gene libraries, and gene sequencing. A two-hour-per-week lecture provides the knowledge base of biotechnology research. Prerequisites: BTEC105G, BIOL108G (or BIOL210G), CHEM115G (or CHEM110G), and MATH145G/MATH147G or MATH150G/152G or higher. Exceptions by permission of department chair only. **Fall semester**

### **BTEC220G Biomanufacturing**

**2-6-4**

The second of two experiential, cornerstone courses in Biotechnology. The course begins by introducing the student to the proteins and companies of biotechnology and to cGMP or current good manufacturing practices. In the remainder of the course, students use bacterial, mammalian, and yeast cells to produce human proteins using tools and manufacturing standard operating procedures of biotechnology, including upstream and downstream processing of proteins and quality control of protein production. A two-hour-per-week lecture provides the knowledge base of biotechnology manufacturing. Prerequisite: C- or better in BTEC210G. Exceptions by permission of department chair only. **Fall/Spring semesters**

### **BTEC223G Biotechnology Externship**

**0-9-3**

This optional externship, consisting of 144 hours of experience in an area of biotechnology, is extended to students who want more exposure to biotechnology before seeking employment. Arrangements are made on an individual basis. Prerequisites: BTEC210G, BTEC220G.

### **BUS110G Introduction to Business**

**3-0-3**

This is an introductory course designed to provide students with a basic understanding of the structures and operations of business and an awareness of social and ethical responsibility as it relates to the environment, consumers, employees, and investors. An appreciation of the global economy will also be explored. **All semesters**



**BUS114G Management****3-0-3**

The principles and techniques underlying the successful organization and management of business activities. This course combines the traditional analysis of management principles with the behavior approach. The management functions of planning, organizing, leadership, staffing, decision-making, communicating, and motivating and controlling will be stressed. Additionally, the impact of technology on management functions and implementation processes, especially information technology, will be examined. **All semesters**

**BUS116G Organizational Behavior****3-0-3**

This course develops basic understanding of organizational behavior. The human relations approach is stressed. It includes management philosophy, the organizational climate, motivation, leadership and management, supervision, communication, group participation and other forces in the work environment. Students learn techniques for becoming more effective managers, subordinates, peers or people. Prerequisite: BUS114G. **Fall/Spring semesters**

**BUS155G Retailing Management****3-0-3**

This course studies the principles of retailing with emphasis on the development of retail institutions, merchandising, pricing, and contemporary problems of retailers in today's business environment. Prerequisite or Co-requisite: MKTG101G.

**BUS200G Teambuilding****3-0-3**

This course will introduce and expand upon the basic principles and concepts of team building and self-directed work teams as they pertain to the workplace environment. Through the use of lecture and workshop-type group exercises, the key concepts of how teamwork can influence and benefit the workplace will be explored. **Fall/Spring semesters**

**BUS205G Small Business Management****3-0-3**

This course covers key concepts and skills critical to successfully launching, developing and managing a small business. A primary focus will be how to use the concepts. Prerequisite or Co-requisite: BUS114G. **Spring semester**

**BUS208G Leadership Theory & Practice****3-0-3**

Leadership Theory & Practice presents critical leadership and management concepts that have emerged over several decades, with emphasis on contemporary leadership theory. Students will apply theories of leadership through case analysis and enhance personal leadership skills through self-assessment exercises and other activities. Included in the course are recognition of significant leaders, understanding of research findings on critical leadership attributes, and contemporary perspectives on leadership ethics, networking, coaching, organizational culture, diversity, learning organizations, strategic leadership, and crisis leadership. The aim of the course is to help students develop as effective leaders in contexts where they currently serve, and for contexts to which they aspire. Leadership Theory & Practice reflects a belief that leadership involves moral and ethical dimensions, that effective leadership equals good leadership, and that leadership includes service to others, authenticity, and integrity. Prerequisite: BUS110G or permission of Dept. Chair. **Fall/Spring semesters**

**BUS209G Principles of Global Business****3-0-3**

Principles of Global Business provides students with a practical, comprehensive foundation in international business topics. Students will gain an understanding of how globalization influences international trade and learn about the complexities of a global supply chain.

Students will discover what it means to open and run in a business in China, Brazil, or the Middle East. Students will acquire practical knowledge of the international monetary system and learn about the cultural and legal factors affecting international product development, distribution channels, sales, and promotion. The course will help prepare students for careers working in the context of multinational organizations and illustrate in depth how business is conducted outside the United States. Prerequisite: BUS110G. **Fall/Spring semesters**

**BUS210G Organizational Communications** **3-0-3**

Effective communication is the lifeblood of the organization; it is also the foundation of a successful business career. This course will focus on the methods and techniques necessary to utilize facts and inferences, understand communication strategies, create logical presentations, and develop critical skills in listening, speaking, and writing. Students will also gain an understanding of nonverbal, visual, and mass communication. **All semesters**

**BUS211G Business Law** **3-0-3**

Based on student input at the start of the course, the course will encompass some of the common topics in criminal and civil law. Likely areas to be taught and discussed include civil and criminal justice systems, contracts, consumer protection, real and personal property, insurance, employment, and wills. **Fall/Spring semesters**

**BUS214G Entrepreneurship** **3-0-3**

This course will focus on all aspects of starting a business: selecting promising ideas, initiating new ventures, and obtaining initial financing. The course will also concentrate on how ventures are begun, how venture ideas and other key ingredients for start-ups are derived, and how to evaluate new venture proposals. The course will also explore business plan development, legal and tax considerations. Prerequisites: BUS205G and MKTG101G.

**BUS220G Operations Management** **3-0-3**

Operations Management focuses on the relationship of the production and operations functions of delivering products or services to the achievement of an organization's strategic plan and linking the organization to its customers. Students integrate forecasting, materials management, planning, scheduling, process, operations control skills and techniques with approaches and tools such as Total Quality, Statistical Process Control, Continuous Improvement, Demand Flow and Just- In-Time production systems.

**BUS221G Business Finance** **3-0-3**

This course is designed to survey the corporate finance discipline, to examine the financial management of corporations, to develop skills necessary for financial decision making, financial forecasting, ratio evaluation, and to acquaint students with money, capital markets, and institutions. Prerequisite: ACCT113G and ACCT123G. **Fall/Spring semesters**

**BUS224G Human Resource Management** **3-0-3**

This course is designed to provide fundamental presentation of the dynamics of human resource management. Emphasis is placed on job design and development, employment training, benefits administration, compensation, and employee relations. **Fall/Spring semesters**

**BUS231G Self-Assessment** **1-0-1**

This course, offered as a seminar or in an online structure, is designed to allow students to assess their strengths and weaknesses and to enlighten students on what types of organizational culture is most conducive to personal growth.

**BUS282G Capstone Research** **3-0-3**

This course will be taught from the viewpoint of the person who conducts market research with a concentration on techniques and processes required to conduct quality research studies. Topics include questionnaire development, sampling techniques, data-collection methods, and survey errors. Application of concepts through primary data coupled with secondary data through a market research project. This course must be taken in the student's final semester. Prerequisite: MKTG101G.

**BUS291G Internship** **0-9-3**

A course designed to provide comprehensive experience in application of knowledge learned in previous coursework. Students will select a site and will work as a supervised intern. This course will be among the last in a student's program. **All semesters**

**CHEM043G Developmental Chemistry** **3-0-3**

This high school-level course in chemistry examines the structure of matter and the nature of chemical reactions. Particular attention will be given to the types of reactions that apply to the health field. These credits do not count toward graduation requirements. **Fall/Spring semesters**

**CHEM110G Introduction to Chemistry** **3-3-4**

This introductory course covers the fundamental principles of chemistry including measurements, atomic structure, periodic trends, names and formulas of compounds, chemical reactions and bonds, acids, bases and solutions: stoichiometry, gas laws, and radiation chemistry. It is designed for students who have had no instruction or limited instruction in chemistry. The course is for the student whose chemistry requirements will have been fulfilled upon completion of this course. It satisfies the needs of the health sciences and related fields as well as the needs for the student who is preparing for further study in chemistry. Co-requisite: MATH145G/147G or MATH150G/152G, or sufficient Placement Scores. This course is not intended to be a prerequisite for CHEM115G.

**Fall/Spring semesters**

**CHEM115G General Chemistry I** **3-3-4**

The objective of the chemistry course is to introduce the student to the principles of chemistry included in the first semester of a two-semester chemistry course. The course will include topics such as components of matter, stoichiometry, chemical reactions, gas and kinetic-molecular theory, thermochemistry, quantum theory and atomic structure, chemical periodicity, chemical bonding, and molecular geometry. Principles taught in lectures will be reinforced in laboratory experiments. Corequisite: CHEM043G or High School Chemistry (or CHEM110G) and MATH145G/147G or MATH150G/152G, or sufficient Placement Scores.

**Fall/Spring semesters**

**CHEM116G General Chemistry II** **3-3-4**

This general chemistry course is designed to introduce the student to the principles of chemistry included in the second semester of a two-semester chemistry course. This course will include topics such as intermolecular forces, properties of solutions, kinetics, chemical

equilibrium, acid-base equilibrium, electrochemistry, and thermodynamics. Prerequisites: MATH150G/152G or higher or permission of department chair and CHEM115G (C or better).

**Fall/Spring semesters**

**CHEM200G Organic Chemistry** **3-3-4**

This course will provide an introduction to the properties and reactions of hydrocarbons and their oxygen and nitrogen derivatives. Special emphasis will be placed on the application in biotechnology and related fields. Laboratory experiments will reinforce class lecture where possible. Prerequisites: CHEM115G (C or better) and CHEM116G (C or better). **Fall semester**

**CHEM205G Biochemistry** **3-3-4**

This comprehensive, introductory level class emphasizes cellular metabolism, and covers the structure and function of the four major classes of biological macromolecules: proteins, nucleic acids, carbohydrates, and lipids. Laboratory exercises will reinforce theoretical concepts presented in the lecture portion of the course. Prerequisites: BIOL108G, CHEM115G (C or better), and CHEM116G (C or better). **Spring semester**

**CIS107G Essentials of Computer Literacy** **2-4-4**

This course is designed for students with little or no computer skills or for those who are interested in refreshing their computer knowledge. Students will use a fully integrated, hands-on approach to understand the essential components of computer technology. Students will identify the major hardware and software components of a computer, gain proficiency in the Windows operating system environment, and learn how to manage files and folders. Students will also learn the essential elements of Office Application Software including word processing, spreadsheets, presentation software, and database applications. In addition, students explore and use the Internet for research, while evaluating electronic information, safeguarding data, and properly using email. Students will also learn the terms and skills needed in today's computer literate society. Prerequisite: Placement Testing. Students cannot receive credit for both CIS107G and CIS110G.

**CIS110G Introduction to Computers** **2-2-3**

In this foundation course to gain computer literacy, students will use a fully integrated, hands-on approach to understand the critical components of computer technology. Students will examine personal computer hardware and software components, gain proficiency in the Windows operating system environment, and learn the fundamental elements of Office Application Software including word processing, spreadsheets, presentation software, and database applications. Students will also explore various facets of the Internet including using the Internet for research, working with online learning tools, evaluating electronic information, safeguarding data, proper use of email, and other current web technologies. Prerequisite: Placement Testing. Students cannot receive credit for both CIS107G and CIS110G.

**CIS111G Computer Technologies** **2-2-3**

The purpose of this course is to provide students with the fundamental background and understanding of various critical components of computer technology. A required course for all computer majors, this foundation course provides students with a firm foundation in computer technology including: hardware components, software applications, processors, memory management, secondary storage, file management, operating systems, networking

essentials, ethics, and emerging technologies. Students will also explore various ethical issues surrounding the use of digital information, as well as the impact of technology on business and society. Prerequisite: CIS110G or CIS107G or permission of Instructor.

**CIS112G Introduction to Object Oriented Programming** **2-2-3**

This course will emphasize systems thinking as an approach to solving computer problems and understanding formal logic. Programming theory and logic will be presented with hands-on practice in model environments, while students are provided with essential problem-solving methods, techniques, and disciplines. Control flow, data manipulation, and planning methods will be emphasized. Students will develop confidence in applying programming solutions, will be exposed to pertinent terminology, and will learn the effective use of reference materials. Prerequisite: CIS107G or higher.

**CIS113G Database Design and Management** **2-2-3**

This course is an introduction to database analysis, planning, designing, and implementation with emphasis on the relational model. Students will study the theory behind relational databases, relational database nomenclature, and relational concepts. The course will include studying Structured Query Language (SQL) and optimizing databases through normalization. Students will apply their knowledge with hands-on exercises designed to teach the intricacies of database design methodology. A final project will conclude the course. Prerequisite: CIS110G or CIS107G.

**CIS118G Introduction to .NET** **2-2-3**

This course will provide students with an understanding of structured, procedural, and event-driven programming. Students will develop techniques for problem solving through the application of programming methods and will gain experience in the nuts-and-bolts of program design as they complete lab work and assignments. Students will learn to use the Visual Basic .NET language and programming environment. Prerequisite: CIS112G.

**CIS124G Web Development I** **2-2-3**

In this course, students will gain knowledge of the web site development process and learn how to develop web pages using XHTML standards. Through the use of different text editors and validation programs, students will study in detail XHTML syntax and will develop well-formed and valid web pages. Students will also incorporate text, graphical, and form components into web pages and will use text formatting, tables, and CSS for page layout and site design. Prerequisite: CIS110G, CIS111G, or CIS107G or permission of instructor.

**CIS134G Web Style and Design** **2-2-3**

Students will learn the basic layout and imaging skills for attractive, informative, and entertaining Web pages. Course topics include information architecture, site design, layout, type, color, scanning, image manipulation and formats, copyrights, element integration, and compatibility issues with multiple browsers. Current software specific to Web publishing will be utilized. Prerequisites: DGMT115G, CIS124G.

**CIS146G Linux I** **2-2-3**

The purpose of this course is to provide students with the fundamental skills needed to work in a Linux environment. A recent version of the popular public domain operating system Linux will be used as a vehicle for course delivery. Topics to be covered include the file system, file

management, text editors, running and creating shell scripts, Xwindows, and basic system administration. Installing the Linux operating system and networking issues will also be discussed. Prerequisite: CIS112G.

**CIS148G Introduction to Java Programming** **2-2-3**

The purpose of this course is to provide a solid foundation in the Java programming language. Program planning, object oriented design, and Java language syntax will be emphasized. This course will prepare students for advanced study of the Java language as well as introduce students in other fields of computer study to general object programming. Prerequisite: CIS112G.

**CIS149G Linux Applications** **2-2-3**

In this course, students will explore the various common business applications available to run on Linux. This includes Star Office, Open Office, Evolution, Mozilla, Gimp, and many other useful, open-source programs which are generally available free from sources on the Internet.

**CIS154G Comprehensive Business Computer Applications** **2-4-4**

The main focus of this course is on the business applications of software, including word processing, spreadsheets, databases, presentations, and business utilization of the internet and email. This course will also provide a comprehensive overview of computer terminology, hardware, and operating systems relative to the business environment. Through a project-based approach, students will learn advanced concepts and functions of business application software. To become more efficient and effective, students will solve real-world office technology problems using integrated software applications. Students will be able to manage customers and sales opportunities more effectively, create impressive sales and marketing materials in-house, manage email, and share information more efficiently using Microsoft Office and other productivity applications. This course is well-suited to those students who know the fundamentals of Microsoft Office, yet need additional instruction to become thoroughly knowledgeable and experienced in its many applications. \*\*This course may be used in place of CIS156 to meet Business, Hospitality and Accounting Program requirements. (Students cannot receive credit for both CIS154G and CIS156G.) Prerequisite: Placement Testing or permission of instructor.

**CIS156G Computer Applications in Business** **2-2-3**

This course stresses project planning using technology, aiming to provide professionals the ability to meet the challenges of business. Through a project-based approach, students will learn advanced concepts and functions of business application software. To become more efficient and effective, students will successfully solve real-world office technology problems using integrated software applications. Students will be able to manage customers and sales opportunities more effectively, create impressive sales and marketing materials in-house, manage email, and share information more efficiently using Microsoft Office. This course is well suited to those students who know the basics of Microsoft Office and need to become thoroughly knowledgeable and experienced in its many applications. Prerequisite: CIS110G or CIS107G.

**CIS158G Introduction to C++** **2-2-3**

This course introduces students to the fundamentals of structured programming and to the procedural aspects of the C++ programming language. Students will create programs to

demonstrate the topics of program control, functions, arrays, and pointers. Microsoft's Visual C++ will be used as the primary development tool; however, other environments may also be utilized. Emphasis will be placed on the creation of platform-independent applications in order to allow students to become familiar with the core features of the C++ language. Prerequisite: CIS112G.

### **CIS177G Introduction to Python**

**2-2-3**

This course will provide a gentle, yet intense, introduction to programming using Python for highly motivated students with little or no prior experience in programming. The course will focus on planning and organizing programs, as well as the grammar of the Python programming language. Prerequisite: CIS110G or CIS107G.

### **CIS210G Data Structures and Elementary Algorithms**

**3-2-4**

This is an advanced, language-independent programming course. Students will master the skills necessary to develop and work with common programming Data Structures. Such topics as Arrays, Stacks, Queue, Linked Lists, Binary Trees, Hash Tables, Heap Concepts, and Graphs will be emphasized. The programming language used will be the students' choice of Java, VB.Net, or C#. Each student will be required to work in a team environment. Prerequisite: CIS118G, OR CIS148G, OR CIS158G, OR permission of the instructor.

### **CIS216G Web Server Administration**

**2-2-3**

In this course students will discover how to manage web sites at the server level. Students will learn how to set up and maintain the hardware and software needed for both Internet and Intranet web sites. Emphasis will be placed on setting up a UNIX/Linux system with Apache web server; however, other platforms will be discussed throughout the course. Prerequisites: CIS146G, CIS224G.

### **CIS218G Advanced .NET**

**2-2-3**

This course will expand the students' understanding of structured, procedural and event-driven programming using Visual Basic .NET. Students will learn advanced programming methods and will gain further experience in the nut-and-bolts of program design as they complete lab work and assignments. Prerequisite: CIS118G.

### **CIS223G Advanced SQL**

**2-2-3**

In this course, students will learn how to use Structured Query Language to manipulate and retrieve data from relational databases. Students will use SQL to modify database structure, add user permission to databases or tables, query the database for information, and update the contents of a database. Stress will be placed on working with large database management systems like SQL Server. Prerequisite: CIS113G.

### **CIS224G Web Development II**

**2-2-3**

Building upon the web development skills taught in CIS124G, this course will enable students to create dynamically-built web sites using JavaScript and other client-side scripting languages. Students will also gain advanced XHTML and CSS skills and will gain familiarity with programming concepts and terminology common to many web scripting languages. Please note that if students have no previous programming experience, then CIS112G is a must prior to enrolling in this course. Prerequisites: CIS112G, CIS124G.

**CIS246G Linux II****2-2-3**

Building upon fundamentals previously acquired, students will further develop Linux skills and knowledge in a hands-on environment. Students will install a dual boot operating system, develop shell scripts for application management, configure various business productivity applications, discuss Linux security issues, and gain a further understanding of Linux administration with respect to using and configuring various network services. Prerequisite: CIS146G.

**CIS248G Advanced Java Programming****2-2-3**

In this course, students will extend their knowledge of object-oriented programming through the use of the Java programming language. They will develop applets for use in web pages as well as stand-alone applications. Application design, planning, language syntax, and a variety of Java environments will be covered. Individual and group projects are emphasized throughout the course. Prerequisite: CIS148G.

**CIS249G Linux Databases****2-2-3**

In this course, students will establish a firm foundation in Linux database installation, design, construction, and use. Students will install and use My SQL and Postgres SQL, two popular open-source database programs, along with a variety of useful tools to work with these databases. Students will also write basic PHP/Perl code to link these databases to websites. Prerequisites: CIS113G, CIS146G.

**CIS253G Data Sharing****2-2-3**

This course will provide the student with the skills necessary to share data across the Internet. Topics will include database queries, ASP, JSP, and CGI scripting, as well as security and form design. Current trends will be examined and discussed. Prerequisites: CIS223G, CIS224G.

**CIS254G PHP and MySQL****2-2-3**

PHP is a server-side, cross-platform scripting language. It offers a server-side approach to database connectivity with an integrated environment where complex scripting code combines with plain HTML. This class enables students to create dynamic web applications with PHP and MySQL. Topics include the basics of PHP, mixing PHP and HTML, displaying dynamic content, using cookies, and database connectivity. Other topics may include: fusebox design and open-source prebuilt solutions. Prerequisites: CIS113G, CIS224G.

**CIS258G Advanced C++****2-2-3**

This advanced programming course emphasizes the C++ implementation of object-oriented designs. It expands upon the structured techniques introduced in CIS158G. While concentrating on the creation of C++ object systems, students will learn advanced language topics such as function overloading, default arguments, inheritance, virtual functions, and run-time type information. Prerequisite: CIS158G.

**CIS281G Internship****1-8-3**

This capstone course allows a limited number of students to receive on-the-job experience at an off-site location related to their specific area of academic concentration. Students are required to work eight hours per week at positions that meet the criteria established by the Internship Manual. A seminar meeting once per week will review internship progress and discuss issues related to successful employment. The course has one hour of lecture and eight



hours of work for three credits. Department Elective. Prerequisite: completion of coursework for the first three semesters of the student's program of study and approval of the Department Chair and/or Program Advisor.

**CIS291G Advanced Topics**

**2-2-3**

The purpose of this experience is to provide qualified students with the opportunity to pursue academic work outside the formal classroom setting. Independent Project is an ideal way for a student to specialize in a concentrated area within the Computer Technologies Department. In order to be eligible for this challenging opportunity, students must seek the approval of the Department Chair and work with a faculty advisor to set up a course of study. Students must submit an original project plan prior to acceptance.

**CIS292G Portfolio Preparation and Presentation**

**1-0-1**

As a required capstone course, this course is an opportunity for students to demonstrate they have achieved the required goals and objectives for the CT/DGMT Programs. The course is designed to assist students with final portfolio preparation. Prerequisite: Approval of the Department Chair and/or Program Advisor upon completion of coursework entering final semester (Permission "PERMXXXG").

**CRIT150G Critical Thinking in the Humanities**

**3-0-3**

This is a reading, writing, and speaking course that applies critical thinking skills to an interdisciplinary theme, aesthetic frame, complex issue, or other broad area of investigation within the Humanities. Students will develop a sophisticated understanding of how facts, assumptions, implications, inferences, opinions, and bias work, and then make careful observations, and draw thoughtful conclusions about the texts that they work with. (Fulfills Humanities requirement.) **All semesters**

**CRMJ101G Intro to Criminal Justice**

**3-0-3**

This course covers the components of the justice system in American society. Although civil law will be discussed, the emphasis will be on the criminal justice system. The influence and pressures of changing social, political, technological, and economic factors on the agencies of justice will be studied. Much of the focus will compare ideals with realities of the system. Law enforcement, the courts, and correctional aspects will be examined. **Fall semester**

**CRMJ121G Criminal Procedure**

**4-0-4**

This course analyzes the constitutional issues in the United States which have direct bearing on the role and policies of criminal justice agencies. Application of these issues as they relate to investigation, arrest, pretrial and appeal will be emphasized. **Fall semester**

**CRMJ123G Criminal Law**

**4-0-4**

This course provides an in-depth review of substantive criminal law in the federal and state systems including analysis of the essential elements of all major crimes, the concepts of constitutional review and judicial scrutiny and the principles governing legal challenges to the constitutionality of laws. **Spring semester**

**CRMJ150G Criminology** **3-0-3**  
Students will learn the definition and nature of crime, criminal statistics, and a survey of the theories of crime causation. Emphasis is placed on crime patterns and typologies. **Fall semester**

**CRMJ205G Police Operations** **3-0-3**  
This course covers the principles of police organization and administration, and community policing, as well as the selection, training, promotion and socialization of officers. It also examines issues involving the influence of research, police deviance, minorities, the use of force, and the general hazards of police work. **Fall semester**

**CRMJ210G Juvenile Justice** **3-0-3**  
An examination of causative factors in the development of youthful offenders and the development and philosophy behind treatment and rehabilitative practices are covered. The course also covers legal, procedural, and substantive issues pertaining to the juvenile justice system. **Spring semester**

**CRMJ215G Corrections Operations** **3-0-3**  
This course is a study of correctional processes and services, standards, personnel and principles of management, allocation of resources, training and staffing, the role of sentencing and work release programs, special programs, and the use of outside contracts. **Fall semester**

**CRMJ225G Drug Abuse and the Law** **3-0-3**  
In the first part of this course, the historical use of the major drug groups (including alcohol) will be reviewed. In the second part, the reaction of the criminal justice system to illegal involvement with drugs and alcohol and methods of treating substance abusers will be reviewed. **Spring semester**

**CRMJ230G Justice and the Community** **3-0-3**  
This course deals with the interaction of the various components of the justice system with the community. It involves an analysis of how the work of police departments, courts, correctional institutions, and community corrections agencies appear to the public. The image of the justice system in the media is examined; specific attention is paid to the issues of the young, minorities, and community organizations. **Spring semester**

**CRMJ250G Criminal Investigations** **4-0-4**  
Meeting the needs of criminal investigations is one of the largest priorities for law enforcement agencies throughout the world. This course prepares graduates for investigations into multiple violations of law and procedures in many applications. The strong foundation provided by this course enables students to develop skills in the areas of incident investigation and case development for future prosecutorial needs of law enforcement and other enforcement entities. Prerequisite: Admission to the Criminal Justice or Homeland Security programs or permission from the program chairperson.

**CRMJ270G Criminal Justice Internship** **0-9-3**  
This course prepares students entering the field of criminal justice by applying theoretical knowledge to practical experience. Students will complete a minimum of 120 hours at an

agency provided by the internship coordinator and assist in activities deemed appropriate by the agency. The agency will also evaluate the student. Students are required to maintain an internship log and prepare an extensive paper which relates previous criminal justice coursework to the internship experience. Approval from the Department Chair is required prior to registration.

### **CRMJ275G Senior Project**

**3-0-3**

This course presents an opportunity for students to focus on a specific issue or topic in Criminal Justice, with a primary emphasis on completing a major independent research project and topic paper analyzing an agency or significant concept/issue in Criminal Justice. Students MUST see their Program Coordinator to discuss their goals for the course and to register for this class.

### **DATA210G Elements of Data Science**

**3-0-3**

This course is the foundation for introducing students to key topics in data science, including data acquisition/preparation and exploratory data analysis. Major topics include an introduction to the R programming language and RStudio integrated development environment, working with modern data formats (e.g. XML, CSV, JSON, XLS, XHTML), data import/export (e.g. files, APIs – application programming interfaces – , web sites, databases), finding data to augment analyses, and exploratory data analysis & visualization. Prerequisite: MATH145G/147G or MATH150G/152G or higher. Some prior programming experience is helpful but not required. **Fall/Spring semesters**

### **DATA220G Data Analysis with R**

**3-0-3**

This course is an applied statistics course that introduces students to key topics in data science, including exploration, statistical data analysis and communicating the results of data analyses. Major topics include advanced R programming language concepts, working as a standalone data analyst and within a team, organizing analysis projects, modeling with univariate, bivariate and multivariate data and basic clustering, classification and time series analysis and forecasting. Prerequisites: C or better in DATA210G (or by department approval) and MATH235G (may be co-requisite). **Spring semester**

### **DATA225G Analytics Capstone**

**0-4-2**

This course serves as a final project for students who are seeking either the Certificate in Practical Data Science or the Associate Degree in Analytics. Students will need to combine knowledge gained in Statistics, including descriptive statistics, regression and analysis of variance, as well as advanced R programming language concepts and data extraction techniques to research a topic, perform data analysis and create a reproducible report. Prerequisites: Successful completion of DATA220G and MATH235G with a C or better or by dept/program advisor approval. **Spring semester**

### **DGMT115G Introduction to Graphic Design**

**2-2-3**

This design course will explore design and layout considerations for various production media. Students will study principles of design including color theory, line, texture, pattern, balance, space and movement. Students will be introduced to computer graphics creation using industry standard software packages. Students will also experience hands on drawing and design lessons to develop their own sense of design, learn how to use paths, manipulate basic shapes and text, apply color and gradients implement styles, work in multiple layers, trace,

and scale. Students will be able to use these design applications for future study in Web Design and Multimedia Production. Prerequisite: CIS110G or CIS107G. Co-requisite: CIS111G. **Fall/Spring semesters**

**DGMT120G Intro to Digital Photography** **2-2-3**

This course serves as an introduction to digital photographic processes, in which technical aspects of cameras and equipment are reviewed. Basic photographic principles such as using aperture and shutter speed to control exposure, metering, depth of field, lenses, and flashes are explained, through which students can gain an understanding of compositional techniques used to create professional-quality exposed photographs. This course also focuses on the history of photography and reviews techniques utilized by photographic masters. The student must supply his/her own digital SLR camera. Prerequisite: DGMT115G. **Spring semester**

**DGMT125G Introduction to Animation** **2-2-3**

Learn how to apply the principles of animation and gain a full understanding of the animation process from conception to completion. Topics to be covered include storyboarding, creating production artwork, setting key frames, tweening and interpolation, creating and animating characters, materials manipulation and lighting. Hands-on experience using 2D and 3D animation tools and software application programs is a core component of this course. Students will gain a working knowledge of 2D and 3D Animation applications that will be expanded upon in DGMT264G. Prerequisite: DGMT115G. **Fall semester**

**DGMT135G Introduction to Photoshop** **2-2-3**

Adobe PhotoShop brings the art and science of photo manipulation to the Web and other computer applications. An overview of the PhotoShop environment, color processes and channels, image modes, scanning, compositing, adjustment layers, masks, type manipulation, filters, actions, file formats, and web/multimedia considerations are among the many topics covered in this course. Prerequisite: CIS111G. **Fall/Spring semester**

**DGMT142G Publication Design** **2-4-4**

This hands-on course introduces students to the basic hardware and software components of publication design as well as the skills needed to produce attractive and effective printed materials. Students will learn to produce page layouts while fulfilling service learning objectives; creating business cards, brochures, display ads, newsletters, menus, logos and announcements, for community partners. This is a Service Learning Course (SL). Prerequisite: DGMT115G. **Spring semester**

**DGMT165G Introduction to Video Production** **2-2-3**

This course introduces students to the fundamentals of video production. Through individual video projects and course work, students will learn technical and esthetic basics for creating videos. This includes introductions to shooting, editing, lighting and sound and the associated equipment required for these individual disciplines. Prerequisite: CIS110G or CIS107G. **Fall semester**

**DGMT167G Single Camera Production** **2-2-3**

This course focuses on single camera production to build on student proficiencies in shooting, lighting, and editing. Students will learn camera functionality for properly shooting a story including managing shot coverage, conventional lighting techniques including lighting for an

interview, and requisite on-location sound acquisition techniques and the audio equipment required to carry them out. Additionally, students will build on their introduction to editing in DGMT165 and learn principles of editing sequence-shots and conventional match cutting. Prerequisite: DGMT165G.

**DGMT175G Adobe Illustrator** **2-2-3**

In this course, students will establish a firm foundation in Illustrator by mastering the primary tools and techniques necessary to create complex and attractive illustrations and text effects. Students will learn to use Illustrator's foundational tools and techniques such as paths, fills, strokes, pathfinder, drawing, painting, gradient mesh, filters, and masks to create artwork and illustrations that could be used for integration with multimedia, for vector animation, or on the World Wide Web. Prerequisite: DGMT115G. **Fall semester**

**DGMT202G Digital Post Effects** **2-2-3**

This course provides an in depth study of Adobe After Effects. Students will learn post production image manipulation for the creation of news graphics, animated logos, credits and titles, film effects and image treatments utilizing methods in composition, animation and masking. Additionally, students will learn about complex special effects used in major motion pictures. Prerequisite: DGMT201G.

**DGMT205G Advanced Photoshop** **2-2-3**

This course will expand student's knowledge of Photoshop through the exploration of more advanced tools and techniques for both print and the web. In-depth work on photo editing, masks, gradient masks and channels, color correction, image blending, digital images, clipping paths, filters and plug-ins, and the creation of 3 dimensional effects through the digital manipulation of lighting and shadow, will be covered. Students will be encouraged to take their own creative ideas from sketch pad to completion. Many professional tips and tricks from publications written by industry experts will be covered. Prerequisite: DGMT135G. **Fall semester**

**DGMT215G Advanced Graphic Design** **2-2-3**

This digital graphic design course provides the student with challenging design problem solving experiences that can be applied to print and digital media. This project based course will utilize industry standard Adobe software, utilized as individual applications and in combination to produce a finished product. The student will be responsible for the development of an original idea from the thumbnail sketch to a digital comp, and to understand the impact of the visual message. The student will become fluent in graphic design vocabulary, experience collaborative work and develop visual literacy. Upon completion of this course the student will assemble a portfolio that expresses a personal voice, as well as help prepare them for an internship. Prerequisites: DGMT115G, DGMT135G, and DGMT175G. **Spring semester**

**DGMT225G Introduction to Print Technology** **2-2-3**

This course is an examination of different print mediums, the benefits of various technologies, and general application requirements for successful output. This course will rely on classroom discussion with emphasis placed on real-life examples of cost-effective decisions, requiring the student to remain current on industry news and trends. Utilizing Adobe InDesign, students

will prepare files for print and perform preflight steps. Prerequisites: DGMT115G, DGMT135G, and DGMT175G. **Spring semester**

**DGMT264G Expressive Web Animation 2-2-3**

This course will teach students to design scalable, key framed based animations for the web as well as games. Students will learn to use industry standard applications to provide responsive design solutions for mobile platforms and desktop browsers. Prerequisites: DGMT125G, CIS112G, CIS124G. **Spring semester**

**DGMT265G 3D Design and Animation 2-2-3**

Students will learn the fundamental principles that form the basis of effective 3D development. Topics will include scene and character development and animation, use of color and lighting, inverse kinematics and modeling using primitive shapes, NURBS and polygons. Hands-on experience using 3D animation tools and software application programs is a core component of this course. Prerequisite: DGMT125G. **Spring semester**

**ECE100G Early Childhood Growth and Development 3-0-3**

This course examines the developmental patterns for children from conception through middle childhood. Students will recognize the influences of family, culture, environment and biology on development and understand major theories of child development. The use of informal and formal documentation tools are incorporated into the required child observations.

**Fall/Spring semesters**

**ECE109G Art, Music, Drama and Movement in Childhood Education 3-0-3**

This course focuses on nurturing creativity in young children through the provision of developmentally-appropriate activities in the areas of art, music, dramatic play, and movement. The various methods and materials used to stimulate a young child's creative impulses will be explored. **Fall semester**

**ECE112G Curriculum Planning and Environments in ECE 3-3-4**

The emphasis of the course is planning, preparing and implementing appropriate activities and environments for preschool aged children. Students will observe the effects of space, equipment, materials, and their relationships to play, learning and discovery. There will be opportunities to plan and implement developmentally appropriate activities. Students will complete 30 hours of observation and assisting in a preschool setting as part of a lab requirement for this course. Prerequisites: ECE100G, place into ENGL110G, and permission of Program Coordinator or Course Instructor. **Fall/Spring semesters**

**ECE116G Child Health, Safety, and Nutrition 3-0-3**

This course addresses the needs and best practice in health, safety and nutrition for young children. These concepts will enable the individual to implement preventive health and safety practices based on NH Childcare Licensing Regulations and national standards. Students will be able to develop menus for meals and snacks which are nutritious, appealing and age appropriate. Recognition and treatment of child abuse victims, emergency preparedness, infectious disease prevention and control, administering medication and safe environments including safe sleep will be addressed. It should be noted that CPR and First Aid are NOT part of the course. This course is offered as a hybrid and 100% online formats. **Fall/Spring semesters**

**ECE200G Math and Science Development in Childhood Education 3-0-3**

This course will provide students with the theoretical and developmental knowledge necessary to effectively teach the basic concepts of math and science to young children. Students will develop their skills in preparing developmentally-appropriate activities that promote inquisitiveness, problem solving and exploration. The interrelationship between math and science and other areas of the curriculum will be explored. Students will need access to young children to complete course requirements. Prerequisite: ECE100G, ECE112G, and 3 additional ECE credits or permission of the instructor or Program Coordinator. **Spring semester**

**ECE202G Senior Practicum: Student Teaching 1-6-3**

This Practicum is the first of two senior Practicum experiences in which students assume teacher responsibilities in an Early Childhood setting (i.e. infant/toddler; preschool; kindergarten or school-age program) under guided supervision with a qualified mentoring teacher. Students will practice intentional teaching in their work with young children by planning and implementing activities, and preparing an environment for their classroom. Students will complete 90 Practicum hours at a college approved Early Childhood program and may not be able to complete hours at their worksite. Pre-requisites: ECE 100G, 116G; 112G (ECE112G requires a C+ or better to enroll in ECE202); Child Care Personnel Health Form on record with no physical or mental restrictions that indicate the student should not be around children; successful background check as required by NH Child Care Licensing Bureau; reliable transportation to practicum site; cumulative GPA of 2.5 or better in ECE coursework and 2.0 overall GPA and permission of the Program Coordinator. **All semesters**

**ECE203G Language Arts in Early Childhood Education 3-0-3**

In this course, the development of language and literacy, components of a language-rich environment, language arts curriculum, and approaches to reading and writing instruction will be explored. This course is designed to provide an overview of developmentally- and interest-appropriate literature and language art curriculum for young children. It will afford an opportunity to explore the various genres, recognize the value of literature to children's development, become familiar with exemplary authors and illustrators of children's literature, and learn ways to extend and enhance literature for young children. Prerequisite: ECE100G, 9 credits in ECE or permission of Program Coordinator. **Fall semester**

**ECE204G Developmentally-Appropriate Curriculum for Infants and Toddlers 3-0-3**

This course provides an in-depth study of the normal growth and development of the child from birth through toddlerhood. Emphasis is placed on the interrelationship of emotional, social, cognitive, physical, and language development patterns of infants and toddlers. The student will learn to plan a developmentally-appropriate curriculum based upon standards of NAEYC and New Hampshire Bureau of Child Care Licensing. The sequential and effective use of play materials will be presented as essential to an infant and toddler curriculum. Students will be required to volunteer and observe eight hours in an infant and toddler program. Prerequisite: ECE100G or permission of the instructor or Program Coordinator. **Spring semester**

**ECE206G Supporting the Special Needs Child 3-0-3**

The course will focus on the unique characteristics and needs of young children with communication disorders, sensory impairments, physical and health-related disabilities, child abuse, and giftedness, as well as those living under stress. Screening, assessment, early

intervention, individualized education plans, inclusive education, community resources, and family issues will be discussed. Prerequisite: ECE100G. **Spring semester**

**ECE210G Child, Family and Community Relationships** **3-0-3**

Young children's learning and development are integrally connected to their families and community. This course will use Bronfenbrenner's Ecological theory to examine the child's relationship as influenced by family composition and stress, language, and culture within their school, home and community. Students will explore ways to establish collaborative relationships with families based on trust and respect and how to use protective factors that strengthen and empower families. Appropriate methods of communication and family involvement in early childhood programs will be explored, and community resources for support will be identified. Professional ethics and their role in working with children and families will be examined. Prerequisite: ECE100G and 3 additional ECE credits. **Spring semester**

**ECE212G Senior Practicum: Professional Development** **1-6-3**

This Practicum is the second of two senior Practicum experiences in which students assume teacher responsibilities in a different Early Childhood setting (i.e. infant/toddler; preschool; kindergarten or school-age program) than ECE202, under guided supervision with a qualified mentoring teacher. Students will practice intentional teaching in their work with young children by planning and implementing activities, and preparing an environment for their classroom. In addition, the final professional portfolio and an application to the Early Childhood Credential will be completed. Students will complete 90 Practicum hours at a college approved Early Childhood program and may not be able to complete hours at their worksite. Pre-requisites: ECE 100G, 116G; 112G (ECE112G requires a C+ or better to enroll in ECE202); Child Care Personnel Health Form on record with no apparent health problems that would prohibit his/her employment caring for children; successful background check as required by NH Child Care Licensing Bureau; reliable transportation to practicum site; cumulative GPA of 2.5 or better in ECE coursework and 2.0 overall GPA and permission of the Program Coordinator. **All semesters**

**ECE214G Appropriate Discipline and Guidance for Young Children** **3-0-3**

The emphasis of the course is on the role of positive child guidance in preparing young children to become competent, confident, and cooperative individuals. Developmentally-appropriate methods of guiding children will be shared, along with effective strategies for preventing disruptive behaviors in the classroom. A recurring theme will be the impact of positive discipline on self-esteem. The influence of developmental, environmental, and health factors will be examined. Theories behind the approaches and techniques of discipline and guidance issues will be discussed. Prerequisites: ECE100G or permission of the instructor or the program coordinator. **Fall semester**

**ECE250G Childcare Administration and Management** **3-0-3**

This course is designed to provide students with information on administering an early childhood education program. Students will explore diverse programs available to the community, and examine state and federal licensing regulations along with national accreditation standards. Students will critically analyze the degree to which financial issues of marketing, accounting, and funding affect the management of the center. In addition, students will identify components of a healthy organization that manages people and



resources in a positive, supportive manner. Prerequisite: 12 credits in ECE or permission of Program Coordinator. **Fall semester**

**ECON225G Personal Finance** **3-0-3**

This course is designed to provide the student with an effective learning experience in personal finance. Emphasis is placed on helping students make sound financial decisions in the areas of budgeting, insurance, taxes, credit investments, real estate, and retirement planning. **All semesters**

**ECON234G Macroeconomics** **3-0-3**

This course analyzes the determinants of aggregate economic activity and the effects of government policies intended to achieve full employment, price stability, and economic growth. The course examines consumer and business spending, government expenditures and tax policies, and the impact of the international sector on the US economy. Topics include: inflation, unemployment, interest rates, fiscal policy and the public debt, monetary policy, international trade, and finance. (Fulfills Social Science requirement.) **All semesters**

**ECON235G Microeconomics** **3-0-3**

This course equips the student with an understanding of fundamental economic principles and tools. It presents economic analysis with respect to demand and supply, consumer utility theory, elasticity, costs of production, perfect competition and imperfect competition, and resource markets. Prerequisite: ECON234G. (Fulfills Social Science requirement.) **All semesters**

**ECON237G Entrepreneurship-Launching Your Business** **3-0-3**

Entrepreneurship - Launching Your Business is designed for degree candidates and non-matriculating students who have always wanted to launch a business but are not sure where to begin. This highly experiential course will take students through the components that are required in a business plan to receive funding from sources such as angel investment, commercial funding and social media platforms. The final deliverable will be a business plan that the student has created, and is ready to launch, and which will be reviewed by a panel of experts. Prerequisites: Successful completion of CIS110G or CIS107G or placement into CIS156G or higher, and permission of instructor or Department of Business Administration and Information Technologies chair. (Fulfills Social Science requirement).

**ENGL099G Developmental College Writing II** **4-0-4**

This course places the development of composition skills in the context of the reading and writing process. Students will examine a variety of texts for idea development and analysis of the organizational patterns that underlie personal and academic writing. Prerequisite: placement testing or a grade of C in either ENGL098G or ESOL120G or higher. This course may not be applied to meet Certificate or degree requirements. **All semesters**

**ENGL110G College Composition I** **4-0-4**

In this course, students learn to write clearly and effectively for defined audiences through a variety of strategies. Emphasis is on the writing process, from drafting through pre-writing, revision and editing. This course places reading at the core of the writing curriculum by including interaction with reading selections as the vehicle for idea development, analytical and interpretive skills, and research, and to serve as writing models. Prerequisite: placement

testing or a grade of C or better in ENGL099G. \*COLLEGE COMPOSITION I POLICY Students must pass the research component of ENGL110G College Composition I in order to pass the course. **All semesters**

**ENGL114G Introduction to Poetry** **3-0-3**

In this course, students will examine poetry in personal, historical and sociological contexts. Prerequisite: ENGL110G (may be co-requisite) or equivalent. (Fulfills English or Humanities requirement.) **Spring semester**

**ENGL115G Introduction to Film Studies** **3-0-3**

This class is an introduction to film—its form, aesthetics, and criticism. We will view a variety of films to see how they function as commercial, entertainment, and artistic artifacts, as well as place them within their historical and cultural contexts. We will discuss how the elements of film production reflect the visions and beliefs of various filmmakers at different times and places. In addition, students will discover how viewers' responses reflect their own visions and beliefs. By employing key concepts from the history of film production and theory, students will be able to engage in critical discussion of a film's merits. Finally, this course serves as a gateway for future film studies at the college level. Prerequisite or Co-requisite: ENGL110G or equivalent. (Fulfills English or Humanities General Education requirement; meets 100-level course requirement for the English major). **Fall semester**

**ENGL117G Introduction to Literature** **3-0-3**

An introduction to the study, appreciation, and understanding of literature. Students will read a variety of types of literature--fiction, drama, and poetry--from a variety of time periods. Emphasis will be placed on the variety of ways in which one can relate to a literary text. Prerequisites: ENGL 110G or equivalent. (Fulfills English or Humanities requirement.) **Fall/Summer semesters**

**ENGL120G Introduction to African-American Literature and Culture** **3-0-3**

A survey of African-American literature and culture in which students encounter a variety of texts and performances ranging from traditional types of literature including fiction, nonfiction, drama, and poetry, to standup comedy, film, music, and dance. The goal is to gain a broader understanding of the profound impact African-Americans and their cultural/artistic contributions have had on American society, politics, culture, and the American soul. Prerequisites or co-requisite: ENGL110G or equivalent. (Fulfills English or Humanities requirement.) **Fall semester**

**ENGL127G Introduction to Literary Analysis** **3-0-3**

An introduction to the practice of analyzing literature. The course will provide a basic understanding of the forms of fiction, poetry, and drama, as well as a brief introduction to critical approaches. The main emphasis of the course, however, will be on developing close reading skills. Prerequisite: ENGL110G or equivalent. (Fulfills English or Humanities requirement.) **Spring semester**

**ENGL201G Film and Society** **3-0-3**

This course will study American film as an expression of American society. Film as a reflection of social trends and changes in America will be emphasized. The influence of film on social

and cultural values will be discussed. Course may be organized by genre, time period, or theme. Prerequisite: ENGL110G. (Fulfills Humanities requirement.) **Spring semester**

**ENGL209G American Literature through the Civil War** **3-0-3**

This course samples American literature from its beginnings through the Civil War period, emphasizing themes that have left their mark on American consciousness and discusses how socio-economic themes relate to literature (as cause and as subject matter). Formal literary criticism is included, as well as analysis of structure. Prerequisite: ENGL110G or equivalent. (Fulfills English or Humanities requirement.) **Fall semester**

**ENGL210G Oral Communications** **3-0-3**

In this course, students develop interpersonal and public communication skills, using informative and persuasive modes of both written and oral presentations. This course builds upon the skills developed in College Composition. Prerequisite: ENGL110G or equivalent. (Fulfills English or Humanities requirement.) **All semesters**

**ENGL212G Women's Literature** **3-0-3**

This course features the writing of women from a variety of genres. Students examine how various works voice similar and/or differing concerns depending on each writer's race, class, nationality, gender identity, and sexual orientation. Reading selections focus on various subjects represented in women's literature from different historical periods (concentrated on the twentieth century through the present). Film selections may be included to accompany the literary texts. Prerequisite: ENGL110G College Composition I. (Fulfills English or Humanities requirement.) **Fall semester**

**ENGL213G Creative Writing** **3-0-3**

In this course, the student will learn the techniques of creative writing. These techniques will run the gamut from brainstorming exercises to revising and editing. The student will learn these techniques through a combination of lecture, in-class exercises, and workshops. Prerequisite: ENGL110G. (Fulfills English or Humanities requirement.) **Fall/Summer semesters**

**ENGL214G Introduction to Creative Nonfiction** **3-0-3**

This course is designed to engage students in a reading and writing exploration of nonfiction. It will build on the skills developed in College Composition I to generate works written in a lively personal voice that are based on the active integration of experience and inquiry. Effective writing skills and research techniques are practiced in addition to creative approaches to scholarly writing. Prerequisite: ENGL110G or equivalent. (Fulfills English or Humanities requirement.) **All semesters**

**ENGL215G Writing Technical Documents** **3-0-3**

An introductory course that deals with writing and speaking effectively on technical subjects. The course stresses frequent practice in planning, composing, and editing letters, memos, and reports. The course also provides practice in resume writing as well as researching, organizing and presenting material extemporaneously. Prerequisite: ENGL110G or equivalent. (Fulfills English requirement.) **Fall/Spring semesters**

**ENGL220G American Literature after the Civil War** **3-0-3**

This course samples post-Civil-War American literature, emphasizing themes that have left their mark on American consciousness, and discusses how writers explore socio-economic themes (especially the American Dream). Formal literary criticism is included as well as analysis of structure. Prerequisite: ENGL110G or equivalent. (Fulfills English or Humanities requirement.) **Fall semester**

**Special topics courses listed under ENGL222G Major Writers**

This course is an-depth study and discussion of a few American and/or British writers. In studying works paired by theme, genre, or topic, students can enrich their sense of each author's distinctive methods, gain a deeper sense of the development of those writers' careers, and examine preconceptions about what makes an author or a work "great." Topics and approaches vary depending on the instructor. Film selections may be included to accompany the literary texts. Prerequisite or co-requisite: ENGL110G: College Composition I. (Fulfills English or Humanities requirement.) **Spring semester**

**ENGL222AG Major Writers: American Literary Realism** **3-0-3**

A selection of readings in American Realism and Naturalism from the late nineteenth and early twentieth centuries. Short stories and novels from authors that might include Howells, Garland, Dreiser, Crane, Norris, Wharton, Alger, James, Twain, London, and others. Prerequisite or co-requisite: ENGL110G: College Composition I. (Fulfills English or Humanities requirement.) **Spring semester**

**ENGL223G British Literature to 1800** **3-0-3**

A survey of the major works of British literature from its Anglo-Saxon origins to 1800 in their cultural, social, historical, political, and literary contexts. The course will also provide students with practice using the critical tools and vocabulary required for the study of literature. Prerequisite: ENGL110G or equivalent. (Fulfills English or Humanities requirement.) **Spring semester**

**ENGL224G British Literature from 1800 to the present** **3-0-3**

This course is a chronological exploration of British literature of the late 18th century through the present. Students read and discuss literature from the periods literary critics have called "Romantic," "Victorian," "Modern," and "Postmodern." Topics of particular focus will be historical and social issues with which British writers have engaged, including: the rise and decline of Empire, the movement to abolish slavery, the New Woman movement, the crises of two world wars, and various civil rights struggles of the 20th and 21st centuries. Prerequisite: ENGL 110G: College Composition I. (Fulfills English or Humanities requirement.) **Spring semester**

**ENGR201G Introduction to Chemical Engineering I** **3-0-3**

Systems of units; material balances and chemical reactions; gas laws; phase phenomena. Prerequisites: CHEM115G with a B or higher, 30 credits taken towards degree with a minimum CGPA of 3.0. **Fall semester**

**ENGR202G Introduction to Chemical Engineering II** **3-0-3**

Energy and material balances for systems with and without chemical reactions; design case studies. Prerequisite: ENGR201G. **S semester**

**ESCI 110G Earth Science****3-3-4**

This course is a lab science that covers the fundamental processes of earth for students who have little science background. Topics include the study of Geology, Meteorology, and Astronomy. **Spring semester**

**FREN110G French I****4-0-4**

A fully integrated introductory French course. The course is designed for beginning French students, with little or no prior knowledge of French. It is directed for students whose learning objectives and needs are in any of the following categories: for French language students, for business purposes as well as for travelers. The emphasis is to develop proficiency in basic communicative skills concentrating on the dynamic application of the living language taught through dialogue, phonetics, and vocabulary. A strong grammar foundation and other basic language skills are taught through actual phrases and sentences. These objectives will be achieved through the following approaches: speaking, listening, reading, writing, and cultural appreciation. (Fulfills Foreign Language requirement.)

**FREN120G French II****4-0-4**

A fully integrated introductory French course. This second semester course is designed for beginning French students, with one previous semester of French. It is directed for students whose learning objectives and needs are in any of the following categories: for French language students, for business purposes as well as for travelers. The emphasis is to develop proficiency in basic communicative skills concentrating on the dynamic application of the living language taught through dialogue, phonetics, and vocabulary. A strong grammar foundation and other basic language skills are taught through actual phrases and sentences. These objectives will be achieved through the following approaches: speaking, listening, reading, writing, and cultural appreciation. (Fulfills Foreign Language requirement.) Prerequisite: FREN110G.

**FYE101G First Year Seminar****1-0-1**

The First Year Experience (FYE) course at Great Bay is dedicated to helping students affirm their career goals, clarify the professional skills aligned with their chosen career, and practice the academic skills required of the major associated with the career. By connecting aspirations to expectations, students will develop a greater sense of purpose for, and commitment to, being in college. Student retention and completion are the guiding forces behind this course. Also included in FYE are discussions on financial literacy and growth mind-set. **All semesters**

**FYE111G First Year Seminar-BUS/HOSP****1-0-1**

The First Year Experience (FYE) course at Great Bay is dedicated to helping students affirm their career goals, clarify the professional skills aligned with their chosen career, and practice the academic skills required of the major associated with the career. By connecting aspirations to expectations, students will develop a greater sense of purpose for, and commitment to, being in college. Student retention and completion are the guiding forces behind this course. Also included in FYE are discussions on financial literacy and growth mind-set. **All semesters**

**FYE112G First Year Seminar Psychology****1-0-1**

The First Year Experience (FYE) course at Great Bay is dedicated to helping students affirm their career goals, clarify the professional skills aligned with their chosen career, and practice the academic skills required of the major associated with the career. By connecting aspirations

to expectations, students will develop a greater sense of purpose for, and commitment to, being in college. Student retention and completion are the guiding forces behind this course. Also included in FYE are discussions on financial literacy and growth mind-set. **Fall/Spring semesters**

**FYE114G First Year Seminar Engineering 1-0-1**

The First Year Experience (FYE) course at Great Bay is dedicated to helping students affirm their career goals, clarify the professional skills aligned with their chosen career, and practice the academic skills required of the major associated with the career. By connecting aspirations to expectations, students will develop a greater sense of purpose for, and commitment to, being in college. Student retention and completion are the guiding forces behind this course. Also included in FYE are discussions on financial literacy and growth mind-set. **Fall semester**

**FYE115G First Year Seminar Fine Arts 1-0-1**

The First Year Experience (FYE) course at Great Bay is dedicated to helping students affirm their career goals, clarify the professional skills aligned with their chosen career, and practice the academic skills required of the major associated with the career. By connecting aspirations to expectations, students will develop a greater sense of purpose for, and commitment to, being in college. Student retention and completion are the guiding forces behind this course. Also included in FYE are discussions on financial literacy and growth mind-set. **Fall semester**

**FYE116G First Year Seminar Nursing 1-0-1**

The First Year Experience (FYE) course at Great Bay is dedicated to helping students affirm their career goals, clarify the professional skills aligned with their chosen career, and practice the academic skills required of the major associated with the career. By connecting aspirations to expectations, students will develop a greater sense of purpose for, and commitment to, being in college. Student retention and completion are the guiding forces behind this course. Also included in FYE are discussions on financial literacy and growth mind-set. **Fall semester**

**FYE150G Essential Skills for College Success 3-0-3**

The Essential Skills for College Success course at Great Bay is dedicated to helping students affirm their career goals, clarify the professional skills aligned with their chosen career, and practice the academic skills required of the major associated with the career. By connecting aspirations to expectations, students will develop a greater sense of purpose for, and commitment to, being in college. Student retention and completion are the guiding forces behind this course. Also included in FYE150G are exercises to improve learning strategies and discussions on financial literacy and growth mind-set. **All semesters**

**GEOG110G World Geography 3-0-3**

The course is an introduction to the geographic and cultural elements of the world's major regions. Demographics, origins, language, religion, geopolitics, and agricultural features of the regions will be covered. The importance of place (geography) and how it shapes the character of the neighborhood, city, country and world will be emphasized as students examine key issues from a geographic perspective. (Fulfills Social Science requirement.) **All semesters**

**HIST120G Western Civilization through 1500** **3-0-3**

The course surveys the development of civilization in the western world from the beginning of Mesopotamian culture through the Protestant reformation of the 16th century. Social, political, economic, and spiritual forces and patterns that shaped the eras of western history will be discussed. History as the record of human struggle and achievement, change and continuity will be emphasized. (Fulfills Social Science or Humanities requirement.) **All semesters**

**HIST130G Western Civilization-1500 to the Present** **3-0-3**

The course surveys the development of civilization in the western world from the 16th century to the present. Social, political, economic, and spiritual forces and patterns that shaped the eras of western history will be discussed. History as the record of human struggle and achievement, change and continuity will be emphasized. (Fulfills Social Science or Humanities requirement.) **All semesters**

**HIST201G History of New England** **3-0-3**

This course is a regional history of New England and New Hampshire, covering pre-contact Native American culture, the separatists and Puritan migrations, role of New England in the American Revolution, and the process of early industrialization. Various aspects of New England social life and cultural contribution will be examined, as well as the urbanization and diversification of New England and New Hampshire in the 20th century. (Fulfills Social Science requirement.)

**HIST202G United States History through 1870** **3-0-3**

The political, social, and cultural development of the United States from settlement to 1870 is studied. Emphasis will be on the development of nationalism, political institutions, sectional rivalry and slavery, and the cultural development of the American people. The course will conclude with the period of Reconstruction. (Fulfills Social Science requirement.) **All semesters**

**HIST204G United States History - 1870 to the Present** **3-0-3**

The political, social, and cultural development of the United States from the period following Reconstruction to the present is covered. Emphasis will be on the urban industrial age, America as a world power, and the challenges to, and advances of, human rights and cultural pluralism. (Fulfills Social Science requirement.) **All semesters**

**HIST210G History of China** **3-0-3**

This course is a survey of the history of China from the Opium Wars to the present. It explores the political, economic, social, and intellectual upheavals which constitute recurrent elements in Chinese history. (Fulfills Social Science requirement.)

**HIST211G Modern Middle East History** **3-0-3**

This course is a survey of the main political, economic, religious and political currents in the region of the world known as the Middle East. The emphasis will be on events since World War II. Topics will include colonialism, the rise of nationalism, the creation of modern nation-states, and the role of the state in an Islamic society. The relationship of the Middle East to the rest of the world, the United States in particular, will be discussed. The geographic and

historical roots of many current issues will be emphasized. (Fulfills Social Science requirement.)

**HIST212G U.S. History Since 1945**

**3-0-3**

This course examines the 20th Century, reviewing major events from different perspectives. The goals of the course include: a fundamental understanding of major events that shaped the century, a sense of the sources of contemporary problems, exposure to artistic and cultural developments and their historical context, the development of a chronological sense of the century, and an extension of the world view beyond ethnocentric limitations.

**Fall/Spring semesters**

**HIST281G History Internship**

**0-9-3**

This course will provide students with the opportunity to experience real world application of Social Science theory. Students will complete a minimum of 135 hours of fieldwork that builds upon previously learned concepts in the Social Sciences. Students need Department Chair approval to register for this course. Prerequisite: Permission of Department Chair.

**HMSC110G Introduction to Homeland Security**

**3-0-3**

This course will encompass the study of and relationship between those entities and institutions necessary for the protection of the United States. Course instructional material will examine the components of Federal, State, and Local Police Agencies, as well as the role of Private Security and Emergency Responders needed to facilitate the implementation of the Homeland Security Act. **Fall semester**

**HMSC115G Crisis Planning, Operations, and Management**

**4-0-4**

Concepts, issues, and problems of crisis and emergency management are introduced. The development of crisis and contingency plans and systems, such as the National Response Plan and the National Incident Management System, are described. Topics include organizing for response, managing the response organization, managing in a turbulent high-stress environment, crisis decision making, and crisis communication. **Fall semester**

**HMSC120G Introduction to Terrorism**

**3-0-3**

This course explores the nature of terrorism, the motivations of terrorists, and the tactics that terrorists use. It surveys state sponsored terrorist groups, as well as several leading past and current radical groups. The final weeks of the course will assess different methods of countering terrorism, ranging from law enforcement to covert action. **Spring semester**

**HOS110G Introduction to Hospitality Management**

**3-0-3**

This course will introduce students to the specialty area of business called hospitality management. Students will learn about basic operations, industry challenges, and current trends in tourism, recreation, restaurants, food service, lodging, resorts, spas, special events, conventions, travel, casinos, cruise lines, airlines, theme parks, and more. Students will gain an understanding of the foundation skills and knowledge needed for a successful career in the world's largest industry. Opportunities to explore specific industry segments in more depth are offered through field experiences and interactions with hospitality professionals.

**Fall/Spring semesters**



**HOS111G Tourism & Sustainable Practices****3-0-3**

The history, growth, and expansion of the tourism industry will be discussed as it relates to the evolution of more responsible and sustainable tourism. Students will become familiar with local, national, and international tourism destinations. Major components of the tourism system will be studied including attractions, entertainment, cruise lines, and airlines. Emerging trends such as eco-tourism, adventure tourism, voluntourism, culinary tourism, agritourism, and cultural tourism will be examined. A service learning component of 10 volunteer hours to give back to a local tourism related organization will be required of all students. (SL)

**HOS150G Hotel Operations****3-0-3**

This course focuses on the roles and duties of the general manager and front office manager of a full service hotel. With an emphasis on front office operations, this course will focus on the interdepartmental flow of operational procedures for the total hotel organization. The student will examine all elements of effective hotel operations management including planning, staffing, revenue management, cost controls, reservations and sales. **Fall semester**

**HOS175G Hospitality Marketing and Sales****3-0-3**

This course applies basic marketing principles and sales techniques to the unique environment of the hospitality industry. Students will learn how to develop a strategic marketing plan integrating key elements of market segmentation, targeting, and branding. Current trends in global marketplace distribution and promotional strategies will also be examined. With a focus on understanding consumer behavior, this course will provide students with an understanding of sales management theories and practices used by hospitality professionals. Through case studies, lectures, guest speakers, and projects, students will apply techniques and strategies to a variety of service businesses including hotels, resorts, spas, and restaurants. Prerequisite: HOS110G. **Spring semester**

**HOS201G Tour & Cruise Operations****3-0-3**

This course will introduce students to tour and cruise operations. Cruise lines, products, ports, and amenities will be examined. In addition, students will become familiar with the various types of tours, tour operators, and steps in the itinerary planning process. The cruise and tour sales process will also be covered. Students will research, develop, plan, cost, and promote a customized group tour. Group dynamics and the skills required to manage and lead a group tour will also be explored. Prerequisite (or co-requisite): HOS110G or HOS111G.

**HOS202G Educational Travel Experience****2-2-3**

This course focuses on developing and executing a student designed educational travel experience to a select destination. In addition to planning trip sightseeing and events, students will also research several characteristics of the destination which may include the history, film, geography, architecture, food, culture and traditions of the destination. The course culminates in a faculty-led, short term, educational travel experience where students will have an opportunity to experience and evaluate several segments of the travel and tourism industry firsthand (additional travel fees apply). Prerequisites: 2.0 CGPA & HOS Chair approval.

**HOS210G Customer Service****3-0-3**

This course examines the principles of customer service and its significance in a service-driven industry. Topics covered include: the service strategy; internal and external customers' wants & needs, communicating customer service; profiles of successful companies; and service people - motivation, communication, and reward. **Fall/Spring semester**

**HOS211G Sports & Recreation Tourism****3-0-3**

This course explores the role of sports tourism as one of the fastest growing niche markets in the global tourism industry. Sports tourism simply combines sports, recreation, leisure, and fitness activities with travel and tourism. These travelers may either participate or spectate. Students will examine the economic, environmental, and sociological impacts of sports tourism on a host community. Students will also develop an understanding of the fundamentals of planning, developing, marketing, and managing competitive and recreational sporting events. Additional key topics include securing sponsorships and understanding the role of various stakeholders as well as the media. Prerequisite (or co-requisite): SPTS101G or HOS110G or HOS111G. **Spring semester**

**HOS215G Planning Meetings & Conventions****3-0-3**

This course introduces the various types of events and activities that can be planned for resort management hotels and convention centers. Students will learn how to work with business convention coordinators, recruit speakers and performers, plan menus, deal with catering departments and talent companies, and plan special events. Negotiation skills, creativity, liability issues, and risk management will be emphasized. **Fall semester**

**HOS225G Hospitality Law****3-0-3**

This course provides a basic understanding of the legal principles and precedents related to hospitality industries with a concentration on hospitality management. Topics include employee relations, compliance with the Americans with Disabilities Act, contracts, liability, negligence, health and safety issues, discrimination, questions of jurisdiction, competition and anti-trust issues, and international relations. Case studies will be examined and the concept of ethics within the industry will be explored. **Spring semester**

**HOS230G Restaurant Development & Strategic Planning****3-0-3**

This course will introduce students to the basic skills of effective restaurant administration. This includes supervising personnel, problem solving, forecasting and operational analysis. There is training in menu planning and food and beverage cost control. Students will acquire firsthand knowledge of developing a restaurant from concept to operation. **Fall semester**

**HOS235G Food and Beverage Operations****3-0-3**

This course is designed to introduce the student to managing front-of-the-house operations with a focus on providing superior service. Management topics include food and beverage product knowledge, sales forecasting, cost control, and basic human resource management. Distilled beverages and wines and the impact they have on resorts and restaurants in generating sales and planning menus will be examined. The course will also include the laws and procedures related to responsible alcohol service. **Spring semester**

**HOS244G Introduction to the Spa Industry****3-0-3**

This course will examine the growing segment of spas and spa services. The evolution of the spa industry will be detailed from ancient civilizations to today with an emphasis on the interrelatedness of spas, medicine, healthcare, tourism and hospitality. Students will learn the unique aspects of a variety of spa categories including day, resort, medical, destination, hospital, and lifestyle management spa programs. Students will learn resume writing and interview skills. This course will provide the knowledge base necessary for students to successfully attain a position in Spa Management or for the Massage Therapy student to successfully apply for a position in the massage therapy field or establish a private practice. The student should be able to use these preparatory skills to facilitate the attainment of his/her career goals. **Summer semester**

**HOS250G Event Planning****3-0-3**

This course is designed to provide an introduction to the principles of event management. The student will examine event planning models and focus on the details required to plan special events. Emphasis is on the planning stage with research in selecting event themes and sites. Specific topics include event administration, detailed tasks and responsibilities, negotiations, staff management, budgeting, finance, advertising and promotion. Students will have the opportunity to volunteer and participate in a variety of area cultural, business, and tourism related events. **Spring semester**

**HOS255G Catering Sales & Event Management****3-0-3**

This course is designed to introduce students to the world of on premise catering by delving into the different aspects of catering sales and event management from the venue's perspective. Students will learn about the different types of events and meals beginning with the sale and marketing of the venue. Understanding how to plan and execute an event from start to finish will be the core emphasis of this course. Students will apply the basic principles of working with an event planner by initiating and executing all of the steps required in planning the event including meal functions, room setup, production & solicitation. Students will also have the opportunity to learn the Delphi Sales and Catering system which is used by catering and sales professionals worldwide. **Fall semester**

**HOS275G Professional Development****3-0-3**

Regardless of the career path a student chooses, developing career goals, demonstrating professional practices, and managing effective workplace relationships will all play an integral role in career success. Some key topics addressed in this course include professional business communication practices via e-mail, text, face to face, and phone, appropriate business dress, business lunch etiquette, managing your online image, leading productive meetings, resolving conflict, and developing essential interviewing, networking, and negotiating skills. This course will provide students with the professional development skills and knowledge needed for successful transition onto the next stage of his or her career. **Fall/Spring semesters**

**HOS280G Hospitality Internship****0-9-3**

The hospitality Industry internship is an opportunity for the student to experience on-the-job training at a business or professional job site. The student will self-place into an area (or sites) at which practical experience related to the hospitality industry can be acquired. **All semesters**

**INSR120G Introduction to Risk Management & Insurance****3-0-3**

This course will examine the field of insurance, risk and risk management and provide an overview of the various types of insurance – accident, casualty, health and life. This course looks at insurance principles and risk management with consumer considerations and the legal principles in the industry. Prerequisite: BUS110G or permission of Dept. Chair.

**Fall/Spring semesters****INSR122G Personal Insurance****3-0-3**

This course provides students with a basic understanding of the property and liability loss exposures that individuals face. The course discusses the types of insurance coverage used for those exposures. The course introduces students to areas that personal insurance professionals assist individuals with: life insurance planning, retirement planning, and health and disability insurance planning. Prerequisite: INSR120G Intro to Risk Management & Insurance.

**INSR123G Commercial Insurance****3-0-3**

This course provides students with a basic understanding of the property and liability loss exposures faced by most organizations and the types of commercial insurance that can be used for covering those exposures. This course will examine the major types of commercial insurance. Prerequisite: INSR120G Intro to Risk Management & Insurance.

**INSR124G Agency Operations****3-0-3**

This course will provide students with an understanding of the different departments needed to run an effective insurance agency. Students will review operations, marketing, customer relationships, public relations, financial management and the supporting organizational structures. Prerequisite: INSR120G Intro to Risk Management & Insurance.

**INSR125G Introduction to Claims****3-0-3**

This course will provide students the opportunity to explore insurance basics within the insurance claim environment, claim process and first party automobile and property claims in addition to liability claims for worker's compensation. Students will understand the process for liability claim investigation, evaluating and settlement techniques. Prerequisite: INSR120G Intro to Risk Management & Insurance.

**IST112G Applied Logic****2-2-3**

The course will present formal logic with a concentration on Classical and Symbolic Logic. Control flow, data manipulation and planning methods will be discussed, including diagramming and pseudo-coding. This course will emphasize systems thinking as an approach to solving will emphasize systems thinking as an approach to solving problems and understanding formal logic. Programming theory and logic will be presented with a hands-on practice in model environments, while students are provided with essential problem-solving methods, techniques and essential problem-solving methods, techniques and disciplines using digital semiconductors and micro-controllers. Students will develop confidence in applying programming solutions, will be exposed to pertinent technology, and will learn the effective use of reference material. **Fall semester**

**IST113G IT Essentials: PC Hardware and Software****2-2-3**

This course presents exposure to computer peripherals and operating systems. Students learn the functionality of hardware components as well as suggested best practices in maintenance and safety issues. Through hands-on activities and laboratory exercises, students learn how to assemble and configure a computer, install operating systems and software, and troubleshoot hardware and software problems. The primary objective of this course is to provide the student with a general understanding of computer hardware and system software. The material covered in this course is intended to form a foundation of technical knowledge for system analysis, design, configuration, procurement, and management. This course helps prepare students for the industry recognized CompTIA's A+ certification. **Fall/Spring semesters**

**IST122G Introduction to Networks****2-2-3**

As an introduction to local area networking systems and protocols, this course is the first of a four course sequence within the Cisco Academy program. Based on the Exploration 1 curriculum, an introduction to networks in the modern world explores network models, applications, fundamental protocols, and data communications. Laboratory experiences involve both simulation and implementation of Ethernet local area network systems. **Fall/Spring semesters**

**IST123G Routing and Switching Essentials****2-2-3**

The second of a four course sequence within the Cisco Academy program is based on the Exploration 2 curriculum. A focus on the role of routing protocols within network systems explores both classful and classless distance vector and link state protocols including static, RIP, RIPv2, EIGRP, and OSPF. The impact of VLSM and CIDR on network systems is considered. Laboratory experiences include designing routed networks, configuring routing protocols for forwarding network traffic, route summarization, and route redistribution. Prerequisite: IST122G. **Fall/Spring semesters**

**IST142G Virtualization Essentials****2-2-3**

This course in the IST Cloud path focuses on concepts surrounding virtualization with emphasis on the Desktop Virtualization. Virtualization and its components will be examined. Subsections will include managing CPUs, memory, storage, and other peripherals. Specific labs include: basic installation, setup and configuration of a PC Virtual Machine. Required knowledge includes PC experience, PC architecture, and how programs use PC resources. Prerequisite: IST113G or IST122G or permission of the Instructor. **Spring semester**

**IST150G Network Operating System Fundamentals****2-2-3**

This course is an introduction to Windows Operating System in general. Basic Concepts in both user and server configuration are explored. Concepts explored will involve topics such as Configuration tools, the use of the MMC to administer a network, adding a new library, and configuring user rights on a PC and Server. This course is part of the Microsoft Technology Associate (MTA) Certification Program which is an entry level certification program focused at individuals wishing to gain introductory knowledge of Microsoft. **Summer semester**

**IST151G Windows Network Operating Systems****2-2-3**

Windows operating systems are popular in the networking world. This course is aimed at developing competencies in installation, configuration, diagnosing and customizing Windows

operating systems in networked environments. The relationship between Windows implementations and standard protocols and services as they relate to workstation systems will be emphasized. **Fall semester**

**IST161G Introduction to Information Assurance 2-2-3**

This course will provide information systems users with the basic knowledge of their role and responsibilities towards protecting information systems resources. Discussion will include workstation and office security, types of malicious programs such as viruses, access control schemes, and management. This will provide a foundation for further study of systems security and protection issues such as terminology, threats to information resources, computer abuse, and system vulnerabilities. This course maps to much of the Security+ Certification. **Spring semester**

**IST163G Legal Issues in Information Security 3-0-3**

This course provides an in-depth study of the legal issues affecting the selection, design, and implementation of internal security controls in business and government organizations. Students will study security policies, standards, procedures, guidelines, laws, regulations, industry best practices, and related concepts in order to apply this information for selecting the proper security control framework to meet business and government objectives. An understanding of the legal issues affecting internal control is critical to understanding appropriate security measures used to meet business and government objectives.

**IST200G Communication Electro-Optics 2-2-3**

As informational systems approach physical limitations in performance, understanding electronics, optics, and electromagnetic propagation is critical for IST professionals. In this course, physical layer operations including communications theories, guided and unguided signal propagation, and physical layer phenomena are explored using intuitive, modeled, and experimental approaches. Prerequisite: IST113G or IST122G or equivalent competencies. **Spring semester**

**IST212G Mobile Systems Architecture 2-2-3**

This course will focus on Computer Systems for Mobile and imbedded processing. System on a Chip (SoC) architectures will be examined in an integrated approach that combines hardware and software functions of the CPU. To support this study the components of the ARM architecture and its programming environment will be thoroughly explored. Basic microControllers and multicore processors will be used in the lab exercises to support the study of the interplay between the hardware & software. **Spring semester**

**IST221G Advanced Switching 2-2-3**

Multilayer Switching enables network administrators to implement appropriate technologies to build scalable multilayer switched networks; build switched networks using multilayer switching technologies; create and deploy a global intranet; and implement basic troubleshooting techniques in environments that use multilayer switches. The knowledge from this course will also enable learners to improve traffic flow, reliability, redundancy, and performance for LAN switching that are self-supported or transported via service provider. Prerequisite: IST223G or Cisco Certified Network Associate (CCNA) certification.

**IST222G Scaling Networks****2-2-3**

The third of a four course sequence within the Cisco Academy program is based on the Exploration 3 curriculum. LAN switching protocols including VLANs, VTP, QoS, security and remote access management are explored. Wireless network access concepts are developed to balance ease of access with security and performance issues. Laboratory experiences involve advanced LAN configuration and testing. Prerequisite: IST122G. **Fall/Spring semesters**

**IST223G Connecting Networks****2-2-3**

The last of a four course sequence within the Cisco Academy program is based on the Exploration 4 curriculum. Issues of convergence (voice, video, data) on networks are addressed in the context of WAN connectivity through PPP, HDLC, Frame Relay, and broadband WAN protocols. WAN security and efficient implementation through protocols including ACLs, DHCP, and NAT are explored. Prerequisite: IST122G and IST123G. **Fall/Spring semesters**

**IST228G Network Implementation****2-2-3**

Network design and installation methods are utilized to plan and install horizontal layer and vertical backbone networks. Networks are designed, specified, and proposed using industry documentation and cost/performance analysis techniques. Students will implement their design to create an operational network, which is analyzed to prove the effectiveness of their plan, use installation equipment, materials, and standards. Prerequisite: IST113G or IST223G or permission of instructor.

**IST242G Advanced Virtualization****2-2-3**

This course in the IST Cloud path focuses on concepts surrounding enterprise virtualization with emphasis on VMware vSphere. Enterprise and cloud-based application delivery through virtualization will be examined. Subsections will include configuring storage, networking, high availability, and systems management for virtual infrastructures. Specific labs include: the installation and configuration of vSphere hosts, configuring iSCSI and NFS storage area networks, configuring virtual switches, and the maintenance and deployment of virtual machines. Required knowledge includes PC experience, PC and server architecture, Windows servers and Active Directory, storage technologies, and a thorough understanding of TCP/IP networking. Prerequisite: IST142G or Permission from Instructor. **Summer semester**

**IST245G Information Storage and Management****2-2-3**

This course provides a comprehensive introduction to storage technology including Storage Area Networks (SANs), tiered storage (CAS) and file sharing attachment (NAS) that will enable the student to make informed decisions concerning the selection and implementation of storage systems in a complex IT environment. The student will learn about the architectures, features, and benefits of an intelligent storage system. Topics include networked storage technologies and long-term archiving solutions, information security, and the emerging field of storage virtualization technologies. This course focuses on storage technology concepts and principles that are reinforced with examples of actual solutions. Realistic case studies enable you to design the most appropriate solution for given sets of criteria. Prerequisites: IST113G and IST122G. **Fall semester**

**IST251G Windows Network Operating Systems Services** **2-2-3**

Windows networking services including DHCP, DNS, WINS, remote access and security features are explored, installed, and configured in this strong laboratory experience course. The services are explored with respect to standard protocols and their impact on the operation of the network. Prerequisite: IST151G or equivalent competencies. **Spring semester**

**IST253G Windows Server 2008 Active Directory** **2-2-3**

Windows Server 2008 Active Directory is a course in the Microsoft MTA path. Topics include configuring, maintenance and troubleshooting of Active Directory on a 2008 Server. Organizational Unit structure in relation to security will be explored. Define and configure Group Policy as a security tool will be examined. Prerequisite: IST151G or equivalent competencies. **Fall semester**

**IST262G Advanced Network Security** **2-2-3**

This course in the IST Security track focuses on the overall security processes with a major emphasis on hands-on skills in the areas of secure perimeter, secure connectivity, security management, identity services, and intrusion detection. Specific labs include: data encryption technology, VPNs including L2TP, PPTP, GRE, and IKE, AAA Security, TACACS+, IPSec, Perimeter routers & advanced ACL/CBAC/PAM, TCP Intercept & Denial of Service attacks, NAT/PAT. Some knowledge of TCP/IP protocol is assumed. This course covers many of the Security+ Certification Domains of Knowledge. Prerequisite: IST223G or equivalent competencies. **Spring semester**

**IST264G Configuration Security Appliance** **2-2-3**

This course in the IST Security track focuses on the configuration of the Cisco PIX Security Appliance, with a major emphasis on hands-on skills in the areas of secure perimeter, secure connectivity, security management, identity services, and intrusion detection. Specific labs include: basic configuration, DHCP server, NAT/PAT, conduits, multiple interfaces, advanced ACL/CBAC/PAM, object groups, AAA Security, CSACS, advanced protocols and intrusion detection systems, failover and system maintenance. Some knowledge of TCP/IP protocol is assumed. This course covers many of the Security+ Certification Domains of Knowledge. Prerequisite: IST223G or equivalent competencies. **Fall semester**

**IST266G Security+** **2-2-3**

This course provides an in-depth study of the security requirements in a business enterprise environment. The core material is based on the Security+ SY)-401 exam. Students will study risk related concepts and apply appropriate risk mitigation strategies. An understanding of the types of equipment found in a network is critical to understanding appropriate security measures used to protect network assets. The end result of this class is to be ready to take the CompTia Security+ exam proctored by a third party. Prerequisite: IST122G or Permission from Instructor. **Summer semester**

**IST275G Network Protocols and Services** **2-2-3**

Understanding network protocols and services is essential for a working with network systems. This course provides in depth coverage of key protocols and services that are key ingredients in network systems. A primary focus on TCP/IP will include explorations of other Layer 3 and 4 protocols including TCP/IP, IPX, SNMP and ICMP. Upper layer protocols such as



HTTP, SMTP, Telnet and FTP will also be investigated. Pre/Co-requisites: IST123G or IST113G or equivalent competencies. **Summer semester**

### **IST281G Internship**

**1-8-3**

This capstone course will allow students to receive on-the-job experience at an off-site location related to their specific area of academic concentration. Students are required to work eight hours per week at paid/unpaid positions that meet the criteria established by the Internship Manual. A seminar meeting one period per week will review internship progress and discuss issues related to successful employment. Outside work and research concerning the weekly topic will be required. Prerequisite: Completion of coursework for the first three semesters of the student's program of study and approval of the Department Chair and/or Program Advisor.

### **MANF112G Topics in Manufacturing**

**2-2-3**

This course is designed to prepare students for jobs in advanced manufacturing. Topics include an introduction to safety; workplace skills; Lean manufacturing concepts; quality; understanding metals and other materials; heat treating and grinding, hand tool use; precision machining technology; careers in machining and related careers. Students will identify a career goal and create a personal resume as part of this course. **Spring semester**

### **MANF135G Technical Math for Manufacturing**

**3-0-3**

This course will cover mathematic concepts frequently used in manufacturing, including some review of fractions, decimals, algebra, ratios, data visualization and statistical measures, plane and solid geometry and applications, Cartesian coordinate system, and right triangle trigonometry with applications including vectors. Students will be introduced to semi-precision measurement and precision measurement, using both Metric and English Standard systems. Prerequisite: Test into MATH080G or higher, or approval by the department chair. **Fall semester**

### **MANF225G Solid Modeling (CAD/CAM)**

**2-2-3**

Building on the introduction to Computer Aided Design (CAD) students received in ACM120, this course will give students the opportunity to create and modify more complicated computer models of parts and assemblies. They will then use these models to produce blueprints of parts and assemblies and run simulations to test the parts in a digital model of their intended working environment. The course will also introduce students to Computer Aided Manufacturing (CAM). Finally students will use CAM software to define milling operations, tooling and toolpaths that will instruct a CNC machine to cut a part from a block of material. Prerequisites: ACM120G with a C- or better, Accuplacer for computers or permission of instructor. **Spring semester**

### **MANF260G Advanced Print Reading & GD&T**

**2-2-3**

This course will focus on the Y14.5-2009 drafting standard. Building on the introduction to GD&T students received in ACM120 and ACM 254. Using example drawings and parts, students will practice interpreting symbols and specifications based on the standard and inspect parts to determine if they meet specifications. We will discuss the need for the standard with a focus on how it can reduce waste, save money and improve quality when properly implemented and interpreted. Prerequisites: ACM120G with a C- or better and ACM254G with a C- or better; or permission of department chair. **Spring semester**

**MANF266G CNC Programming****2-2-3**

This course will build on the basic programming taught in ACM255. Students will learn program optimization strategies that can be applied to programs from ACM255 or to CAM posts to make machining more efficient. Parametric programming will be introduced and students will learn how to use variables, parameters and control program flow. Students will also learn to incorporate probing cycles into their programs. Prerequisites: ACM255G Composites CNC Milling and MANFG225G Solid Modeling, with a C- or better; or permission of the department chair. **Fall semester**

**MANF267G Work Holder and Fixture Design****2-2-3**

Work holding and Fixture Design will introduce the Setup Operator to a history and definition of fixture designs. Understanding concepts in: 12 degrees of freedom, GD&T, Alternative ways to overcome variations in difficult to control parts with Probes and parametric programming, and utilizing Assemblies in Solidworks to visualize and maintain proper geometry when programming parts. Proper tool selection and techniques for difficult to machine materials will also be demonstrated to set yourself up for success every time. Prerequisites: ACM255G with a C- or better; or permission of the department chair. **Spring semester**

**MASS150G Physiology of Wellness****2-0-2**

Students in this course develop strategies for self-care needed for longevity in the field of Massage Therapy as well as strategies for working with clients to promote change that will complement massage in creating optimal health and wellness. Students will define stress and stress factors and identify the impact it has on an individual physically and psychologically. Students will explore the nature of stress and how it can be the cause of disease. Students will identify stress factors and patterns of stress that cause dysfunction as well as strategies to reduce and manage stress. A variety of stress reducing/relaxation techniques will be discussed or experienced. Prerequisite: Permission of the Massage Therapy Program Coordinator. Co-requisites: MASS161G, MASS162G, MASS171G (or BIOL110G), and MASS181G. **Fall semester**

**MASS161G Principles of Massage Therapy****2-0-2**

This course is designed to provide the student with entry level information about the history and theory of massage therapy. Material covered includes principles of professional touch, history of massage including pertinent people who helped develop massage into what it is today, therapy room set up, hygiene and sanitation, proper record keeping procedure including intake procedures, postural assessment, SOAP charting and devising a treatment plan, endangerment sites and contraindications, and the physiological effects of massage therapy on the body's systems including the autonomic nervous system. The student will learn how to determine if a client is a candidate for therapeutic change, condition management or palliative care. Students will be exposed to recent articles and studies on the effects of massage on the body. Prerequisites: Permission of the Massage Therapy Program Coordinator and placement into college level reading. Co-requisites: MASS150G and MASS171G (or BIOL110G). **Fall semester**

**MASS162G Essentials of Massage Application****0-4-2**

This course is designed to provide the student with entry level practical massage therapy skills. Material covered includes ethics of touch, appropriate practitioner body mechanics and proper draping technique. Students will learn the basics of providing a full body Swedish

Massage, seated massage and range of motion with instruction on massage strokes, and application of oils, creams, lotions and gels, The student will continue practice in identifying contraindications, sanitation procedures, proper record keeping including intake procedures, postural assessment, SOAP charting and devising a treatment plan. The students will assess the muscle tissue and fascia both pre and post massage and observe the physiological effects of massage therapy, both reflexive and mechanical, on the body's systems. Massage for special populations will also be included. Prerequisites: Permission of the Massage Therapy Program Coordinator, MASS161G, and MASS171G. Co-requisites: MASS150G and MASS181G. **Fall semester**

**MASS171G Structural Anatomy and Physiology** **3-2-4**

This course will give Massage Therapy students a thorough background in anatomy and physiology stressing the importance of the therapists' knowledge of muscles bones and nerves. In-depth information is presented on the structure and function of human cells, tissues, and organ systems including the skeletal, muscular and nervous, systems. Laboratory work augments lecture topics and the use of student models to explore body orientation and planes, bony landmarks, etc. Prerequisites: Permission of the Massage Therapy Program Coordinator and placement into college level reading. Co-requisites: MASS150G and MASS161G. **Fall semester**

**MASS172G Visceral Anatomy and Physiology** **3-2-4**

This course includes in depth information of the structure and function of the integumentary, endocrine, digestive, respiratory, cardiovascular, respiratory, urinary, and reproductive systems with discussions of how massage therapy may affect and enhance the function of these systems while supporting the body's immune system and hormone production. Laboratory work augments lecture topics. Prerequisites: Permission of the Massage Therapy Program Coordinator, complete MASS251G, MASS261G, MASS191G and MASS281G with a grade of C or better. Co-requisites: MASS271G, MASS192G, and HOSP244G. **Summer semester**

**MASS181G Pathology and Massage I** **2-0-2**

Pathology and Massage I is a course designed to teach the massage therapist the benefits of massage on the skeletal, muscular and nervous system as well as when it is safe to perform massage on individuals with specific diseases, syndromes or conditions of these systems. This course will further instruct students when and how to make adjustments to accommodate clients with these diseases, conditions or syndromes and when massage is contraindicated. Prerequisites: Permission of the Massage Therapy Program Coordinator, placement into college level reading and MASS171G. Co-requisites: MASS150G and MASS162G. **Fall semester**

**MASS182G Pathology and Massage II** **2-0-2**

Pathology and Massage II is a course designed to teach the massage therapist the benefits of massage on the circulatory, urinary, lymphatic, reproductive, integumentary, respiratory, and lymphatic systems as well as when it is safe to perform massage on individuals with specific diseases, syndromes or conditions of these systems. This course will further instruct students when and how to make adjustments to accommodate clients with these diseases, conditions or syndromes and when massage is contraindicated. Prerequisites: Permission of the Massage Therapy Program Coordinator, complete MASS251G, MASS261G, MASS191G and MASS281G

with a grade of C or better. Co-requisites: MASS271G, MASS192G, MASS172 and HOSP244G.  
**Summer semester**

### **MASS191G Clinical Experience I**

**0-4-1**

Clinical Experience I is the first exposure the students have to a working clinical setting. They will learn the operations, policies and procedures of a massage clinic. In addition they will treat clients based on their scope of practice and training from past courses as well as incorporating theory, technique and knowledge from current courses including MASS251G. Students will practice client consultation, devising a treatment and plan, SOAP charting and the art of the therapeutic conversation with each client. 64 one hour sessions are required for course completion. Prerequisites: Permission of the Massage Therapy Program Coordinator, complete MASS150G, MASS161G, MASS162G, MASS171G and MASS181G with a grade of C or better. Co-requisites: MASS251G, MASS261G and MASS281G.

**Spring semester**

### **MASS192G Clinical Experience II**

**0-4-1**

Clinical Experience II is designed to provide the students an opportunity to continue to refine the advanced skills learned in MASS251G and to incorporate new therapies based on their scope of practice and training from past courses as well as incorporating theory, technique and knowledge from current courses as they are learned including in MASS271G. They will continue to participate in the operations, policies and procedures of a massage clinic. Students will further develop SOAP charting and the art of the therapeutic conversation. 64 one hour sessions are required for course completion. Prerequisites: Permission of the Massage Therapy Program Coordinator, complete MASS251G, MASS261G, MASS191G, and MASS281G with a grade of C or better. Co-requisites: MASS271G, MASS172G, MASS182G and HOSP244G. **Summer semester**

### **MASS251G Advanced Theory and Techniques**

**3-4-5**

This course covers the theory and application of advanced massage therapy techniques including Neuro-muscular Reeducation, Myofascial Release and Trigger Point Therapy for the purpose of finding and treating myofascial syndromes throughout the deep and postural muscles as well as prime movers. Theory and application of techniques for treatment of commonly encountered conditions will also be learned. Continued theory in support of client evaluation, treatment plan preparation, charting and the use of heat and cold will be presented. Prerequisites: Permission of the Massage Therapy Program Coordinator, complete MASS150G, MASS161G, MASS162G, MASS171G and MASS181G with a grade of C or better. Co-requisites: MASS261G, MASS191G and MASS281G. **Spring semester**

### **MASS261G Kinesiology for Massage Therapists**

**3-4-5**

This course is an introduction to the science of muscles, body motions and biomechanics. Course concentration will include structure, origin, insertion, and function of muscles with patho-mechanical considerations. Emphasis will be placed on the movements of the head, neck, and face, upper and lower limbs, spine, abdomen, and pelvic girdle. Laboratory investigations will concentrate on palpation and motions produced by these muscles using movement exercise. Students will develop proficiency with both static and motion palpation and muscle tracing with emphasis on muscles in a relaxed state and in motion. Prerequisites: Permission of the Massage Therapy Program Coordinator, complete MASS150G, MASS161G,

MASS162G, MASS171G, and MASS181G with a grade of C or better. Co-requisites: MASS251G, MASS191G and MASS281G. **Spring semester**

**MASS271G Therapeutic Massage Specialties** **2-2-3**

This course introduces the student to other modalities of massage such as Sports, Maternity, Hot Stone and Orthopedic Massage. Additional content may include, but is not limited to Energy Modalities, Spa Therapies, Eastern Theory and Technique and other alternative health modalities. Theory in support of client evaluation, treatment plan preparation, and SOAP notes will be continued in this course. Prerequisites: Permission of the Massage Therapy Program Coordinator, complete MASS251G, MASS261G, MASS191G, and MASS281G with a grade of C or better. Co-requisites: MASS192G, MASS172G, MASS182G and HOSP244G. **Summer semester**

**MASS281G Ethics for Massage Therapists** **1-0-1**

This course will include discussions on personal and professional ethics as they pertain to the massage therapy industry, as well as business and medical ethics based on the fundamentals of establishing a successful practice, conducting the day to day operation of a that practice and maintaining client confidentiality. Prerequisite: Permission of the Massage Therapy Program Coordinator, complete MASS150G, MASS161G, MASS162G, MASS171G and MASS181G with a grade of C or better. Co-requisites: MASS251G, MASS261G and MASS191G. **Spring semester**

**MATH080G Skills for College Math** **4-0-4**

This course is for the student who possesses an adequate background in basic math concepts and skills, but who has never taken an algebra course or who needs a refresher course. Topics covered are operations with signed numbers; algebraic expressions; linear equations/inequalities; exponents; square roots; understanding and manipulating formulas; translating and solving word problems; interpreting/analyzing data, and basic graphing techniques; and applications of all skills. Credits do not count toward graduation requirements. Prerequisite: Satisfactory placement test scores as defined by mathematics faculty, MATH070G with C or better or math department approval. **All semesters**

**MATH145G Quantitative Reasoning** **4-0-4**

Quantitative Reasoning course. This course focuses on quantitative thinking and methods with real- world applications. Some topics covered are algebraic expressions with applications, graphing and modeling linear, quadratic, polynomial, exponential and logarithmic equations, systems of linear equations and linear programming, simple and compound interest, annuities, probability and measures of central tendency of a data distribution. Students cannot receive credit for both MATH145G and MATH147G. (See catalog description for MATH147G). Prerequisites: Satisfactory placement test scores as defined by the mathematics faculty or successful completion (grade of C or Better) of MATH 084G, MATH090G or equivalent, or by permission of the math department chair. **All semesters**

**MATH147G Quantitative Reasoning Plus** **5-0-5**

Quantitative Reasoning course. This course satisfies an entry-level college mathematics requirement and acts as an alternative or replacement for MATH145G but with some added class time for review. Some careful attention is given as the course progresses to review high school algebra/arithmetic and is intended for students who do not quite place into MATH145G. Students cannot receive credit for both MATH145G and MATH147G. (See catalog description

for MATH145G). Prerequisites: Satisfactory placement test scores as defined by the mathematics faculty or successful completion (grade of C or Better) of MATH 080G or higher, or by permission of the math department chair. **All semesters**

### **MATH150G College Algebra**

**4-0-4**

This course prepares the student for higher-level mathematics. Some topics covered are factoring, rational exponents, solving linear and quadratic equations, rational expressions and functions, polynomial functions, composite and inverse functions, systems of linear and quadratic functions, logarithmic functions, and exponential functions. This course also prepares the student for higher-level mathematics. Graphing of trigonometric functions is in Pre-Calculus. Prerequisite: Satisfactory placement test scores as defined by mathematics faculty or successful completion (grade of C or better) of MATH084G or MATH090G, or with math department approval. Students cannot receive credit for both MATH150G and MATH152G. **All semesters**

### **MATH152G College Algebra Plus**

**5-0-5**

This course prepares the student for higher-level mathematics and acts as an alternative or replacement for MATH150G but with some added class time for review. Some careful attention is given during the first few weeks to review high school intermediate algebra and is intended for students who do not quite place into MATH150G. Prerequisite: Satisfactory placement test scores as defined by the mathematics faculty or successful completion of MATH080G (C or better) or with math department approval. Students cannot receive credit for both MATH150G and MATH152G. **All semesters**

### **MATH170G Discrete Mathematics**

**4-0-4**

Discrete mathematics describes processes that consist of a sequence of individual steps and is based on the ideas underlying the science and technology of the computer age. The main themes of this course are: logic and proof: induction and recursion; discrete structures such as number sets, general sets, Boolean algebras, functions, relations, graphs, trees, regular expressions and finite-state automata; combinatorics and discrete probability; algorithms and their analysis; and applications and modeling. Prerequisite: Satisfactory placement test scores as defined by mathematics faculty or successful completion (grade of C or better) of MATH145G/147G. **All semesters**

### **MATH210G Pre-Calculus**

**4-0-4**

This course prepares the student for higher-level mathematics. Some topics covered are solving polynomial equations, rational expressions and functions, polynomial functions, composite and inverse functions, logarithmic functions, and exponential functions. This course also prepares the student for Calculus with trigonometric functions, their inverses and solving problems involving trigonometric identities. Some topics include right triangle trigonometry, Law of Sines, Law of Cosines and the geometry of vectors in the 2-D plane. Prerequisite: Satisfactory placement test scores as defined by mathematics faculty or successful completion (grade of C or better) of MATH150G or MATH152G or with math department approval. **All semesters**

### **MATH215G Finite Mathematics**

**4-0-4**

This course begins with a review of linear equations, inequalities, and systems of equations emphasizing graphing methods. Topics include matrices, linear programming, sets, an introduction to probability, the mathematics of finance, and the simplex method. Applications

include Input-Output analysis, Sensitivity Analysis and Markov Chains. Prerequisite: Satisfactory placement test scores as defined by mathematics faculty or successful completion (grade of C or better) of MATH145G or MATH147G or with math department approval. **All semesters**

**MATH225G Probability and Statistics** **4-0-4**

Topics include basic measures of central tendency and variability; frequency distributions; probability; the binomial distribution; the normal distribution; sampling of distributions; estimation of parameters; confidence levels and hypothesis testing; non-parametric tests; simple regression and correlation. Prerequisite: satisfactory placement scores as defined by mathematics faculty or successful completion (grade of C or better) of MATH145G or MATH147G or with math department approval. **All semesters**

**MATH230G Calculus I** **4-0-4**

Calculus I is a first calculus course that is designed to explore functions, limits, continuity, derivatives; rules for differentiating algebraic, trigonometric, exponential and logarithmic functions; chain rule; implicit differentiation; related rate problems; max-min problems; curve sketching; integrals, areas and volumes. Prerequisite: MATH210G with a grade of C or better. **All semesters**

**MATH235G Statistics for Engineers and Scientists** **4-0-4**

This course is Probability and Statistics intended to focus on exploratory data analysis inferential statistics, regression techniques and design of experiments with large data sets. Major topics include inference testing for population standard deviations, inferences for two population proportions, descriptive & inferential methods in regression and correlation, multiple regression analysis, ANOVA and Two-Way ANOVA. Use of statistical software is included. Prerequisite: Successful completion of MATH210G or higher (grade of C or better) or with math department approval. **Spring semester**

**MATH245G Introduction to Linear Algebra** **4-0-4**

This course explores the linear systems of equations, matrix operations, determinants, linear dependency, vector spaces, linear transformations, eigenvalues and orthogonality. Construction of mathematical reasoning using induction and contradiction are integrated into the course curriculum. Prerequisite: Satisfactory placement test scores as defined by mathematics faculty, or MATH230G with a grade of "C" or better, or with math department approval. **Fall semester**

**MATH250G Calculus II** **4-0-4**

This is a second course in calculus. Topics to be investigated include area, volume, arc length, surface area, pressure force; integration of trigonometric, exponential and logarithmic functions; differentiation and integration of inverse trigonometric and hyperbolic functions; methods of integration; improper integration; infinite series, Taylor and MacLaurin series; and polar coordinates. Prerequisite: MATH230G with a grade of C or better. **All semesters**

**MATH265G Differential Equations** **4-0-4**

This first course in differential equations will include introductory theory, solutions methods and selected applications of ordinary differential equations. Topics include fundamental methods of solving ordinary first- and second- order differential equations, essentials of linear

algebra, Laplace transforms, and series solutions. Prerequisite: MATH250G with a grade of "C" or higher or with math department approval. **Spring semester**

**MATH270G Calculus of Several Variables** **4-0-4**

Extends the study of calculus to several variables. Topics include a study of vectors, vector algebra, and vector functions; partial differentiation; chain rule; extrema; transformations; gradient, moments of inertia, divergence, and curl; curves and surfaces; multiple, line, and surface integrals; Green's and Stoke's theorem. A graphing calculator will be required. Prerequisite: MATH250G with a grade of "C" or higher or with math department approval. **Fall semester**

**MKTG101G Introduction to Marketing** **3-0-3**

The course presents an introduction and overview of marketing activities, and explains the role of marketing in the Global economic and social contexts. Students will learn about the components of strategic marketing, including how to plan, price, promote, and distribute products, goods, services, ideas, people, and places.

**MKTG135G Consumer Behavior** **3-0-3**

An in-depth analysis of the internal and external forces in the consumer decision-making process as it relates to marketing. Areas of study include consumer reaction, personal selling, product positioning, brand loyalty, and image management. Applications in non-profit and government areas are also discussed. Prerequisite: MKTG101.

**MKTG201G Business Relationship Management** **3-0-3**

Relationship Management provides students with theoretical knowledge and practical skills in building business relationships and the technologies associated with marketing, such as Customer Relationship Management (CRM) tools and software. Prerequisite: MKTG101G or HOS175G. **Spring/Fall semesters**

**MKTG205G International Marketing** **3-0-3**

This course analyzes the decision-making process in marketing products, goods, and services internationally. The focus will be on the design of international marketing strategies (identification of potential markets, and product, price, promotion, and distribution decisions) within the global constraints of a particular cultural, economic and political setting. Prerequisite: MKTG101G.

**MKTG210G Advertising** **3-0-3**

This course will cover the development, planning, implementation, and evaluation of an advertising campaign. A primary focus will be on the development and planning of creative and media strategies. Also examined will be the dynamic changes taking place with regard to electronic media and advertising's role in the marketing of products, goods, and services. Prerequisite: MKTG101G.

**MKTG224G Sales and Sales Management** **3-0-3**

This course will focus on the dynamic changes taking place in sales and sales management. Critical areas of sales organizations will be examined: building long-term relationships with customers; creating sales organizations that are more nimble and adaptive to the changing customer base; gaining greater job ownership and commitment from sales personnel; shifting sales management style from commanding to coaching; leveraging available technology for



sales success; and better integrating salesperson performance to incorporate the full range of activities and outcomes relevant within sales jobs today. Case method will be employed. Prerequisite: MKTG101G. **Spring/Fall semesters**

**MOAA120G Medical Office Administrative Assistant 3-0-3**

Medical Office Administration will teach the student to succeed in today's medical front office by learning the principles of medical office administration and how to apply factual knowledge to the many complex scenarios that may arise in the medical office environment. Emphasis will be on communication skills, ethical and legal issues, paper and electronic medical records, banking procedures and the revenue cycle. Prerequisite: Admission to the Medical Office Administrative Assistant Program. **Fall semester**

**MOAA130G Medical Coding I 3-0-3**

Medical Coding I focuses on the evaluation and management, the medicine section and also ICD-9-CM diagnosis coding aspects of coding for medical office setting. The students will be required to apply their knowledge of medical terminology to interpret and abstract pertinent data needed to accurately code the evaluation and management portion of an office or hospital visit to optimize insurance reimbursement. CPT, HCPCs and ICD-10-CM manuals will be explained and utilized extensively. Prerequisites: Admission to the Medical Office Administrative Assistant or Health Information Technology program, AH110G and AH112G both with a grade of C or better. **Spring semester**

**MOAA210G Medical Coding II 3-0-3**

This coding course focuses on surgical procedures, with individual emphasis on each of the body systems, radiology, pathology and behavioral medicine. Special attention will be paid to the use of modifiers for definitive CPT, HCPCs as well as ICD-10 diagnosis coding. Students will continue to interpret and abstract data from simulated and actual case studies. Prerequisites: C or better in MOAA130G and AH112G. **Spring semester**

**MOAA212G Insurance for the Medical Office 2-2-3**

The Medical Insurance Billing course focuses on the data entry of patient demographics, insurance information, ICD-10-CM, CPT, and HCPCs codes to properly complete the health insurance claim form for submission to the insurance carriers and facilitate prompt payment. The course will also address the legal and ethical issues involved in the field of health information management including HIPAA and OIG regulations. Prerequisites: MOAA210G and CIS110G or CIS107G. **Summer semester**

**MOAA220G Advanced Coding 2-0-2**

Advanced medical coding provides an in-depth understanding of physician-based medical coding and coding services using real-world patient cases including experience coding from physical documentation with advanced material. This course will enhance clinical decision-making skills, abstraction of information from documents, code selection and sequencing, and prepare the student for auditing medical records. Prerequisite: Grade of C or better in MOAA210G. **Summer semester**

**MOTR110G Product, PDI, and Dealer Experience 2-4-4**

The purpose of this course is for students to be introduced to basic processes related to preparation and delivery of motorcycles, and to understand basic procedures involved in the

set-up and delivery process. Students will learn and apply procedures, use reference materials, become familiar with shop practices relevant to set-up and delivery. In addition, students will be introduced to basic organizational practices and receive an overview of maintenance workflow from intake and service writing, set-up, and delivery. Prerequisite: Acceptance to program. Co-requisites: MOTR120G and MOTR130G. **Fall semester**

**MOTR120G Powertrains: Engine, Drivetrain, and Transmission** **2-4-4**

This course introduces students to internal combustion engines, transmissions, fuel systems, and provides students with opportunities to use and apply references information to understanding, diagnosing, and resolving basic powertrain problems. Students will learn, practice, and demonstrate mastery of making accurate measurements using precision tools, and work on all basic aspects of the drivetrain. Students will disassemble and reassemble drivetrain components to understand the function and potential problems with these components. Students will focus on shop safety, and review and practice professional communication skills throughout the course. Prerequisite: Acceptance to program. Co-requisites: MOTR110G and MOTR130G. **Fall semester**

**MOTR130G Electrical Systems and Electrical Service Procedures** **2-4-4**

In this course, learn basic aspects of electrical system diagnosis and service, as well as relevant theoretical understanding of electrical system theory. In addition, students will learn, practice, explain, and demonstrate mastery of electrical service procedures. Prerequisite: Acceptance to program. Co-requisites: MOTR110G and MOTR120G. **Fall semester**

**MOTR140G Wheels, Tires, and Brakes** **2-4-4**

In this course, students will learn inspection procedures, service, and repair of wheels, tires, and brakes for various models of motorcycles. In addition, students will learn, practice, explain, and demonstrate mastery of the recommended service procedures and preventative maintenance of wheels, tires, and brakes at specified intervals. Prerequisites: Successful completion of MOTR110G, 120G, and 130G, or permission of program coordinator. **Spring semester**

**MOTR150G Capstone: Servicing Motorcycle Families** **4-8-8**

This course will focus on the procedures and knowledge required to service contemporary models of motorcycles, including: Sportster, Dyna, Softail, Street, FL, and Trike. Students will integrate and apply knowledge from previous courses to all aspects of each type of motorcycle. Areas of focus will include inspection and maintenance of powertrain elements, electrical systems, scheduled service procedures, wheels, tire, and brakes, preparing motorcycles for service, and delivering motorcycles when service is completed. Students will periodically observe professional technicians working in similar circumstances in the maintenance shop of the dealership. Prerequisites: Successful completion of MOTR 110G, 120G, and 130G, or permission of program coordinator. Co-requisite: MOTR140G. **Spring semester**

**NATR100G Natural Resources Stewardship** **3-2-4**

This course focuses on New Hampshire's natural resources and the relationship between healthy ecosystems and healthy communities. Specialists from the field will engage students to focus on particular aspects of NH's natural resources and history. The course emphasizes hands-on, experiential learning in both outdoor and classroom settings and offers techniques for applying scientific and horticultural skills in real-world service learning projects. Students

will gain an understanding of stewardship from awareness to activism, across topics that include native plant identification, ecological landscaping, sustainable living, NH's wildlife and their habitats. They will also acquire skills in presentation, public outreach and local government access. (Will not fulfill science elective requirements.) This is a Service Learning Course (SL). **Fall semester**

**NATR105G Sustainable Agriculture & Food Systems 3-2-4**

This course emphasizes the importance of comprehending the current global food system as a way to make a positive impact on our local food production here in New Hampshire. Students will learn the fundamentals of organic, sustainable agriculture techniques while contrasting them with large-scale conventional farming practices. Classroom discussions in small groups, student-initiated research projects and presentations will occur weekly. Field trips to local farms will be conducted later in the season. **Fall/Spring semesters**

**NATR299G Contemporary Conservation Issues and Environmental Awareness 3-3-4**

This course explores the impacts of technology and human activity on our environment and natural resources. Key conservation issues are used as examples of past and present biological, social, and environmental conflicts. Each week we will explore a range of themes that help you analyze and interpret the work of local leaders and their organizations. The ultimate goal of the course experience is to help you explore your own leadership style and chart out a professional course for your future work academic and professional. Students will work collaboratively on a current environmental problem. Tasks will include characterizing the problem, analyzing possible solutions and publicly presenting the results. Prerequisite Admission to Environmental Studies Program or Instructor Signature. **Spring semester**

**NDT110G Introduction to Nondestructive Testing 2-2-3**

This course covers an introduction to the fundamental principles of non-destructive testing, the processes of examining materials without damaging them. Content will include an overview of career opportunities, training requirements, and certification programs for the NDT profession. Manufacturing processes, materials, and equipment will be covered as they relate to potential product flaws. Students will be introduced to various testing methods, including the benefits, limitations, and applications of each. Labs will include introduction to the NDT lab equipment, safety in the lab, visual inspection, interpretation of results, and reporting. Applied math will be included in this course. In addition to scheduled classes, students will be required to attend field trips organized by instructors. Prerequisite: ACM210G with a grade of C or higher or permission of ACM Program Coordinator. **Fall semester**

**NDT210G Liquid Penetrant Testing 1-2-2**

Penetrant Testing (PT), used for detecting cracks and other surface defects on nonporous solid materials, is one of the most commonly used nondestructive testing methods. This course covers theory and principles as well as procedures and techniques using a range of materials. Applied mathematics will be included. Labs will focus on water-removable penetrants with a variety of developers. Quality control will be stressed. Prerequisite: NDT110G with a grade of C or higher. **Spring semester**

**NDT212G Ultrasonic Inspection 3-2-4**

Ultrasound, a term used to describe mechanical vibrations above the audible range, is commonly used in nondestructive testing of metals and nonmetal materials to measure

thickness or to examine the internal structure. Abnormalities such as cracks, boundaries, or inclusions can be detected as sound waves are scattered or reflected. In this class, students will learn the physics of sound, the use of sound waves for measurement, and technical aspects of ultrasonic testing. This course will cover math, including basic trigonometry, to help the student understand ultrasound principles in terms of velocity, distance and angles. Prerequisite: NDT110G with grade of C or better. **Spring semester**

### **NDT214G Radiographic Testing**

**3-2-4**

Radiographic inspection is based on the principles of physics that x-ray and gamma ray absorption indicates thickness and density of matter to examine material for internal discontinuities. Radiography is one of the most common and effective methods of inspecting products without damaging them (nondestructive testing or NDT). This course will cover material required for the classroom training portion for level 1 and II certification of NDT personnel in the radiographic testing method. This includes radiography testing principles, equipment, safety considerations, and the interpretation and evaluation of results. Applied math will include basic algebra and geometry. Prerequisite: NDT110G with grade of C or better. **Summer semester**

### **NURS111G Nursing I**

**6-9-9**

Students begin learning the roles of the Associate Degree Nurse as a provider and manager of care and a member within the discipline of nursing. Students develop introductory knowledge, attitudes, as well as interpersonal and psychomotor skills to provide care to patients with actual or possible health problems who are in a state of wellness. The organizing curricular concepts of Person, Health, Environment, and Nursing and their interrelationships are introduced. Students learn to respect the patient and family as central members of the health care team and develop commitment to advocacy, and provision of safe, high quality, holistic, and evidenced-based practice. Nursing care content includes the nursing process, health promotion, safe medication administration, communication/documentation, teamwork/interdisciplinary collaboration, effective utilization of resources, and patient/family education. Students learn to apply a systematic approach to health assessment. Additional nursing concepts that are integral to the nursing role such as professionalism, leadership, systems based practice, informatics and technology, and quality improvement are presented. Students are introduced to nursing research and conduct an article critique. Students participate in a Learning Lab group project and poster presentation. The Learning Laboratory provides opportunities to practice nursing skills in simulated activities. Clinical Learning provides experiences to practice nursing by caring for well patients or patients with common basic health problems in protected favorable environments such as nursing homes, rehabilitation and transitional care. Co-requisites: BIOL110G, PSYC110G, and FYE116G. **Fall semester**

### **NURS112G Nursing II**

**4-15-9**

Students develop competence to provide and manage care as a member within the discipline of nursing for patients and their families with common health problems in protected, favorable environments. The delivery of patient centered care across the life span is emphasized with a special focus on adults, children in childbearing and childrearing families, and psychiatric/mental health care settings. Nursing knowledge, attitudes, as well as interpersonal, and psychomotor competencies are further developed. Nursing content establishes the relationship between common health problems and their contributing factors;

pathophysiology; assessments/diagnostic and lab testing; evidenced based practice and collaborative care. The nursing concepts of safety/prevention of injury, systems based practice, leadership, professionalism, and ethical decision making are further explored in theory and developed in practice within the legal, political, regulatory and economic context of health care. Students further their understanding of nursing research by reviewing nursing literature and writing a research paper. Students participate in a group Community Health Project and poster presentation. The Learning Laboratory provides opportunities to practice more complex nursing skills in simulated activities. Clinical Learning provides experiences to practice nursing care in perinatal/pediatric or psychiatric/mental health, and adult health acute care settings. Prerequisites: Both NURS111G and BIOL110G with grades of "C+" or better, PSYC110G. Co-requisites: BIOL120G, PSYC210G, and FYE116G. **Spring semester**

### **NURS200G Advanced Placement Seminar**

**3-0-3**

Licensed Practical Nurses develop the knowledge, attitudes and interpersonal and psychomotor skills to succeed in advanced placement entry into the Associate Degree Nurse Program. The philosophy, objectives, and organizing curricular concepts of Person, Health, Environment, and Nursing and their interrelationships are introduced. Students develop competence to provide and manage care as members within the discipline of nursing for patients and their families with common health problems in protected, favorable environments. Students learn to respect the patient and family as central members of the health care team and develop commitment to advocacy, and provision of safe, high quality, holistic, and evidenced-based practice. Nursing care content includes the nursing process, health promotion, safe medication administration, communication/documentation, teamwork/interdisciplinary collaboration, effective utilization of resources, and patient/family education. Students learn to apply a systematic approach to health assessment. The nursing concepts of safety/prevention of injury, systems based practice, leadership, professionalism, and ethical decision making are explored in theory within the legal, political, regulatory and economic context of health care. Students are introduced to nursing research, review nursing literature, and write a research paper. The Learning Laboratory provides opportunities to practice more complex nursing skills in simulated activities. Students apply the nursing process to online case studies in pediatric, psychiatric/mental health, and adult health acute care settings. Prerequisites: Admission to Nursing Program Advanced Placement; BIOL110G and BIOL120G in the past 5 years with a "C+" or better, PSYC110G, PSYC210G, FYE116G. **Summer semester**

### **NURS211G Nursing III**

**4-15-9**

Students develop competence to provide and manage care as a member within the discipline of nursing for patients and their families with common health problems and in favorable environments. The delivery of patient centered care across the life span is emphasized with a special focus on adults, children in childbearing and childrearing families, and psychiatric/mental health care settings. Nursing knowledge, attitudes, as well as interpersonal, and psychomotor competencies are further developed. Nursing content establishes the relationship between common health problems and their contributing factors; pathophysiology; assessments/diagnostic and lab testing; evidenced based practice and collaborative care. The nursing concepts of safety/prevention of injury, systems based practice, leadership, professionalism, and ethical decision making are further explored in theory and developed and applied in practice within the legal, political, regulatory and economic context of health care. Students utilize nursing research to create a Proposal Paper

exploring divergent perspectives on a contemporary issue or trend that impacts nursing practice. Students participate in the Cooperative Learning Lab group presentation. The Learning Laboratory provides opportunities to practice more complex nursing skills in simulated activities. Clinical Learning provides experiences to practice nursing care in perinatal/pediatric or psychiatric/mental health, and adult health acute care settings. Prerequisites: Both NURS112G and BIOL120G with grades of "C+" or better, as well as completion of all other first level courses per the Nursing program, and FYE116G. Co-requisites: BIOL210G and ENGL110G. **Fall semester**

### **NURS212G Nursing IV**

**3-18-9**

Students develop competence and independence to provide and manage care as members within the discipline of nursing as well as the interdisciplinary team for patients and their families with multi-system health problems across the life span in structured health care settings. Nursing knowledge, attitudes, as well as interpersonal, and psychomotor competencies are further developed and refined. Nursing content establishes the relationship between common multi-system health problems and their contributing factors; pathophysiology; assessments/diagnostic and lab testing; evidenced based practice and collaborative care. Professional standards of practice, research, and the nursing concepts of safety/prevention of injury, systems based practice, leadership, professionalism, quality improvement and risk management, culturally competent care, and ethical decision making within the legal, political, regulatory and economic context of health care are further discussed and explored in theory and developed and applied in practice. Students analyze the nursing research and create a Position Paper exploring divergent perspectives on a contemporary issue or trend that impacts nursing practice. Students participate in the Senior Seminar group presentations. The Laboratory Learning includes simulated learning activities to care for complex patients with multisystem health problems. Clinical Learning provides experiences to practice nursing care in advanced medical-surgical, extended care and/or acute rehabilitation, and various community health settings. At the conclusion of the course, the student is prepared to transition to the role of registered nurse. Prerequisites: Both NURS211G and BIOL210G with grades of "C+" or better, and ENGL110G. Co-requisites: MATH145G or higher, ENGL elective, Humanities/Fine Arts/Foreign Language elective. **Spring semester**

### **PHIL110G Introduction to Philosophy**

**3-0-3**

In this course, students will be introduced to the important ideas in Western philosophy. The course will emphasize the Greek origins of philosophy, the transformation of philosophy by Enlightenment thought in the 17th and 18th centuries, and the postmodern reaction to Enlightenment thought. The course will relate philosophical ideas to contemporary issues. (Fulfills Humanities requirement.) **Fall semester**

### **PHIL215G World Religions**

**3-0-3**

The course is an introduction to the major religions of the world. The origins, core beliefs, traditions, and practices will be discussed. The purpose of the course is to understand and appreciate the various religious theories and practices by focusing on key texts, figures and ideas. The approach will strive to be descriptive, not prescriptive. Students will gain initial exposure to the structure and world-view of the religions covered: Christianity, Islam, Judaism, Hinduism and Buddhism. Additional religions may also be included based on instructor and student interest (African, Native American and new wave, Taoism,

Confucianism, Baha'i, Zoroastrianism, Sikhism, etc.). (Fulfills Humanities requirement.)  
**Spring semester**

**PHIL240G Ethics** **3-0-3**

This course is designed to introduce students to general ethical theories, philosophies and decision-making models. The goal of the course is to relate theory to practice. Throughout the course, this general knowledge will be applied to specific problems and cases. Applications may include general ethical issues and more career-specific issues determined by student interest. (Fulfills Humanities requirement.) **All semesters**

**PHYS135G College Physics I** **3-3-4**

This course is an introduction to the basic principles of Newtonian mechanics with emphasis on the application of these principles when solving problems. Topics to be covered include kinematics of motion, vectors, Newton's laws, friction, work energy, impulse-momentum for both translational and rotational motion, and the mechanical properties of matter. Dimensional (unit) analysis and critical thinking are stressed. Prerequisite: "C" or better in MATH150G/152G or equivalent. **Fall/Spring semesters**

**PHYS136G College Physics II** **3-3-4**

This course is a continuation of the study of elementary physics that began in College Physics I. Special emphasis is placed on the principles introduced when solving problems. Topics to be investigated include the fundamentals and the applications of Coulomb's Law, electrical fields and potentials, capacitance, electric current and resistance, DC circuits, magnetism, electromagnetic induction, AC circuits, oscillating systems and waves, and geometric optics. Prerequisite: "C" or better in MATH210 or equivalent and PHYS135G. **Spring semester**

**PHYS290G University Physics I** **3-3-4**

This course is an introduction to the basic principles of physics including motion in one and two dimensions, force, statics, translational and rotational equilibrium, work, energy, power, and mechanical properties of matter. Dimensional (unit) analysis and critical thinking are stressed. Prerequisite: Grade of "C" or better in MATH230G or equivalent. **Fall semester**

**PHYS295G University Physics II** **3-3-4**

This course is a continuation of University Physics I, investigating the fundamental properties of solids, liquids, simple harmonic motion, mechanical waves, energy transfer, electromagnetic waves, field theory, heat, temperature, temperature effects on solids and fluids, heat transfer, geometric optics, and electricity. Special emphasis is placed on problem-solving skills, developing solutions based on the application of integration, polar coordinates and series to the solution of realistic problems. Dimensional (unit) analysis and critical thinking are stressed. Prerequisite: Grade of "C" or better in PHYS290G. **Spring semester**

**POLS110G American Government** **3-0-3**

This course provides a functional approach to the study of American government on the national, state, and local level. The structure, functions, operations, and problems of the American system will be explored in lectures, discussions, readings, and papers. (Fulfills Social Science requirement.) **Fall/Spring semester**

**POLS210G Introduction to Political Science** **3-0-3**

This course is an introduction to the field of political science. Political ideologies, nationalism, cultures, and institutions will be discussed. Public opinion, political parties, interest groups, and voting behavior will also be covered. Throughout the course, the concepts of power and legitimacy, elitism and pluralism will guide discussion. American and comparative examples will be utilized. (Fulfills Social Science requirement.)

**POLS220G Public Administration** **3-0-3**

This course discusses the growth of the public sector and the methods by which this sector can be managed. Topics include public management techniques, effective decision making, civil service, budgeting, public organizations, and the politics of public-sector administration. (Fulfills Social Science requirement.) **Spring/Summer semesters**

**PSYC110G Introduction to Psychology** **3-0-3**

This course is an introduction to various areas of psychology, including scientific investigation and leading theories. Topics include, but are not limited to: motivation, emotions, personality, physiological foundations of behavior, psychological disorders and therapy, perception, learning, and human development. (Fulfills Social Science requirement.) **All semesters**

**PSYC140G Introduction to Social Work** **3-0-3**

This course will introduce students to the profession of social work within the context of the social welfare system. It will provide an overview of an integrative approach to generalist social work practice, which emphasizes intervention on individual, environmental and societal levels. **Fall semester**

**PSYC150G Social Welfare & Policy** **3-0-3**

This course examines the values and norms that underlie social welfare services; the historical roots of current approaches to social services; the overt and covert functions of social welfare; and the political, social, cultural and economic forces that shape social welfare policy and services in the United States. Throughout the course, the parallel historical development of the profession of social work, including ways in which it responded to the demands of social problems across key periods of social welfare policy transformation will be considered. Students will also gain an understanding of the interrelated nature of global events and domestic social policy as it affects individuals and families across diverse practice settings. **Spring semester**

**PSYC205G Crisis Intervention** **3-0-3**

This course focuses on crisis theory methods of crisis intervention, and specific crises that occur with individuals and families such as suicide, unemployment, criminal victimization, natural disasters, illness, divorce, and death. Prerequisite: PSYC110G. (Fulfills Social Science requirement.) **All semesters**

**PSYC210G Human Growth and Development** **3-0-3**

This course is a study of psychological implications for the growth and development of humans with a specific emphasis on the physical, cognitive, social, emotional, and ethical dimensions during the prenatal period through later adulthood. A review of, and an introduction to, major theorists is presented on a continuing basis throughout the course. Prerequisite: PSYC110G. (Fulfills Social Science requirement.) **All semesters**



**PSYC215G Abnormal Psychology****3-0-3**

This course provides a comprehensive overview of the field of abnormal psychology and mental illness from a biopsychosocial perspective. Focus will be on the complexities and consequences of labeling as well as the diagnostic techniques and research methods used. Contemporary approaches to psychological and biological interventions will be introduced. PSYC110G. (Fulfills Social Science requirement.) **Fall/Spring semesters**

**PSYC230G Educational Psychology****3-0-3**

This course reviews the application of psychological principles to the educational environment. Theories of cognitive processes and development, learning, and social and moral development are discussed as they apply to learning and teaching. Issues involving assessment, classroom management, individual differences, and socioeconomic and developmental influences on learning are also presented. Application of theoretical perspectives to classroom teaching will be emphasized. Prerequisite: PSYC110G. (Fulfills Social Science requirement.) **Fall/Spring semesters**

**PSYC235G Health Psychology****3-0-3**

This course focuses on health empowerment coping styles of resiliency and characteristics of invulnerability. It is designed to meet the needs of professionals, significant others, and individuals themselves who are attempting to affect the quality of life outcomes of addiction, trauma, long-term stressors, and/or disease. This course brings awareness of factors and behavioral methods which facilitate a resilient, thrive mode of quality of life that is very different in nature and practice from that of the coping style of psychosocial survival. Prerequisite: PSYC110G. (Fulfills Social Science requirement.) **Fall/Spring semesters**

**PSYC241G Social Science Research Methods****3-0-3**

This course provides an overview of the research design process in the social sciences. Students will design and implement their own their own research study in an area related to the social sciences. All aspects of a research study will be explored and developed by the students. Ethical issues in research will also be investigated. Prerequisite: ENGL110G. **Fall semester**

**PSYC281G Psychology Internship****0-9-3**

This course will provide students with the opportunity to experience real world application of Social Science theory. Students will complete a minimum of 135 hours of fieldwork that builds upon previously learned concepts in the Social Sciences. Students need Department Chair approval to register for this course. Prerequisite: PSYC110G & Permission of Department Chair. **Fall/Spring semesters**

**SOCI 110G Sociology****3-0-3**

This course will provide an introduction to the concepts and principles of sociology. The basic social units of society and how they interact are studied in order to understand and appreciate the contributions of sociology to the field of social behavior. Social changes and its causes and effects will also be addressed. (Fulfills Social Science requirement.) **All semesters**

**SOCI 116G Sports & Society****3-0-3**

This course is designed to raise awareness with regard to the sociology of sport and how cultural practices in the world of sport can have significant social, economic, and political

consequences. Discussion and research should give future sport managers a broader understanding of how sport impacts different groups of people in different ways throughout this country and beyond. **Fall semester**

**SOCI 120G Society and Technological Change** **3-0-3**

This course is a study of the relationship between technology and humankind and the attempt to link, decipher and evaluate technological systems to all human life and to prove that all of them are interrelated. (Fulfills Social Science requirement.) **All semesters**

**SOCI 135G Sociology of Gender** **3-0-3**

This course will provide an introduction to the concepts and principles of the sociology of gender. Within a sociological perspective, the gendered issues of culture and ideology, socialization, family and intimate relationships, education, work, and health are discussed. Gender discrimination and changing roles will also be examined through the context of the major themes. **Fall/Spring semesters**

**SOCI 136G Children and the Media: Diversity Issues** **3-0-3**

This course will explore the relationship of children to media in its social context. "Childhood" is a unique time where many images have a dramatic impact on the development of attitudes and perceptions about others. Impressions that may penetrate the subconscious are formed in children through media. This influence will be used to analyze diversity and the resulting stereotypes of religion, gender, age, race, ethnicity, disabilities, socio-economic status, and body image. Children have an innate capacity for empathy, respect and compassion toward others; an examination of the relationship between these qualities and the perceptions of diverse issues created by the media will be completed. (Fulfills Humanities requirement.) **All semesters**

**SOCI 250G Multi Ethnic Cross-Cultural Relations** **3-0-3**

This course is designed to introduce students to ethnic and cross-cultural differences in the norms, values, perceptions, and behaviors as they impact personal lives in interpersonal skills. Introducing students to these differences will facilitate communication and cooperation within relationships where the participants come from very different backgrounds and/or ethnic cultures. This course is appropriate and will serve as an elective for professionals and paraprofessionals in business, human services, nursing, early childhood education, gerontology, and criminal justice. (Fulfills Social Science requirement.) **Fall/Spring semesters**

**SOCI 281G Sociology Internship** **0-9-3**

This course will provide students with the opportunity to experience real world application of Social Science theory. Students will complete a minimum of 135 hours of fieldwork that builds upon previously learned concepts in the Social Sciences. Students need Department Chair approval to register for this course. Prerequisite: SOCI110G & Permission of Department Chair.

**SPAN110G Spanish I** **4-0-4**

This course is a fully integrated, introductory Spanish course. The course is designed for beginning Spanish students with little or no prior knowledge of Spanish. It is directed to students whose learning objectives and needs are in any of the following categories: for Spanish-language students, for business purposes, as well as for travelers. The emphasis is

to develop a proficiency in basic communicative skills concentrating on the dynamic application of the living language taught through dialogue, phonetics, and vocabulary. A strong grammar foundation and other basic language skills are taught through actual phrases and sentences helping the student develop an instinctive sense of the correct usage. Language laboratory activities are part of the course reinforcing class content. These objectives will be achieved through the following approaches: speaking, listening, reading, writing, and cultural appreciation. (Fulfills Foreign Language requirement.) **Fall semester**

### **SPAN120G Spanish II**

**4-0-4**

This course is a continuation of the introductory Spanish course. For students who have had the equivalent of one year of high-school Spanish or one semester of college Spanish. The course is designed for students whose learning objectives and needs are in any of the following categories: for Spanish- language students, for business purposes, as well as for travelers. The emphasis is to consolidate and reinforce the language skills acquired in Spanish I, or equivalent, and to continue building communicative skills and cultural competency. The course continues to offer a comprehensive review of basic first-term grammar structures, while developing proficiency and advancement in communicative skills concentrating on the dynamic application of the living language taught through dialogue, phonetics, and vocabulary. A strong grammar foundation and other essential language skills are taught through actual phrases and sentences, helping the student develop an instinctive sense of the correct usage. Language laboratory activities are part of the course reinforcing class content. These objectives will be achieved through the following approaches: speaking, listening, reading, writing, and culture. Prerequisite: SPAN110G or equivalent. (Fulfills Foreign Language requirement.) **Spring semester**

### **SPTS101G Introduction to Sports Management**

**3-0-3**

This introductory survey course introduces students to sports marketing, sports law, sports supervision, sports media, sports ethics, recreational sports management and other related areas. This course will expose students to the career possibilities in the Sports Industry. Students will focus on communication skills needed across both organizations and cultures. Prerequisite: BUS110G or permission of Dept. Chair. **Fall/Spring semester**

### **SPTS210G Sports & Facilities Management**

**3-0-3**

This course exposes students to the multiple aspects of managing a sports facility. Students will gain an understanding of what is required to develop and successfully manage and market such sports facilities. Students will gain exposure to the various types of sports facilities through course assignments and projects. Prerequisite: Intro to Sports Management or permission of Dept. Chair.

### **SPTS225G Sports Law**

**3-0-3**

This course focuses on the legal issues surrounding the sports industry and to sport managers. Numerous case studies and laws are examined and related to current events involving professional, intercollegiate, interscholastic and community sports and athletic activities. Prerequisite: SPTS101G Intro to Sports Management.

### **SURG115G Basic Instrumentation, Supplies and Equipment**

**0-3-1**

Overview of instruments, supplies and equipment used in the operating room and specifically for General and Gynecological Surgeries. Course includes instrument classifications, care and

cleaning. Suture, mechanical stapling devices and other methods of hemostasis along with supplies and equipment will be discussed. Prerequisite: Admission to Surgical Technology Program. Co-requisite: SURG118G and SURG119G. **Fall semester**

**SURG116G Advanced Instrumentation, Supplies and Equipment 0-3-1**

A continuation of instruments, supplies and equipment used in the operating room and specifically for Genitourinary, Plastics, Ophthalmology, Otolaryngology, Orthopedics, Neurological, Cardiothoracic, and Peripheral Vascular Surgeries. Each specialty will include an in depth procedure demonstration. Prerequisites: Admission to Surgical Technology Program, C or better in SURG 115G, SURG118G, and SURG119G. Co-requisite: SURG121G and SURG122G. **Spring semester**

**SURG118G Surgical Technology Fundamentals Lecture 6-0-6**

This course focuses on surgical technology and the roles in which it plays in the areas of the operating room environment, the operating room staff, hospital facilities, and the surgical patient, legal, ethical and moral principles, aseptic technique, wound healing, pharmacology and anesthesia. Pre-requisites: Admission to Surgical Technology Program. Co-requisites: AHLT110G, BIOL110G, SURG119G, SURG115G, and MATH145G/MATH147G. **Fall semester**

**SURG119G Surgical Technology Fundamentals Lab 0-3-1**

The core of this course consists of the role of the scrub during the preoperative and intraoperative phase of surgery, sterilization, disinfection, asepsis, and the principles of sterile technique and sterile conscience, leading into a detailed study of combining; procedures, instrumentation, equipment, and supplies needed for specific surgeries. Pre-requisite: Admission to Surgical Technology Program. Co-requisites: AHLT110G, BIOL110G, SURG118G, SURG115G, and MATH145G/147G. **Fall semester**

**SURG121G Surgical Procedure I Lecture 3-0-3**

This course builds on information acquired in the freshman fall course work. Surgical procedures are studied in a unit-by-unit basis according to surgical categories. Students are expected to research and review anatomy for each unit. Emphasis is placed on variations of principles as applied to surgery in different body parts, detailed study of instrumentation, and the technologist's role in each procedure. Pharmacology and drugs related to specialties will also be studied. Prerequisite: Admission to Surgical Technology Program, C or better in AH110G, SURG115G, SURG118G, and SURG119G. Co-requisites: SURG116G and SURG122G. **Spring semester**

**SURG122G Surgical Procedure I Lab 0-3-1**

The core of this course enhances on the role of the scrub during the preoperative and intraoperative phase of surgery, sterilization, disinfection, asepsis, and the principles of sterile technique and sterile conscience, leading into a detailed study of combining; procedures, instrumentation, equipment, and supplies needed for specific surgeries, preparing the student for senior clinical rotation. Prerequisites: Admission to Surgical Technology Program, C or better in AH110G, SURG115G, SURG118G, and SURG119G. Co-requisites: SURG116G and SURG121G. **Spring semester**

**SURG123G Orientation to Surgical Clinical** **0-6-2**

Orientation to Surgical Clinical is a continuous correlation of theoretical content and clinical performance. The student is expected to focus clinical performances with corresponding units covered in SURG 120 Surgical Procedures I. Forty hours are spent for two weeks in assigned clinical areas. The student is expected to document learning experiences on a daily basis utilizing a journal, their Surgical Case Logs, Preceptor Evaluations and Case Study Reports. Prerequisites: Admission to Surgical Technology Program, C or better in SURG116G, SURG121G and SURG122G. **Summer semester**

**SURG210G Surgical Procedures II** **3-0-3**

This course is a continuation of Surgical Procedures I. The more complex surgical specialties are presented including Orthopedics, Peripheral Vascular, Cardiothoracic, and Neurology. Care of high risk patient populations will be included in each area. Prerequisites: Admission to Surgical Technology Program, Pass in SURG123G, C or better in both MATH145G/147G and BIOL110G. Co-requisite: SURG215G **Fall semester**

**SURG215G Surgical Clinical I** **0-24-8**

Surgical Clinical I is a continuous correlation of theoretical content and clinical performance. The student is expected to concentrate clinical performances with corresponding units covered in Surgical Procedures I, SURG120. Twenty-four hours are spent each week in assigned clinical areas. The student is expected to document learning experiences on a daily basis utilizing a blog, their Surgical Case Logs, Preceptor Evaluations and Case Study Reports. All assigned cases must be documented weekly on the Surgical Case Log sheet and signed by their Preceptor. Prerequisites: Admission to Surgical Technology Program, Pass in SURG123G, C or better in both MATH145G/147G and BIOL110G. Co-requisite: SURG210G. **Fall semester**

**SURG224G Surgical Procedures III/Special Considerations in Surgery** **4-0-4**

A continuation of Surgical Procedures II. Students complete the theory portion of their clinical specialties with management of emergency situations, biotechnical science, physics, robotics, laser and other current technologies, resume writing and tips for a successful job interview. Prerequisite: Admission to Surgical Technology program, Pass in SURG215G and C or better in following courses: SURG210G, BIOL120G and BIOL210G. Co-requisite: SURG225G. **Spring semester**

**SURG225G Surgical Clinical II** **0-24-8**

Surgical Clinical II is a continuous correlation of theoretical content and clinical performance. The student is expected to concentrate clinical performances with corresponding units covered in Surgical Procedures II, SURG210G. Twenty-four hours are spent each week in assigned clinical areas. The student is expected to document learning experiences on a daily basis utilizing a journal, their Surgical Case Logs, Preceptor Evaluations and Case Study Reports. Prerequisite: Admission to Surgical Technology program, Pass in SURG215G and C or better in following courses: SURG210G, BIOL120G and BIOL210G. Co-requisite: SURG224G. **Spring semester**

**TCHP101G Introduction to Exceptionalities** **3-0-3**

This course will provide students with an overview of the special education process in today's public schools. The special education process involves working effectively with school personnel and parents, and acquiring a general knowledge of various disabilities and needs

of students. A comprehensive examination of inclusion and its effects on the classroom environment will be covered. This course will provide teachers and paraprofessionals with the basic knowledge to begin to successfully meet the needs of a variety of students in the classroom. This course will also provide a foundation for further courses in the area of special education. **Fall/Summer semesters**

**TCHP104G Foundations of Education 3-0-3**

This course will provide students with an overview of education in the United States and an overview of the many dimensions of the teaching profession. There are many factors that influence the teaching profession, from the students in the classroom to the political climate. This course will engage students in the examination of these influences and their effects on education in the K-12 setting. Students will be encouraged to reflect on the art of teaching. This course requires 20 hours of observations in a classroom setting. **Fall/Spring semesters**

**TCHP201G The Teaching & Learning Process 3-0-3**

This course will provide students with an overview of the teaching and learning process. The teaching process is multidimensional. Each component of the process is essential to the success of the learners. Students must develop an understanding of this process and the factors that lead to the success of the K-12 student. Students will be engaged in the material throughout the course as work will be designed for classroom implementation. Prerequisite: TCHP104G. **Spring semester**

**TCHP215G Behavioral Challenges in the Classroom 3-0-3**

This course will provide students with an overview of behaviors that can hinder the educational process. It is essential that educators plan for behavior issues in the classrooms. An overview of the behavior issues related to a variety of disabilities will be provided. The course will provide students with a broad theoretical foundation of behavioral management strategies that can be used to support children with emotional, behavioral, and social challenges. An emphasis on observation skills, record keeping, and parental support will be provided. Prerequisites: TCHP101G & TCHP104G ECE100G or permission of instructor or Program Coordinator. **Summer semester**

**VETN110G Introduction to Veterinary Technology 2-0-2**

This course will introduce the student to the field of Veterinary Technology. Animal behavior, species and breed identification, medical terminology and occupational safety will be covered. In addition, students will get an overview of managing the reception area of a veterinary hospital including how to maintain medical records, organize inventory and dispense prescription medications. Handling various client situations will be emphasized. Ethical and legal issues in veterinary medicine will also be discussed. This course will include lecture material, class discussions and student presentations. Prerequisite: Acceptance into the Veterinary Technology program or acceptance in the Veterinary Practice Management certificate program. Co-requisite: VETN112G Computer Applications in Veterinary Medicine (For Veterinary Technology program). **Fall semester**

**VETN112G Computer Applications in Veterinary Medicine 1-0-1**

Students will use a fully integrated, hands-on approach to understand the use of computer technology in the Veterinary setting. Students will gain proficiency in the Windows operating system environment, and learn the elements of Veterinary application software. Students will

also explore software applications relevant to veterinary practice including word processing, spreadsheets, and presentation software. Students will explore various facets of the Internet as used in veterinary practice for research, client education and information. Prerequisite: Admission to the Veterinary Technology Program. **Fall semester**

**VETN114G Veterinary Pharmacology** **2-2-3**

This course will cover basic pharmacology for the veterinary technician with focus in private practices. It will cover basic classes of drugs with an emphasis on pharmacodynamics, client education, side effects and dosage calculations. This is the first semester of a two semester course. Lab work will augment lecture material. Prerequisites: C+ or better in BIOL111G, VETN110G, and VETN112G. Co-requisites: BIOL121G and VETN121G. **Spring semester**

**VETN121G Veterinary Clinical Methods I** **3-3-4**

Small animal medical nursing procedures are introduced. Elements include handling and restraint, aspects of the history and physical exam, specimen collection, administration of medications and treatments, diseases, nutritional supplementation, the basics of preventative health care, first aid and emergencies. The lab provides hands-on practice using models and the animal patient. This course will provide the foundation by which the student will progress to their summer clinical affiliations. This course includes a service learning requirement to volunteer two days at spay/neuter clinics run by rescues, at veterinary clinics or at animal rescues. Instructors will choose the volunteer opportunities and will accompany the students. Prerequisites: C+ or better in VETN110G, VETN112G and BIOL111G. Co-requisites: VETN114G and BIOL121G. (SL) **Spring semester**

**VETN130G Veterinary Clinical Affiliation I** **0-24-4**

This eight-week summer session provides students with supervised hands-on work experience with live animals in selected clinical settings. Following sequential steps from basic to complex, learners build correlation of theoretical content to clinical performance. Students will be required to volunteer at one spay/neuter clinic during the Clinical Affiliation. The participating clinics will be pre-arranged by VETN faculty and the associated animal rescue by VETN faculty and the associated animal rescue organizations and/or shelters. VETN faculty will be present at the clinics to instruct and supervise the students. Prerequisites: "C+" or better in VETN110G, VETN112G, VETN114G, VETN121G, BIOL111G, BIOL121G. **Summer semester**

**VETN210G Veterinary Clinical Methods II** **3-3-4**

This course is designed to provide the student with a strong background in veterinary surgical nursing and assistance. Surgical interventions, as well as sterilization, disinfection, and aseptic technique are covered. Anesthesia and monitoring the surgical patient is emphasized. Specialized clinical procedures are also covered that build on techniques learned during VETN121G and the student's Clinical Affiliation I. Prerequisites: Complete VETN110G, 112G, 114G, 121G with a C+ or better and successfully complete VETN130G Clinical Affiliation I. **Fall semester**

**VETN212G Laboratory Animal Science** **2-2-3**

This course provides students with an understanding of the principles and practices of laboratory animal science. Research methods, care and handling of laboratory animals, and legal regulations pertaining to animal welfare and research procedures are incorporated.

Students also become familiar with handling, basic care, and diseases of the popular small pets including guinea pigs, rabbits, ferrets, hamsters, birds and reptiles. Prerequisite: VETN130G. **Fall semester**

**VETN 214G Veterinary Pharmacology II** **1-0-1**

This course will cover basic pharmacology for the veterinary technician with focus in private practice. It will cover basic classes of drugs with an emphasis on anesthetic, pain medications, emergency medications and pharmacodynamics. VETN114G, BIOL121G and VETN121G with a C+ or better. **Fall semester**

**VETN215G Large Animal Management** **2-2-3**

This course is designed to familiarize the student with the care, handling, and restraint of large animals commonly encountered in veterinary practice. Preventive medicine, nutritional requirements, injury and wound care, and common medical and surgical interventions in the care of equine, dairy, and other large animals are explored. Laboratory sessions provide hands-on opportunities at local dairy and horse farms. Prerequisite: VETN130G. **Fall semester**

**VETN220G Veterinary Clinical Pathology I** **2-3-3**

An overview of the study of disease processes as well as veterinary diagnostic tests and laboratory technique will be provided in this course. Hands-on laboratory experience is gained in areas of, hematology, parasitology and urinalysis and cytology. Prerequisite: VETN130G, CHEM110G (or CHEM115G); or permission of the Instructor. **Fall semester**

**VETN221G Veterinary Clinical Pathology II** **2-3-3**

This course is a continuation of VETN220. The student will continue to develop skills utilized in the veterinary clinical laboratory. Elements of clinical microbiology, cytology, and specialized diagnostic tests are covered. Laboratory sessions focus on clinical microbiology, but also offer exposure to serology, cytology, and necropsy. Prerequisite: C+ or better in VETN220G. **Spring semester**

**VETN222G Veterinary Clinical Affiliation II** **0-24-6**

This course is a continuation of VETN130G, Clinical Affiliation I. The objective of this course is to provide the student with practical application and hands-on experience of procedures learned in VETN210G and VETN220G. This course provides supervised clinical experiences in which the learner can incorporate and build upon knowledge and increase skills and self-confidence in the veterinary technician role. Students are expected to select, contact and interview with their potential clinical site before the start of the semester. Prerequisite: "C+" or better in VETN210G, VETN212G, VETN215G, VETN220G. **Spring semester**

**VETN 224G Veterinary Diagnostic Imaging** **1-3-2**

This course will provide the student with an in-depth study and hands-on practice in veterinary medical radiology including radiographic exposure techniques, both traditional and digital, film processing and contrast radiography. In addition, the fields of ultrasound, CT and MRI, as used in veterinary medicine, will be introduced. Prerequisite: VETN130G. **Spring semester**



**VETN225G Veterinary Practice Law****2-0-2**

This course is a business law course focused on legal and ethical issues of interest to a veterinary practice. Areas of law to be considered will be Veterinary Practice Acts, controlled substance and other pharmaceutical laws, Veterinary client patient relationships, contracts and employment law. Students will be able to utilize case studies and briefs to enhance their working knowledge of these topics. Prerequisite: Completion of VETN110G, 112G, 114G and 121G with a C+ or better; or fulfill criteria required for admission to the Veterinary Practice Management Certificate. **Summer semester**

**VETN226G Small Animal Behavior****2-0-2**

An understanding of normal animal behavior can lead to better understanding and management of the patients in the clinical setting. Human-animal interactions can be enhanced through the use of learning theory and scientifically and humane training, restraint, and behavior modification techniques. Prerequisites: Complete VETN110G, 112G, 114G, and 121G with a C+ or better or permission of Dept. Chair. **Summer semester**

**VETN227G Veterinary Emergency Medicine****1-2-2**

This course will delve into the area of emergency medicine and critical care of the small animal patient, reinforcing and building on material covered in the prerequisite courses (i.e. anatomy and physiology, pharmacology, nursing care, and emergency medicine). Prerequisites: Complete VETN110G, 112G, 114G, 121G, BIOL111G and BIOL121G with a C+ or better or permission of Dept. Chair. **Summer semester**

**WELD100G Basic Welding Technologies****5-3-6**

The purpose of the Basic Welding Technologies Course is to provide the student with techniques and manipulative skills required for basic electric arc and fuel gas welding. This course will provide an entry level of technical understanding of basic welding processes as well as power supplies, electrode classifications, joint designs, material identification, blue print reading, numerical geometry and welding safety. This course will provide the training to develop the skills necessary to make basic fillet and square groove welds in the flat position on mild steel material following the American Welding Society standards found throughout the industrial workforce. **Fall semester**

**WELD150G Intermediate Welding Technologies****3-6-6**

The purpose of the Intermediate Welding Technologies course is to build on the skills learned from Basic level by adding horizontal, vertical, and overhead welding positions to electric arc and gas welding. This course will also provide the student with techniques and manipulative skills required for gas metal arc welding (MIG) and gas tungsten arc welding (TIG) on mild steel material in the flat only position. Intermediate Welding will increase the student's knowledge area with welding blue print reading, field sketching, numerical geometry, units of measure, and other associated areas of welding including flux cored arc welding (FCAW), torch brazing and soldering. This course will provide the training to develop the skills necessary to make out-of-position fillet and square groove welds on mild steel material with arc and gas welding as well as basic fillet and square groove welds in the flat position on the mild steel with the MIG and TIG process by following the standards set forth by the American Welding Society used throughout the industrial workforce. Prerequisite: WELD100G. **Spring semester**

**WELD200G Advanced Welding Technologies****3-6-6**

The purpose of the Advanced Welding Technologies course is to utilize the student's skills that were created in the Intermediate Welding course for certification opportunities as well as in manufacturing and repair situations. This course will provide the student with the techniques and manipulative skills for welding pipe and plate to code requirements as well as incorporate fabrication techniques, equipment, specifications, and basic metallurgy, use of associated cutting processes such as Plasma Arc, Air Carbon Arc, mechanized equipment, material identification on alloys, destructive and non-destructive testing methods, welding defects and discontinuities, and distortion control methods. This course will provide the training necessary to weld exotic materials such as aluminum, fabricate to code environments, and proper repair practices following the American Welding Society standards and specifications used throughout the industrial workforce. This course will create the desired advanced employability skills that are required in today's manufacturing job market. Prerequisite: Intermediate Welding Technologies. **Summer semester**

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