DANIEL WEBSTER COLLEGE

TRADITION. COMMUNITY. EDUCATION.

Daniel Webster College

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Nashua, NH 03063

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Academic Calendars 2010/2011

Fall Semester - 2010

August 28 (Saturday)	New Students Arrive
August 28 (Saturday) - August 30 (Monday)	Orientation/Registration; Residence halls open for New Freshmen and Transfers
August 30 (Monday)	Residence halls open for Returning Students
August 30 (Monday)	Check-in and final registration for Returning Students
August 31 (Tuesday)	Classes begin (Semester); Late registration
September 1 (Wednesday)	Classes begin (Term 1)
September 3 (Friday)	Last day to add/drop a course (Term 1)
September 6 (Monday)	Labor Day - Regular classes
September 7 (Tuesday)	Last day to add/drop a course (Semester)
September 9 (Thursday)	Opening convocation
September 25 (Saturday)	Family day
October 5 (Tuesday)	Last day to withdraw (Term 1)
October 11 (Monday)	October holiday — No Semester classes; Term 1 classes meet; college offices closed
October 12 (Tuesday)	Classes meet on Monday class schedule (Semester); Classes meet on Tuesday class schedule (Term 1)
October 19 (Tuesday)	Last day of classes (Term 1)
October 20 (Wednesday)	Mid-Terms Completed (Last day for incompletes from past term to be converted to grades)
October 27 (Wednesday)	Classes begin (Term 2)
October 29 (Friday)	Last day to add/drop a course (Term 2)
November 1 (Monday) - 5 (Friday)	Course Planning period
November 5 (Friday)	Last day to withdraw (Semester)
November 8 (Monday) - 12 (Friday)	Registration for Spring 2011
November 23 (Tuesday)	Residence halls close for Thanksgiving Break at 6 p.m.
November 24 (Wednesday) - 28 (Sunday)	Thanksgiving break
November 28 (Sunday)	Residence halls open at 2 p.m.
November 30 (Tuesday)	Last day to withdraw (Term 2)

December 10 (Friday)	Last day of Semester classes; Last day of Hard Schedule Flight
December 13 (Monday) - 17 (Friday)	Final Exams; Soft Schedule Flight
December 17 (Friday)	Last day of classes (Term 2)
December 17 (Friday)	Residence halls close for Holiday Break at 6 p.m.
December 19 (Sunday)	Aviation Center Changes to Winter Break Hours
December 20 (Monday) - January 16 (Sunday)	Winter Intersession

Spring Semester - 2011

January 18 (Tuesday)	New Student Orientation and Check-in for new & returning students
January 18 (Tuesday)	Residence halls open for all students Dining hall opens for dinner
January 19 (Wednesday)	Classes begin (Semester & Term 3) — Late check-in
January 21 (Friday)	Last day to add/drop a course (Term 3)
January 25 (Tuesday)	Last day to add/drop a course (Semester)
February 22 (Tuesday)	Last day to withdraw from a course (Term 3)
March 8 (Tuesday)	Last day of classes (Term 3)
March 11 (Friday)	Mid-Terms completed (Last day for incompletes from past term to be converted to grades)
March 11 (Friday)	Residence halls close 6:00 p.m. for Spring Break (Term 3 classes meet during spring break)
March 12 (Saturday) - 20 (Sunday)	Spring Break — No classes, administrative offices open
March 16 (Wednesday)	Classes begin (Term 4)
March 18 (Friday)	Last day to add/drop a course (Term 4)
March 20 (Sunday)	Residence halls open — 2:00 p.m.
March 28 (Monday) – April 1 (Friday)	Course Planning period
April 1 (Friday)	Last day to withdraw from a course (Semester)
April 4 (Monday) – 8 (Friday)	Registration for Summer and Fall 2011
April 19 (Tuesday)	Last day to withdraw (Term 4)
May 3 (Tuesday)	Last day of classes (Term 4)
May 6 (Friday)	Last day of semester classes
May 7 (Saturday)	Last day Hard Flight Schedule

May 9 (Monday) - 13 (Friday)	Final Exam period*; Soft Schedule Flight
May 13 (Friday)	Residence halls close at 6 p.m. for all students other than graduates (Dining Hall closes after lunch)
May 13 (Friday)	Senior Honors/Reception
May 14 (Saturday)	Commencement Residence Halls close for Graduates at 6 p.m.

Term Calendar – 2010/2011

Term 1	September 1 - October 19, 2010
Term 2	October 27 - December 17, 2010
Intersession	December 20, 2010 - January 16, 2011
Term 3	January 19 - March 8, 2011
Term 4	March 16 - May 3, 2011
Term 5	May 17 - July 4, 2011
Term 6	July 12 - August 29, 2011

Summer Semester - 2011

May 17 (Tuesday)	Classes begin - Term 5
May 19 (Thursday)	Last day to add/drop - Term 5
May 30 (Monday)	Memorial Day; No classes
June 20 (Monday)	Last day to withdraw - Term 5
July 4 (Monday)	Independence Day; No classes
July 4 (Monday)	Last day of classes – Term 5
July 12 (Tuesday)	Classes begin – Term 6
July 14 (Thursday)	Last day to add/drop - Term 6
August 15 (Monday)	Last day to withdraw – Term 6
August 29 (Monday)	Last day of classes - Term 6

The academic calendar is set prior to the start of each school year. *****Students and families should consider the College calendar before making travel arrangements for the fall and spring semesters/terms and summer terms including the Final Exam period, Thanksgiving, and spring break.

Participation in all classes and exams is critical to student success at Daniel Webster College.

Aviation flight students are expected to be available for all Hard Schedule. Soft scheduling on weekends, during final exams, and during breaks is recommended especially if students fall behind schedule in their flying progress.

Resident students should consult with Housing & Residential Education to arrange for housing due to extra flying or to attendance in intersession courses.

About Daniel Webster College

Since its founding in 1965, Daniel Webster College (DWC) has maintained a commitment to both regional and national constituencies. Dedicated to the development of professionals in its chosen fields, the College fulfills its pledge to its mission by focusing on the education of the next generation of leaders for a select niche of dynamic professions. Highly specialized, the College recruits from across the country and currently serves students from 20 states and 14 countries. Alumni have worldwide opportunities and currently live and work in all 50 states and across the globe. With 1,100 students, of whom 50% are traditional undergraduates, the College focuses on providing all students with an educational experience that is rich in theory and practice. Service learning practica, as well as national and local opportunities for internships, are part of the educational plan for most students. Traditional undergraduates have the ad-vantage of an academic experience that extends beyond the classroom to provide further enhanced opportunities for leadership and learning. The curricula is designed to provide both the competencies needed for professional entry and general education skills needed for professional success.

Long distinguished as one of the nation's leaders in aviation, more recently the College has earned recognition in New England for its leadership in computer science and management. In the fall of 2001, DWC introduced a Social Sciences major to further expand opportunities for our students. Since the fall of 2005, the College has offered Bachelor of Science degrees in Aeronautical Engineering and Mechanical Engineering. Our vitality and strength stem from a faculty who come from across the country and the world. They share a wealth of theoretical knowledge, experience, and a deep commitment to student success. Our faculty teach, advise, mentor and challenge students to achieve professional excellence. Throughout the past decade, individual faculty members have been recognized by professional associations for their leadership in curricular innovation. Dedicated to teaching, faculty members also engage in research, scholarship and industry relationships that benefit the undergraduate experience.

Daniel Webster College supports NCAA Division III intercollegiate athletics, student stock market competitions, student software competitions and other forms of academic competition, such as FIRST Robotics, that build knowledge, leadership, teamwork, and discipline skills.

The College remains committed to the pursuit of professional excellence within a supportive environment that challenges the individual to excel in the academic arena and become independent life-long learners. Daniel Webster College strives to prepare highly competent graduates who are confident of their abilities to succeed.

The College's publications and most recent audited financial statement are available upon request.

Mission Statement

Daniel Webster College educates purposeful men and women for professional entry, advancement, and advanced studies in the fields of aviation, computer science, management, social science and engineering. Our students prepare through residential and continuing studies programs which emphasize the integration of theory and practice through interactive teaching and learning in the professional and liberal studies.

Ownership

Daniel Webster College, Nashua, NH, is one of a network of co-educational, non-denominational private (for profit) postsecondary educational institutions owned and operated by ITT Educational Services, Inc., a Delaware corporation, with central offices located in Indianapolis, IN.

Board of Directors

The board of directors of Daniel Webster College is responsible for the organization and governance of the college. The board meets regularly to establish and review policies and to review their implementation. Board members closely monitor the academic quality of the college and act to ensure that the college continues to effectively serve the students, the college community, and the public interest.

Daniel Webster College Administration and Faculty

The administration of Daniel Webster College is authorized by the board of directors to administer the college through effective and efficient management of college resources. Primary responsibility for achieving the mission and implementing board policy rests with the president. Academic affairs are managed by the chief academic officer in consultation with the faculty of the college. The central offices of ITT Educational Services, Inc., serve as a resource to the college administration.

State Authorization

Daniel Webster College is chartered as an institution of higher education in accordance with New Hampshire law, subject to the authority of the New Hampshire Postsecondary Education Commission.

College Accreditation

Daniel Webster College is accredited by the New England Association of Schools and Colleges, Inc. through its Commission on Institutions of Higher Education. Accreditation by the New England Association indicates that it meets or exceeds criteria for the assessment of institutional quality periodically applied through a peer review process. An accredited College or university 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. Institutional integrity is also addressed through accreditation.

Accreditation by the New England Association is not partial but applies to the institution as a whole. As such, it is not a guarantee of every course or program offered, or the competence of individual graduates. Rather, it provides reasonable assurance about the quality of opportunities available to students who attend the institution. Inquiries regarding the accreditation status by the New England Association of Schools and Colleges should be directed to the administrative staff of the institution. Individuals may also contact:

Commission of Institutions of Higher Education
New England Association of Schools and Colleges
209 Burlington Road
Bedford, MA 01730-1433
(617) 271-0022
E-Mail: cihe@neasc.org

All Bachelor of Science degree programs in the School of Aviation Sciences are accredited by the Aviation Accreditation Board International (AABI), formerly the Council on Aviation Accreditation (CAA). Flight education operations are conducted in accordance with Training Course Outlines approved by the Federal Aviation Administration (FAA) under Part 141 of the Federal Aviation Regulations. The Aviation/Air Traffic Management program is recognized by the FAA Air Traffic Collegiate Training Initiative (AT-CTI), one of the original schools recognized and one of only 31 recognized programs nationwide.

Daniel Webster College has participated in the Air Traffic Collegiate Training Initiative (“AT-CTI”) program of the Federal Aviation Administration (“FAA”) for a number of years. The AT-CTI program is designed to provide qualified applicants to fill developmental air traffic control specialist positions. Graduates of the program are eligible to bypass the Air Traffic Basics Course, which is the first five weeks of qualification training at the FAA Academy in Oklahoma City. Academy training consists of option-specific (terminal or en route) initial training. Students must successfully complete all required training at the FAA Academy to continue employment with FAA.

The FAA’s participation criteria for the AT-CTI program include a requirement that a college be organized as a not-for-profit organization under the federal tax laws. Since June 2009, Daniel Webster College has not been organized as a not-for-profit organization under the federal tax laws. The College initiated communication with the FAA in the spring of 2009 to determine whether the change in the College’s organizational structure would result in any change in the College's participation in the AT-CTI program. As of the date of publication of this catalog, the FAA has not yet informed the College if the FAA will permit Daniel Webster College to continue participating in the AT-CTI program, but the College continues to be listed on the FAA web site as an approved AT-CTI program participant. The College cannot assure you that it will be allowed to continue to participate in the AT-CTI program.

The Aeronautical Engineering Program is accredited by the Engineering Accreditation Commission (EAC) of ABET, 111 Market Place, Suite 1050, Baltimore, MD 21202-4012 – telephone: (410) 347-7700. (ABET, Inc., is the recognized accreditor for college and university programs in engineering and technology, http://www.abet.org/)

The Bachelor of Science program in Sport Management is accredited by the North American Society of Sport Management (NASSM) under the guidelines of the Sport Management Program Review Council (SMPRC).

Campus Location

The Daniel Webster College campus is situated on 54 wooded acres in New Hampshire's second largest city, Nashua. Designed to fit the historical setting of New England, the campus is tucked away beside a comfortable residential community, just one mile from a comprehensive shopping area. Daniel Webster College students enjoy the benefits of Nashua's growing cosmopolitan community as well as easy access to Boston, and immediate proximity to outdoor activities such as mountain climbing, hiking, boating, canoeing, camping, skiing, swimming, and snowmobiling. The region, noted for its beautiful fall foliage, offers a variety of restaurants, cultural activities, and entertainment opportunities. Nashua is just an hour's drive from the seacoast and mountains and only 45 minutes from Boston.

Campus Facilities

The buildings and grounds of Daniel Webster College are designed to complement and enhance the college experience, while providing various amenities to suit a student's individual needs. Study areas, classrooms, fitness facilities, and social meeting places are just a few of the functions for the fifteen New England traditional-style buildings on campus.

The **Eaton-Richmond Center** is an outstanding academic and technology center that houses technology-rich classrooms, computer science laboratories, the physics lab, seminar and conference rooms, and faculty offices. It also is home to the **Collings Auditorium**, a 350-seat auditorium suitable for theater, music, and dance, in addition to lectures and workshops.

Daniel Webster Hall serves as the center of academic and administrative activity. The building holds classrooms, science and engineering laboratories, faculty, staff and administrative offices, and the College Store.

The Veteran's Memorial Library and Learning Resource Center houses the library, the career center, computer laboratories, classrooms, seminar and audiovisual workrooms. The first floor of the building also houses the campus mailroom and the Common Thread, a multi-use space, including a convenience store, an ATM, lounge space, pool table, gaming spaces and student meeting space.

The College's award-winning aviation operations center is located in the **Nicholas N. Tamposi Aviation Center** at the Nashua Airport, immediately adjacent to campus. A flight observation tower is part of the facility. An expanded description of the aviation facilities and resources is provided under Aviation Program Facilities.

The Department of Athletics maintains offices in the **Mario J. Vagge Gymnasium**, home of the NCAA Division III Eagles. The building includes men's and women's locker rooms, an athletic training room and a fitness area equipped with aerobic exercise machines, free weights, and universal gym.

The College Center houses the dining facility as well as Campus Safety Office and the Student Affairs offices.

Residence Halls
Daniel Webster College maintains five residence halls (***Fagan***, ***Franklin, Fremont, Gates and Tamposi***) and a townhouse complex on campus. Residence housing offers single, double and triple rooms, in addition to suites, along with single-sex and coed housing options. Most halls have cooking and lounge facilities, and all halls have laundry facilities. All rooms have connections to the campus computer network. Students are encouraged to bring their own computers to campus.

Aviation Program Facilities
The School of Aviation Sciences at Daniel Webster College is located at the Nashua Municipal Airport, directly adjacent to the College. The Nicholas N. Tamposi Aviation Center is home to a full flight operations center, seminar rooms, training suites, lounge areas, faculty and flight instructor offices and a variety of flight simulation equipment that ranges from single engine piston trainers through a complex,

modern, airline jet training device. Air Traffic Control Tower and Radar simulation suites and training facilities are located in the Business Center at Daniel Webster College adjacent to the Tamposi Aviation Center.

The Daniel Webster College aviation curriculum is a robust program that provides academic and flight training far in excess of the minimum standards required by the FAA for pilot certification. Our fleet currently includes 19 Cessna 172s, three Piper Arrow complex aircraft and three Piper Seminole multi-engine training aircraft. The College has recently made significant commitment to the use of Advanced Aviation Training Devices by acquiring three Elite iGATE trainers that can be configured as a Cessna 172, a Piper Arrow and a Piper Seneca. Advance aircraft training is available in our Precision Flight Control Jet Trainer that replicates cockpit technology and automation similar to that found in modern glass cockpit airline aircraft.

Actual flight training takes place on the 5,500-foot, paved, lighted runway that serves the Nashua Municipal Airport, adjacent to the campus. Students have access to a full range of facilities that support Instrument Landing System (ILS), VOR, NDB, GPS, and Area Navigation approach procedures. For maximum training benefit, student training flights also make use of other airports in the region, from small turf strips to high density airports, as may be found in Washington DC or Boston, and to international fields in Canada.

The Business Center at Daniel Webster College (Building 85), adjacent to the Nicholas N. Tamposi Aviation Center, houses the college's Air Traffic Management (ATM) simulation program. The air traffic control simulation facilities have been dramatically up-graded since January, 2005. We have new radar and air traffic control tower simulators that allow very high fidelity simulations of the tower, terminal radar and en-route radar environments. The radar simulator is a full voice recognition system for highly realistic simulation of the procedures used in the control of air traffic. The tower simulation is based upon a very high quality, three screen visual display system that allows for simulation of a wide variety of training scenarios for an air traffic control tower.

Information Technology Facilities
The College's Information Technology Center is located in the Eaton-Richmond Center. There are four labs equipped with computers for teaching, research, and general use. Additional labs are located in the Library and Daniel Webster Hall. The campus has 100% b/g wireless coverage.

Library and Information Service

The Daniel Webster College Library houses a growing collection of print and electronic resources designed to support the curricula in all DWC schools of study. An extensive collection of educational media and popular feature films complement the library's print and electronic resources. State, national and international resource sharing networks and document delivery services augment the library's collections.

The DWC Virtual Library is available 24/7, from any location, at: https://studentportal.dwc.edu/library. Students use their DWC network login to access all the of DWC's electronic resources (including books, reference resources, and research databases) available via the Virtual Library. The Virtual Library also provides access to the online catalog, research guides, library instruction tutorials, electronic document delivery services, and more.

The library is fully integrated within the campus network with access to computers, printers, and a scanner. A wireless network provides convenient internet access throughout the building. The library also offers lounge seating, study tables, a conference room, group and quiet study areas, and an audio/visual viewing room. Media equipment (including laptops, digital voice recorders, digital still cameras, and digital video cameras) may be used in the library or checked out for classroom presentations and projects.

Reference help is available in person, by phone, or by email at librarian@dwc.edu. Instruction in research methods is offered through course-integrated instruction, web-based instruction tutorials, one-on-one drop-in instruction, and research consultation appointments. The computer classroom provides an interactive setting for library and information literacy instruction. The DWC Library is open 7 days a week during regular academic sessions.

Academic Resources

Academic Resources are available for all students to assist them in achieving their maximum academic potential. The college offers a variety of services including tutoring programs, study skills and time management assistance, general advising, assisting students with

disabilities, and more. Faculty and staff are here to guide and empower all students to assume responsibility for their own education and to become self-directed learners.

Students may request tutors for all general and major courses. Peer tutors work with students on an individual basis or in a group setting. School Deans and advisors identify and train students, based on their academic record and instructor recommendation, to be peer tutors. Peer tutoring in aviation, math, science, and writing is available through the Aviation Resource Room, the Math/Science Support Center, and the Writing Center.

Students may also make individual appointments with their school Dean to receive help with communication with professors and advisors, as well as staying on track to ensure academic success.

Students who are placed on academic probation create, in consultation with their school Dean an academic contract that is then monitored in regular meetings with the faculty advisor and or school Dean.

Disabled Applicants and Students

Daniel Webster College is committed to compliance with Section 504 of the Rehabilitation Act of 1973 and its regulations. The school does not discriminate on the basis of disability in admission or access to, or treatment or employment in, its programs and activities. The school's student disability coordinator coordinates Section 504 compliance. Applicants or students with a disability may request an accommodation by contacting the Office of Academic Affairs.

Programs and Courses Offered

The College offers only those specific programs of study and courses within those specific programs of study that are expressly discussed in the Curricula section of this catalog. Daniel Webster College offers only those specific programs of study and courses within those specific programs of study that are specified in their respective current catalogs. The College does not make any representation or promise whatsoever regarding any program of study or course within any program of study that the College may offer in the future.

All of the courses in every program of study are not offered every term. New classes in every program of study do not begin every term. Course offerings and new classes in programs of study are dependent on a variety of factors, including student interest and faculty availability, among others. The College will, in its discretion, determine which courses will be offered each academic term and which programs of study will begin new classes each academic term. The College does not make any representation or promise whatsoever that any course will be offered by the College in any academic term or that a new class in any program of study will begin in any academic term. As a result, a student may not be able to take all of the courses that he or she desires to take in any academic term or begin a program of study in any academic term, which may affect the amount of time it takes the student to graduate from a particular program of study.

Textbook information for each of the offered courses is available on the Daniel Webster College website at www.bkstr.com/CategoryDisplay/10001-9604-10330-1?demoKey=d.

Admissions

Daniel Webster College is committed to identifying students who have the academic preparation, desire, and commitment to be successful in its challenging programs. We consider each applicant on an individual basis. DWC does not discriminate on the basis of race, disability, gender, age, nationality or ethnic origin. All students are extended the rights, privileges, programs, and activities available to students at the College. The College provides limited special services and facilities for students with special physical and educational needs.

Application Procedures

Freshman applicants should:

1. Submit a completed, signed Application for Admission to Daniel Webster College to:

   Office of Admissions
   Daniel Webster College
   20 University Drive
   Nashua, New Hampshire 03063-1300

2. Submit an official high school transcript or, if you have completed the GED, a record of a satisfactory high school equivalency score.

3. Complete the Scholastic Assessment Test (SAT) or American College Testing (ACT) examination. If you have completed the SAT/ACT, but did not specify that your official scores be mailed to DWC, request that your guidance counselor or the appropriate testing agency do so. If you have not completed either examination at the time of your application to the College, specify when you register for the examination that DWC should receive a copy of your official test report.

   For the SAT, DWC's college code is: 3648.
   For the ACT, DWC's college code is: 2525.

4. Visit our campus as part of the application process. Visiting the campus is the best way to meet our faculty, speak with current students, and determine if DWC is the right place for you. You may arrange a campus visit by calling the Office of Admissions at: 1-800-325-6876 or (603) 577-6600, or by emailing us at admissions@dwc.edu**.**

Campus Visits

Campus visits are highly recommended for all students considering application to Daniel Webster College. Meeting with an admissions representative, financial aid counselor, student or faculty member will allow you to personally judge the educational opportunities and campus life activities available at DWC. Such conversations will also help us better understand you as an individual and will assist us in evaluating your potential success at DWC. All students who have made inquiries to DWC receive notification of campus events.

The best time to visit DWC is on a weekday when the College is in session. The Office of Admissions is open Monday-Saturday. Visitors will be accommodated at any time of the year, but when the College is not in session, all facilities may not be available for touring. Appointments for a campus visit should be made by calling 1-800-325-6876 or (603) 577-6600 or by emailing us at admissions@dwc.edu.

Admission Requirements

A student may be admitted into a program of study offered by the school upon satisfying all of the following requirements:

1. Admission Requirements for Residence Programs

(a) The student is at least 16 years of age.

(b) The student has:

(1) a high school diploma; or

(2) a recognized equivalent of a high school diploma (e.g., typically a general education development (GED) certificate or a document from a state authority (to the satisfaction of the school) recognizing that the student has successfully completed secondary school through home schooling (as defined by state law)).

The student must either:

(i) certify (on a form and in a manner acceptable to the school) the following at or before the start of the student's first semester of attendance at the school, or the student will be terminated from his or her program of study:

(A) the student has graduated from a high school; or

(B) the student has obtained a recognized equivalent of a high school diploma; or

(ii) provide the school with the following before the start of the student's first semester of attendance at the school:

(A) a copy of the student's high school diploma;

(B) a copy of the student's recognized equivalent of a high school diploma;
(C) the student's official high school transcript;
(D) the student's GED scores at or above the passing level set by the state agency awarding the GED; or
(E) a document from a state authority (to the satisfaction of the school) recognizing that the student successfully completed secondary school through home schooling (as defined by state law).

(c) The student must:
(1) have scored, within the immediately preceding five years, a minimum of:
(i) 17 on the ACT; or
(ii) 400 each on both the critical reading (formerly verbal) and math portions of the SAT; or
(2) have earned 36 quarter credit hours or 24 semester or trimester credit hours with an overall cumulative grade point average of 2.0 on a 4.0 grading scale from a postsecondary educational institution located either (A) in the U.S. that is accredited by an accrediting agency recognized by the U.S. Department of Education or (B) outside the U.S. that is accredited or similarly acknowledged by an agency deemed acceptable to the school in its discretion.

(d) The student provides the school with an official transcript from each educational institution awarding the degree or any course credits that the student desires to transfer to satisfy the requirements in (c) (3) above.

Upon the student's satisfaction of all of the above requirements with respect to his or her selected program of study, the school will promptly notify the student that he or she is admitted into that program of study at the school.

2. Admission Requirements for the Business Administration Master's Degree Graduate Programs

(a) The student has a baccalaureate degree awarded by an educational institution located in the U.S. that is accredited by an accrediting agency recognized by the U.S. Department of Education, or an educational institution located outside the U.S. that is accredited or similarly acknowledged by an agency deemed acceptable in the school's discretion.
(b) Provide official transcripts from all institutions attended.
(c) A completed application form.
(d) Satisfactory performance in at least one of the following areas:
(1) An undergraduate grade point average 2.75 or higher on a 4.0 scale.
(2) The student passes (as determined by the college in its discretion) an individual interview with the Dean, if the Dean requests an interview with the student.
(e) A letter of intent regarding admission to the program

Upon the student's satisfaction of all of the above requirements with respect to his or her selected program of study, the school will promptly notify the student that he or she is admitted into that program of study at the school.

Undergraduate and Graduate Conditional Admission

If an applicant does not meet all admission requirements, his/her application will be considered for conditional admissions. Acceptance is based on an evaluation of the student's ability to contribute to and benefit from the program. Full admission will be confirmed after the participant demonstrates a capability to meet the expectations of the program by the completion of pre-requisite course work and other recommendations from the Program Director.

Advanced Placement

A student who achieves a score of three or higher on a College Board Advanced Placement Assessment will be granted credit for college work in the appropriate division and will receive placement credit at the discretion of the division when he/she enrolls as a degree-seeking student at DWC. Students may also earn credits through the College Level Examination Program (CLEP). A schedule of acceptable scores and equivalencies is available in the Office of the Registrar and the Office of Recruitment.

Credit granted in accordance with the above policy statements will satisfy the corresponding graduation or distribution requirements. In addition, such course credit will normally satisfy a prerequisite requirement for advanced work in that division. The repetition of a course received as placement credit will result in replacement of credit for that course.

Writing and Math Placement

A good foundation in writing and mathematics is necessary for success in all of the academic programs at DWC. Both play a pivotal role in undergraduate education and form the core of the communication and quantitative skills needed to succeed in the future.

Students will take a math placement test prior to entering insure they begin their math studies at the proper level of instruction. All new students must take the placement test before registering for classes. Transfer students who are given credit for comparable courses need not take the placement tests. Students whose placement assessment indicates the need for developmental work to prepare them for college level math will be placed in the appropriate course(s). The addition of developmental courses in an academic program usually has an impact on meeting course prerequisites, and therefore the time needed to meet degree requirements.

Placement in the Writing Program is determined by the student after reviewing placement criteria and/or meeting with an advisor prior to registration. Courses in the Writing Program are designed to help students develop the skills in reading, writing, research, and critical thinking that they will need to succeed at the college level and in their chosen profession.

Regulatory Requirements for Participation in Flight Education Operations

All students intending to participate in Flight Training at DWC are required to obtain the FAA Class 2 Airman Medical Certificate and Student Pilot Certificate prior to enrolling in a flight course. The Office of Recruitment can provide assistance in locating an FAA-approved physician. Flight students should be aware of weight limitation requirements to successfully complete the flight curriculum.

Due to increased sensitivity of national security risks at flight training institutions, all flight students are required by the Transportation Security Administration to verify their citizenship status prior to beginning any flight training at Daniel Webster College.

Additional information on these subjects may be found in the DWC Flight Operations Manual (FOM).

Transfer Student Application Procedure

Transfer students (students with prior college credit) should:

1. Submit a completed, signed Application for Admission to:

   Office of Admissions
   Daniel Webster College
   20 University Drive
   Nashua, New Hampshire 03063-1300

2. Provide either a final official high school transcript or, if you have completed the GED, a satisfactory high school equivalency score.
3. Provide official college transcripts from each college attended.
4. Submit a letter of intent. Explain why you wish to transfer to Daniel Webster College.
5. Schedule a campus visit (strongly recommended). You may arrange for a visit by contacting the Office of Recruitment at 1-800-325-6876 or (603) 577-6600, or by emailing us at admissions@dwc.edu.

Administration Policies

Transfer Credit

DWC recognizes work completed at other regionally accredited institutions of higher education. A student wishing an unofficial evaluation prior to enrolling may send or bring a transcript for preliminary evaluation to the Office of Recruitment. Final confirmation is based on official transcripts only. Daniel Webster College has articulation agreements with several two-year institutions. Those agreements provide additional opportunities for transferring students.

Students who have completed course work at another regionally accredited college or university may be considered in either the fall or spring semester in accordance with the following guidelines:

1. A transfer applicant should have a cumulative college grade point average of no less than 2.00 (based upon all colleges attended).
2. Previous college-level work earned at a regionally accredited college or university has been satisfactorily completed with a grade of C or better (2.00 or above on a 4.00 scale).
3. There is no limitation on the age of credit accepted for transfers. Credit will be normally granted where there is evidence to anticipate that a student's skills and knowledge are sufficient to allow the student to successfully complete his/her desired degree program. However, it may be advisable for students to retake foundation courses in math and/or writing to support their successful academic progress at DWC.
4. The repetition of a course previously received as a credit in transfer will result in the re-placement of credit for that course.
5. Students may transfer up to 63 credit hours from a two-year institution and up to 90 credit hours from a four-year institution applicable toward their degree. (Some articulation agreements the College has with other institutions may provide for additional transfer credit.)

Graduate Transfer Credit

Up to six graduate-level credits are transferable as part of the MBA program.

Veterans

The programs at Daniel Webster College are approved by the New Hampshire State Approving Agency (the New Hampshire Postsecondary Education Commission) for GI eligible persons. Veterans should contact their local Veterans Administration office for information on educational benefits. The nationwide toll free number is: 1-888-442-4551.

DWC recognizes education and training previously earned through the military. We accept DANTES and use the ACE guide to grant appropriate credit. Veterans need to submit test scores and a copy of their DD-214 or NOBE, DD Form 2384-1.

Servicemember Notice of Service and Intent to Return: Contact the Registrar's office for information.

International Student Application Procedure

Daniel Webster College admits students from across the U.S. and around the globe in the belief that a diverse community creates a vibrant campus. Annually, students from approximately ten countries enroll at Daniel Webster College. The curriculum is designed to maximize student achievement and, as you would expect, fluent knowledge of written and spoken English is required to be successful. Applicants for whom English is not their native language must demonstrate a working knowledge of academic English by successful completion of the TOEFL, the SAT or ACT verbal portion, or other more rigorous tests. Success on these exams normally insures that the candidate can be successful in the classroom.

International applicants should:

1. Submit a completed, signed Application for Admission to:

   Office of Admissions
   Daniel Webster College
   20 University Drive
   Nashua, New Hampshire 03063-1300

2. Submit scores from the SAT or ACT for international students whose first language is English. International students whose first language is not English must provide an official TOEFL score report to the Office of Recruitment. DWC requires a minimum score of 550 for the paper based TOEFL, 213 for the computer-based TOEFL or 80 for internet based TOEFL for acceptance into the College's academic programs.

3. Submit your official high school and/or college transcripts to DWC. High school or college transcripts submitted for credential evaluation should be in English. Students are responsible for payment of any charges if additional evaluations are needed for the appropriate transfer of credit.
4. Submit DWC's Declaration of Finances form.

Financial Information

Tuition and Fees 2010-2011

	Resident Students		**Non Resident Students** (Nashua Campus)		**Non Resident Students** (Online Programs)
	Fall	**Spring**	**Fall**	**Spring**	
Undergraduate Tuition	$6,975*	$6,975	$6,975	$6,975	$465**/credit hour
Room (double)	2,451	2,451	N/A	N/A	N/A
Board (19 meals)	2,544	2,544	N/A	N/A	N/A
Student Activity Fee	275	-------	275	-------	N/A
Total	**$12,245**	**$11,970**	**$7,250**	**$6,975**	

Graduate Tuition: $555/credit hour

Other Fees and Charges (excludes online programs):

Security Deposit	200
New Student Orientation Fee	250
Academic Fee (one time new students only)	200
Graduation Fee	100
Key Deposit	30
Extra Credits (Per Credit over 15 Credits per Semester)*	465
Credit by Examination (CBE) per credit	100
Part-Time (Per Credit)	465
Single Room Rate (per Semester)	2,958
Town House Room Rate (per Semester)	3,110
Fagan Residence Premium (per Semester)	237

Diploma Replacement Fee	30
Flight Re-Enrollment Fee	1,500
Administrative Fee	100
Flight No-Show Fee	100
Estimate for Books, Supplies, and Personal Expenses	3,900

Student's credit load is calculated by all courses enrolled after the drop/add period. Withdrawal does not constitute a reduction in course load attempted for financial assistance or overload.

*Based on 15 credit hour course load.

**Based on undergraduate per credit hour cost.

All charges are subject to change. A student may not complete registration for the semester if payment is not received. A finance charge of 1.5% per month (18% per annum) is assessed on all overdue accounts. The finance charge accrues from the due date of the payment (July 24 and December 18).

The Application Process
To be considered for financial assistance at Daniel Webster College, you must:

1. Complete the Free Application for Federal Student Aid (FAFSA). This form should be filed as soon after January 1st as possible. If necessary, estimate your family income to file the FAFSA on a timely basis. You should apply on the web at www.fafasa.edu.gov. Remember to list Daniel Webster College on your FAFSA, so the Financial Assistance Office will receive the results of your application automatically (the Title IV Code for DWC is 004731). You should apply on the web at www.fafsa.ed.gov.
2. Complete the DWC Institutional Application for Financial Assistance. The application may be obtained from the Financial Assistance Office or you may also download this application from our website at www.dwc.edu.
   You must complete both of the steps listed above and be accepted into a degree program to be considered for any DWC or Federal need-based financial assistance.

Eligibility
Financial Assistance for Daniel Webster College is awarded to students to recognize academic achievement and to students who will need additional funding to meet their educational expenses. Financial Assistance is awarded in two forms:

1. **Performance-based eligibility** is determined by the student's academic accomplishments, special skills or overall character. Financial need is not a factor when awarding performance-based financial assistance.
2. **Need-based eligibility** is determined by calculating the student's demonstrated financial need. Financial need is calculated by subtracting your Expected Family Contribution (EFC) from educational costs at Daniel Webster College. Your EFC is derived from the information you report on the FAFSA, which utilizes an approved federal methodology for determining family contribution.

Educational Costs
Typical estimated budgets at Daniel Webster College for students at the Nashua campus for the 2010-2011 college year are:

Annual Charges	**Residents**	**Non-residents**
Tuition	$13,950	$13,950

Student Activity Fee	275	275
New Student Orientation Fee	250	250
Room (Double) and Board	9,990	0
Total Direct Costs:	**$24,465**	**$14,475**

Semester tuition covers 15 semester hours. Students can expect additional expenses other than the direct costs listed above, which may include: books and supplies, estimated at $1,200; miscellaneous personal expenses estimated at $1,500; and travel estimated at $1,200. Additional credits will be charged at the rate of $465 per credit hour.

Professional Flight Core Tuition

In addition to tuition, students enrolled in flight practica pay for flight training. Each flight practicum requires separate flight tuition to cover hourly fees for aircraft, simulators, and flight instructors. Flight tuition fee schedules are reviewed periodically and are based on the calculated costs to complete each lesson in the flight practicum.

The Flight Core Fees are similar to a declining balance deposit towards the hourly fees for aircraft, simulators, and flight instruction. Students will be charged for each use of the resources based upon the currently hourly rates. The current hourly rates will be posted in the Flight Center, at the Dispatch desk and also on Skyscheduler.

- **Overage Charges:** Since students progress at different rates, the actual costs for all flight practica are computed and the student is billed for costs in excess of the stated Flight Practicum Tuition Deposits. Practicum tuition deposits are based upon minimum times to meet FAA requirements and curriculum objectives. If a student is not progressing very efficiently in the practicum, he or she will require more time and resources than the minimum to complete the lesson/stage/practicum objectives. When the student exceeds the established nominal flight time and/or flight instructor time planned for the course, additional charges will be billed. It is not unusual for these additional charges or “overages” to be in the range of 20-30% over the practicum flight tuition deposits.
- **Practicum Failures (No Credit):** Students who do not make expected progress overall in the practicum will receive a “no credit” (NC), which is a failing grade for the practicum and will be required to reenroll in the practicum in order to continue in the fight program. Individual lesson prices for re-enrollments will be based upon the current hourly rates. In addition, a student who receives a NC in a flight practicum is subject to a re-enrollment fee of $1,500, in lieu of the flight tuition deposit.
- **Practicum Withdrawals:** If a student withdraws from a practicum, the refund policy is applied as outlined under the Refund Policy. Refunds of flight lessons not flown, less fixed cost of re-sources allocated, are calculated on an individual basis. See the DWC FOM for more information.
- **Practicum Attendance:** Attendance requirements in these practica are rigorously enforced due to the minimum flight and contact hour requirements established by the FAA for courses that provide training to meet the administrator’s requirements for pilot certificates. Resources are committed for every scheduled flight. When a student is absent from a scheduled flight, resources may be wasted and the College must commit additional resources for the makeup of that session. If the absence is not authorized, a charge of $100 will be assessed to defray the additional expense. Excused absences may be requested, with a reasonable explanation. Excused absences are the exception, and are only authorized for sanctioned college activities, sickness, and family emergencies. They are not authorized for long weekends, extended travel before or after break, or routine convenience of the student. An appeal process for reversing the “No Show” (NS) event codes and voiding of the no show fee is available. Further information may be found in the DWC FOM.
- **Federal Aviation Administration (FAA) Knowledge and Practical Test Fees:** The requirement to obtain certain FAA Certificates or Ratings is part of the DWC Flight Curriculum. These tests are normally conducted by an FAA designated representative or entity acting on behalf of the FAA. Since these FAA designees serve without pay from the government for conducting tests and processing the necessary reports, the FAA designee is allowed to charge a reasonable fee. These fees are separate from other flight fees, are not a DWC fee, and are paid directly to the FAA designee. Knowledge Test fees normally range from $75 to $150, and Practical Tests from $300 to $500 each.

A student may check on his/her financial status in the practicum at any time via SkyScheduler. Finally, qualified students and alumni may rent College aircraft for extracurricular purposes. Contact the Aviation Center for rates.

Professional Flight Core Fees*

Course	Fee
AF 128P - Fund of Flight Practicum	$10,500
AF 129P - Extended Fund Flight/Trans Practicum	4,000
AF 148P - Extended Fundamentals of Flight Practicum	10,400
AF 258P - Integrated Flight Ops Practicum	12,600
AF 328P - Full Mission Operations Practicum	12,800
AF 338P - Crew/ATC Integration Practicum	15,200

***Subject to change**

Elective Flight Courses

Course	Fee
AF 216P - Multiengine Class Rating Practicum	$ 4,200
AF 218P - Global Navigation Systems Operations Practicum	3,700
AF 409P - Flight Instructor Practicum	5,990
Practicum Re-enrollment Fee per re-enrollment	1,500

College Payment Policy

Students are required to pay in advance of the beginning of each semester the total fees incurred for that semester. Payment of the tuition, residence fee, and other fees must be satisfied in full before the deadlines listed below. In keeping with this policy, confirmation of final assignment to classes and housing will be made only with approval from the Vice President for Business, Finance and Operations. Any additional charges, if incurred during the semester, will be submitted as they become payable.

Payment due dates are as follows:

Fall Semester	July 30, 2010
Spring Semester	December 17, 2010
Flight Courses	Prior to registration
Other charges	As incurred

Finance charges of 1.5% per month will be assessed from the due date on all outstanding balances over 30 days. Students with outstanding balances will be unable to complete registration for further courses until the account is cleared.

Any student making payment by a check or bank card which is returned because of insufficient funds will be assessed a penalty of $35. Use of an unauthorized credit card or declined credit card will also be assessed a penalty of $35 and may result in the cancellation of the student's registration.

Transcripts are not released to individuals, or on behalf of individuals, who have accounts outstanding.

The College offers a monthly payment plan through Tuition Management Systems, which is independent of the College. Please contact Tuition Management Systems directly for details. Additional information and brochures regarding these tuition budget plans are available from the Admissions Office, and the Office of Financial Aid.

Withdrawal Refund Policy

A student wishing to withdraw from the College must complete a form from the Registrar's Office indicating the official date of withdrawal. Recipients of financial assistance through programs administered by the College must have an exit interview with the Director of Financial Assistance before submitting a withdrawal form. This form is required before refunds will be considered. Refunds are determined as follows:

- **Tuition:** A student who discontinues attendance within the school year will be charged tuition for the whole semester unless the withdrawal is within the first five weeks of the semester. Assuming that full tuition has been paid, a student will be refunded 75% of tuition if withdrawal takes place within the first week of the semester; 60% within the second week; 25% within the third and fourth weeks; 10% within the fifth week; and 0% thereafter.
- **Housing:** Housing refunds are computed by the week, counting the first week of entry as a full week and that of withdrawal as a full week, less the $500 early housing contract termination fee.
- **Resident Meal Plan:** Refunds are computed on a daily basis.
- **Federal Funds:** Refunds for recipients of Title IV, federally funded financial aid (Perkins Loans, Supplemental Educational Opportunity Grants, Pell Grants, and Guaranteed Student Loans) are computed according to federal regulation 34#CFR#668.22. Students must complete an exit interview before leaving Daniel Webster College. Please contact the Office of Financial Aid for further information.
- **Flight Courses:** Students need to send a written request to Administration and Finance stating they intend to leave the flight operations program and asking them to close out their flight practicum record before the flight department will issue a credit to the student's account. FAA Regulations require detailed flight records to be maintained for only one year; therefore this request must be made within one year of the termination of flight activity. Refunds are based on the cost of resources (aircraft and instructor time) that are programmed for the particular practicum but were not used. Further information is available in the DWC Flight Operations Manual.

Explanation of Fees

Room and Board
Students are required to live on campus for their first two years of matriculation unless their permanent residence is within commuting distance. All resident students, other than Townhouse residents, are required to participate in a 19-meal or 15-meal or 10-meal plan. The 19-meal plan includes three meals daily, Monday through Friday, two meals on Saturday and Sunday, and unlimited seconds. The 15-meal plan includes 15 meals a week (unlimited seconds) plus a declining balance, and the 10-meal plan includes 10 meals a week (unlimited seconds), plus a declining balance.

The fall semester room fee is for residence from the opening of the College semester until the beginning of the Winter break. The spring semester room fee covers the beginning of the spring semester until the last exam of the spring term excluding the Spring Break week. The College Academic Calendar specifies the dates when residence halls are open. Additional room fees are charged for the weeks between semesters and Thanksgiving and Spring Breaks.

Academic Fee
Each student will pay the school an Academic Fee of $200. Notwithstanding anything to the contrary in the immediately preceding sentence, if the school or any other Daniel Webster College previously received and retained any monies from or on behalf of the student for an Academic Fee charged to the student ("Prior Academic Fee Retained"), the student will only be obligated to pay the school an Academic Fee in the amount of $200, less the amount of the Prior Academic Fee Retained. The Academic Fee is due and payable by the student to the school on the student's first day of recorded attendance in any program course following the student's enrollment in a program of study offered by the school.

Administrative Fee
Each student will pay the school an Administrative Fee of $100 each time the student's enrollment in a program of study offered by the school is terminated, regardless of the reason for the termination (including, without limitation, any termination of enrollment resulting from a student's graduation, withdrawal, failure to make satisfactory academic progress or violation of the Conduct section of the school catalog). The Administrative Fee is due and payable by the student to the school immediately upon the termination of the student's enrollment in the program of study.

Graduation Fee
The graduation fee covers the cost of the cap and gown and other charges associated with graduation.

Student Activity Fee
The student activity fee of $275 is charged to each student registered for six or more credit hours. The student activity fund provides support for programming, clubs and organizations.

Damage and Security Deposit
The College requires a damage and security deposit from all resident students at the beginning of each academic year. The College shall deduct from the student's damage and security deposit any loss or damage to the College grounds, fixtures, furnishings, or personal property furnished by the College for use by the student. The security deposit balance, upon receipt of damage reports, will be refunded after graduation, withdrawal, or dismissal from the College.

A commuting student will not be charged for damages done to the residence halls unless the individual has been found to have actually done the damage.

New Student Orientation Fee
This fee partially covers the cost of the New Student Orientation Program including room and meals and other expenses associated with the orientation activities. The program extends into the first semester and carries one credit hour which is counted as part of the student load.

Late Check-In Fee
There is an additional $100 charge to students who do not complete the check-in process by the published deadline for each semester.

Extra Credits/Overload
When a student enrolls in a course which brings the total number of credit hours in the semester to more than 18, an overload charge will be incurred. Flight practicum courses are credit courses and included in the total credit hours carried. Enrollment in a flight course that begins at any time during the semester may cause extra credit charges if the semester load exceeds 18 credit hours and the academic year load exceeds 36 credit hours. Withdrawal from a course after the published drop date does not constitute a reduction in course load attempted for computation of overload charges.

Technology Fee
This fee covers the cost of telephone, e-mail and internet connection in the residence halls, student technology labs and voice mail boxes for all students.

Flight Re-Enrollment Fee
The Flight Re-Enrollment Fee covers fixed costs that are associated with each enrollment in a Flight Practicum. Just as there are fixed costs (building, utilities, etc.) associated with providing any class in a classroom, they also exist for flight practica, but to a greater extent. In the classroom, these costs are covered by tuition and in flight, they are covered by the practicum fee for each practicum a student flies. When a student must retake a course in the classroom, the fixed costs are covered once again by the tuition. When a student needs to retake a flight practicum, the re-enrollment fee is applied to cover the fixed costs associated with the flight practicum.

A student who is retaking a flight practicum normally does not start at the beginning of the practicum and will not use all of the resources covered under the fixed costs for the entire practicum. Therefore, the college has established a re-enrollment fee of $1,500 per practicum. This re-enrollment fee does not cover “extra” flight time the student may need to complete the retaking of the practicum.

Help with Educational Costs
Well aware that many students and their families today need help with educational costs, Daniel Webster College maintains a comprehensive program of financial assistance including our own institutional grants and scholarships, federal assistance programs, and state funding from those states with which we have reciprocity agreements.

The College is approved for the education of veterans and the children of veterans. ROTC scholarships can also be a source of education benefits. (Please see section on ROTC.)

Payment of Awards
Federal grants and loans administered by the College are usually awarded on an annual basis and will be credited to the student’s account, one-half at the start of each semester.

Funds awarded under the Federal Work Study Program are not automatically credited to a student’s account. The student must earn these funds and will be paid for hours worked on a bi-weekly basis. Work study jobs are not guaranteed. Work study money can be considered taxable income.

Renewal of Financial Assistance
Students must re-apply for need-based financial assistance every year they are enrolled at DWC. To re-apply for need-based assistance, you will need to complete the FAFSA and the DWC Institutional Application for the particular year for which you are re-applying. Renewal of all financial assistance is also dependent upon maintaining satisfactory academic progress according to the College’s policy as outlined in the next section.

Standards of Satisfactory Academic Progress
Federal regulations require Daniel Webster College to monitor a student’s satisfactory academic progress through both qualitative and quantitative measurement. The qualitative standard is a measure of a student’s cumulative grade point average (CGPA). The quantitative standard measures the number of credits attempted versus the number of credits earned. As long as these standards of satisfactory progress are met, a student is eligible to receive financial assistance. The standards apply to both fulltime and part-time students enrolled in a degree or certificate program. Although these standards must be met to continue eligibility for financial assistance, they may be different from academic standards set by the College.

Qualitative Standards
A student at Daniel Webster College must maintain a minimum grade point average of 2.0 on a 4.0 scale to meet the eligibility requirements for both federal and institutional financial assistance.

First and Second Year Undergraduate Students: A student who has attempted fewer than 60 credit hours qualifies for first or second year status. At the end of the first undergraduate year, with 30 credit hours attempted, a student must have a 2.0 cumulative GPA. If this standard is not met, the student will be placed on Financial Assistance Probation. (see information below)

Third and Fourth Year Undergraduate Students: A student who has attempted 60 credit hours or more, including transfer credits, qualifies for third or fourth year status. A student in this category must maintain a 2.0 grade point average in order to continue to make satisfactory progress towards graduation. Failure to do so will result in the suspension of financial assistance for at least the following semester/term. Eligibility will not be restored until it is determined that the student is again meeting the requirements for satisfactory progress.

Quantitative Standards
To ensure that a student is meeting this measure of satisfactory progress, Daniel Webster College compares the number of credit hours a student has attempted to the number of credit hours that have been successfully completed. This comparison enables the College to determine if progress is being made towards graduation at a rate which will allow the student to finish a program within the maximum allowable time frame and continue to receive financial assistance. A student at Daniel Webster College has a maximum of six years to complete a Bachelor’s Degree with financial support. Financial assistance is not available after that time period; however, the student may take a longer time to complete degree requirements.

In order for a student to progress at a reasonable rate towards graduation, at least 70% of all credits attempted at Daniel Webster College must be completed. This standard is measured on a cumulative basis at the end of each academic year. Total credits earned divided by the total credits attempted equals the percentage completed. Successful completion is defined as the assignment of a passing grade to the courses attempted. Failure, withdrawal, incomplete, or other similar designations are not considered successful completion. Courses that are repeated by the student will be counted as credits attempted and will be counted as credits earned when the student receives a passing grade. If a student has an Incomplete (I) for a course and receives a grade at a later date, the credits will be counted as earned when the passing grade is assigned.

Financial Assistance Probation
The probationary period for federal assistance will be a maximum of twelve months and cannot be extended beyond this twelve-month period. The student is still eligible for financial assistance while on probation.

At the end of the probationary period, a student must meet both the qualitative and the quantitative standards to have financial assistance continued. If a student's academic record does not meet these standards at that time, the student's eligibility for financial aid is suspended. The student will not regain eligibility to receive further financial assistance until it is determined that the student is again meeting the requirements for satisfactory progress.

If eligibility for financial assistance is suspended based on either qualitative or quantitative standards, the student may appeal the suspension on the grounds of undue hardship. Undue hardship is defined as a death in the family, injury to the student and/or serious illness or other types of extenuating circumstances which have affected the student's academic performance. A written appeal should be sent to the Student Financial Services Office with appropriate documentation of circumstances.

Nondiscrimination
DWC admits students of any race, color, creed, gender, disability and national or ethnic origin to all the rights, privileges, programs, and activities generally accorded or made available to students at the College. The College does not discriminate on the basis of race, color, creed, gender, disability, and national or ethnic origin in administration of its educational policies, admissions policies, scholarship and loan programs, or athletic and other school administrative programs.

Entrance/Exit Counseling
If you receive Federal Direct Loans (Subsidized or Unsubsidized), federal regulations require you to complete an entrance and exit counseling.

Federal regulations mandate that you complete loan counseling on-line at: www.mappingyourfuture.org prior to the receipt of your first loan. Online exit counseling is also at www.mappingyourfuture.org provided to review your loan indebtedness and your rights and responsibilities regarding repayment of your loans prior to graduation or withdrawal. The Student Financial Services Staff also prepares an exit counseling package for each student.

Return of Title IV Funds
The Return of Title IV Funds process is used to determine what percentage of financial assistance a student is allowed to keep and what percentage of financial assistance must be returned to the federal government when a student withdraws from the college. A student earns Title IV funds in direct proportion to the length of time a student remains enrolled. The number of days attended by the student, (a direct result of the student's withdrawal date) divided by the number of days in the period determines the percentage of Title IV assistance earned by the student. Unearned Title IV assistance is the amount of disbursed Title IV assistance that exceeds the amount of Title IV assistance actually earned. Title IV assistance is returned in the following order.

- Unsubsidized Federal Direct Loans
- Subsidized Federal Direct Loans
- Federal Perkins Loan
- Federal Direct PLUS Loan
- Federal Pell Grant
- Federal SEOG
- All other Title IV assistance

Financial Assistance Office Information
The Student Financial Services staff are able to provide information concerning educational funding to parents and students during the regular working hours of the College, usually 8:30 a.m. until 5:00 p.m., Monday through Friday and by appointment. Appointments are scheduled upon request. Voice mail is available 24 hours a day, 7 days a week. Your call will be returned as soon as possible. Inquiries may also be sent by e-mail to finassist@dwc.edu.

Consumer Information and Financial Assistance
The Director of Recruitment is designated to provide consumer information concerning admissions and retention statistics, which is available to parents and students in the Admissions Office during the regular working hours of the College, usually 8:30 a.m. until 5:00 p.m., Monday through Friday and by appointment. Call 1-800-325-6876 for more information.

Student Consumer Rights and Responsibilities
Education after high school costs time, money, and effort. It's a big investment, and as a student and a consumer, one should carefully evaluate the educational program they are considering. To help make a good choice, students should have information on a college's academic program, facilities, retention rates, full cost of attendance, refund policy, financial aid program, and any other information to help make the decision.

Graduation rate statistics and campus crime statistics are available upon request as required by the Federal Student Right-to-Know and Campus Security Act. Copies of these statistics may be obtained through the Office of Recruitment.

FINANCIAL ASSISTANCE

Daniel Webster College may, from time to time, provide the student with (a) information on federal, state and private education loans and grants, and other student financial aid (collectively, "Financial Assistance") for which he or she may apply to receive and/or (b) estimates of the amount of Financial Assistance for which he or she may qualify, but:

- the federal, state and private party providers determine the student's eligibility for any Financial Assistance;
- the federal, state and private party providers determine the amount of any Financial Assistance the student may receive, not the College;
- any Financial Assistance, including, without limitation, scholarships, may terminate at any time without notice;
- the student is responsible for applying for any Financial Assistance, not the College;
- the student is responsible for determining when and where to apply for any Financial Assistance; and
- the student is responsible for repaying the full amount of any Financial Assistance received in the form of a loan, plus interest and less any amount of the loan that may be refunded.

Federal Financial Aid Administered by the U.S. Department of Education

The College is designated as an eligible institution by the U.S. Department of Education ("DOE") for participation in the following federal programs. To apply for financial aid under the following federal programs, a student needs to complete and submit a Free Application For Federal Student Aid online, by PDF or by paper.

Federal Pell Grant Program
The Federal Pell Grant Program is intended to allow eligible students financial access to the school or college of their choice. For eligible students, Federal Pell Grants are the "floor" or base upon which all other federal student financial aid is built. Current year awards range from $0 to $5,550. The amount a student may receive depends on the student's family's financial situation, the student's full- or part-time enrollment status and how much of the student's remaining education at the school falls within the current federal award year (July 1 through June 30). In order to be eligible for a Federal Pell Grant, a student may not have previously received a bachelor's degree from any institution.

Federal Academic Competitiveness Grant Program
An eligible student may receive a federal Academic Competitiveness Grant of up to $750 for the student's first academic year of study and up to $1,300 for the student's second academic year of study. To be eligible for each academic year, a student must:

- be a U.S. citizen or an eligible noncitizen;

- be a Federal Pell Grant recipient;
- be enrolled at least half-time in a degree program;
- be enrolled in the first or second academic year of his or her program of study at an eligible two-year or four-year degree-granting institution;
- have successfully completed a rigorous secondary school program of study (after January 1, 2006, if a first-academic-year student, and after January 1, 2005, if a second-academic-year student);
- if a first-academic-year student, not have been previously enrolled in an Academic Competitiveness Grant-eligible undergraduate program while the student was still in high school or, if the student was in such a program, the courses must have been part of the student's high school program; and
- if a second-academic-year student, have successfully completed the student's first academic year and have a cumulative grade point average of at least 3.0 on a 4.0 scale.

The goal of this federal grant program is to encourage more students to pursue fields of study involving physical, life or computer science, engineering, mathematics, technology, or a critical foreign language.

Federal National Science and Mathematics Access to Retain Talent ("SMART") Grant Program
An eligible student may receive a federal SMART Grant of up to $4,000 for each of the student's third and fourth academic years of study. To be eligible for each academic year, a student must:

- be a U.S. citizen or an eligible noncitizen;
- be a Federal Pell Grant recipient;
- be enrolled at least half-time in a bachelor degree program in a field of study involving physical, life or computer science, engineering, mathematics, technology, or a critical foreign language;
- be enrolled in a four-year degree-granting institution; and
- have a cumulative grade point average of at least 3.0 on a 4.0 scale for all courses in the student's program through the most recently completed payment period.

The goal of this federal grant program is to assist students who have demonstrated academic ability and require financial aid to help pay their cost of education.

Federal Supplemental Education Opportunity Grant ("FSEOG") Program
An eligible student attending the College may receive a federal FSEOG of $100 to $4,000 for each of the student's academic years of study. The actual amount of the federal FSEOG depends on the financial need demonstrated by the student's family and the amount of federal FSEOG funds available to be awarded by the institution. Based on the federal FSEOG funds available to be awarded by the College, a student's federal FSEOG in any award year will not exceed $1,500. In order to be eligible for a federal FSEOG, a student may not have previously received a bachelor's degree.

Direct Subsidized Federal Stafford Loan Program
These loans are available to eligible students enrolled at least half-time in an eligible institution and are based on the financial need demonstrated by each student. An undergraduate student may borrow up to $3,500 for the first academic year, $4,500 for the second academic year and $5,500 for each of the third and subsequent academic years under this program. A graduate student may borrow up to $8,500 for each academic year under this program. The loan amounts will be pro rated for academic years of less than nine months. A student must repay his or her Direct Subsidized Federal Stafford Loans based on the amount borrowed, but no less than $50 per month, beginning six months after graduation or termination of studies. As of July 1, 2010, the maximum interest rate on a Direct Subsidized Federal Stafford Loan is 4.5% for undergraduate students and 6.8% for graduate students. Repayment of a Direct Subsidized Federal Stafford Loan may be deferred for up to three years for any student who: (1) is seeking and is unable to find full-time employment; (2) suffers economic hardship; or (3) returns to school and is enrolled at least half-time. As of July 1, 2010, a student is obligated for a 1.0% origination fee on each Direct Subsidized Federal Stafford Loan that the student receives. At the time of loan origination, the DOE will provide an interest rebate to Direct Subsidized Federal Stafford Loan borrowers. This rebate will be credited to the student's loan account. In order to keep this benefit, a student must make his or her first 12 required monthly payments on time. As of July 1, 2010, the interest rebate awarded by the DOE is 0.5%.

Direct Unsubsidized Federal Stafford Loan Program

These loans are available to eligible students enrolled at least half-time in an eligible institution and who do not demonstrate financial need. An undergraduate student who is classified as (a) independent or (b) dependent and whose parents fail to qualify for a Direct Federal PLUS Loan, may borrow up to $6,000 for each of the first two academic years and $7,000 for each of the third and subsequent academic years under this program. An undergraduate student who is classified as dependent and whose parents are not rejected for a Direct Federal PLUS Loan may borrow up to $2,000 for each academic year under this program. A graduate student may borrow up to $12,000 each academic year under this program. This loan was created so that any student, regardless of income, would be able to obtain a Federal Stafford Loan. The terms and conditions of the unsubsidized loan, including deferments, interest rate and loan charges, with few exceptions, are the same as the Direct Subsidized Federal Stafford Loan described above. However, a student must pay the interest on any Direct Unsubsidized Federal Stafford Loan during the time that the student is in school and during any deferment period. The maximum interest rate on a Direct Unsubsidized Federal Stafford Loan was 6.8%, as of the date this catalog was published. As of July 1, 2010, a student is obligated for a 1.0% origination fee on each Direct Unsubsidized Federal Stafford Loan that the student receives. At the time of loan origination, the DOE will provide an interest rebate to Direct Unsubsidized Federal Stafford Loan borrowers. This rebate will be credited to the student's loan account. In order to keep this benefit, a student must make his or her first 12 required monthly payments on time. As of July 1, 2010, the interest rebate awarded by the DOE is 0.5%.

Direct Federal PLUS Loan Program

Direct Federal PLUS Loans are for parent and graduate student borrowers. The maximum interest rate for Direct Federal PLUS Loans was 7.9%, as of the date this catalog was published. The interest rates charged on these loans may change, so the student must check with the College for the current rate. As of the date this catalog was published, parent and graduate student borrowers are obligated for a 4% origination fee on each Direct Federal PLUS Loan they receive. At the time of loan origination, the DOE will provide an interest rebate to Direct Federal PLUS Loan borrowers. This rebate will be credited to the parent's or graduate student's loan account. In order to keep this benefit, a borrower must make his or her first 12 required monthly payments on time. As of July 1, 2010, the interest rebate awarded by the DOE is 1.5%. Direct Federal PLUS Loans enable parents and graduate students to borrow the cost of the student's education, less other aid received by the student. Direct Federal PLUS Loan borrowing is limited to parents and graduate students with a favorable credit history.

Federal Perkins Loan Program

These loans are available to eligible students who began attending and have continuously attended the College prior to June 30, 2010, have qualified to receive and have received a Federal Perkins Loan through the College and continue to qualify by demonstrating financinal need. The pool of available Federal Perkins Loan funds is limited, so not all Federal Perkins Loan applicants may be offered a Federal Perkins Loan. An undergraduate student may borrow up to $500 for each academic year under this program based on the pool of funds that is currently available under this program. A graduate student may borrow up to $500 for each academic year under this program based on the pool of funds that is currenly available under this program. A student must repay his or her Federal Perkins Loans based on the amount borrowed but no less than $50 per month, beginning nine months after the student graduates, withdrawals or enrolls less than half-time. As of the date this catalog was published, the interest rate on a Federal Perkins Loan was a 5.0% fixed interest rate. No interest is charged while the student is enrolled at least half-time in an eligible program at an eligible institution. Repayment of a Federal Perkins Loan may be deferred for varying periods for any student who, among other reasons: (1) is seeking and is unable to find full-time employment; (2) suffers economic hardship; or (3) returns to college and is enrolled at least half-time.

Federal Work Study Program

The Federal Work Study Program ("FWS") provides jobs for eligible students who must earn funds to pay a portion of their educational expenses. A student enrolled at least half-time in an approved postsecondary educational institution may work in a governmental or nonprofit agency. The salary is generally the current minimum wage, unless the employer is willing to pay a higher wage rate for particular skills. The number of hours a student may work is based on the financial need demonstrated by the student, the number of hours it is possible for the student to work and the availability of FWS funds at the institution. Only a limited number of FWS jobs are available on campus; information with respect to these campus positions is available from the College's Career Services Department.

GI Bill Education Benefits

Some of the programs offered at the College are approved by the State Approval Agency for the training of veterans, Ready Reservists, National Guard members, spouses and children of deceased or 100% disabled veterans, and, in some cases, spouses and children of active duty service members under Titles 10, 32 and 38 of the United States Code. Veterans desiring to train using the benefits of the GI Bill must first establish eligibility with the Department of Veterans Affairs ("VA") by submitting Form 22-1990, Application for VA Education Benefits, or by applying online at www.gibill.va.gov. For a complete description of each VA education assistance program, go to the GI Bill website at www.gibill.va.gov. Service members on active duty or current members of the National Guard who are considering college

should contact their post or unit education officer for full details and current tuition benefits. Veterans should contact the College's Finance Department with questions regarding institutional procedures for certifying enrollment.

NOTE: The regulations governing all federal financial assistance programs are subject to change. The Finance Department will have information regarding available programs, and will make available to the student a copy of the DOE publication "Funding Education Beyond High School: The Guide to Federal Student Aid 2010-11."

Private Loan Programs

Sallie Mae Smart Option Student Loan Program

Loans made under the Sallie Mae Smart Option Student Loan Program (the "SOP") are made available to eligible students by Sallie Mae Bank. The SOP was designed to help eligible students fill the funding gap when federal and state student financial aid sources do not fully cover the students' cost of education. SOP loans are not guaranteed by the federal government and may cost an eligible student more than federal loans. Under the SOP, an eligible student may borrow from $1,000 up to the cost of the student's Daniel Webster College education, less all federal and state grant and loan aid received by the student and his or her parents for the student's Daniel Webster College education.

A student borrower may elect from the following repayment options during the student's enrollment and for six months after the student's enrollment in any program at the College ends:

- make monthly interest payments but defer prinicpal payments on his or her SOP loans; or
- make fixed payments of $25 each month on his or her SOP loans.

A student borrower must begin making regular principal and interest payments on his or her SOP loans six months after the student's enrollment in any program at the College ends. The loan repayment period for SOP loans will vary based on the loan amount and a student's academic grade level in school. To qualify for a SOP loan:

- the borrower or a cosigner must be a U.S. citizen or permanent resident alien with a valid Social Security number;
- the borrower or cosigner(s) must meet the lender's creditworthiness criteria;
- the borrower or cosigner must have attained the age of majority in the state of his/her residence at the time of the loan application; and
- the student must be attending Daniel Webster College on a full-time, half-time or less than half-time basis.

As of the date this catalog was published:

- no loan origination fee was charged on a SOP loan;
- the interest rate charged on a SOP loan was a variable rate that ranged from the one-month London Interbank Offered Rate ("LIBOR") plus 10.875% for the least creditworthy eligible borrowers without a cosigner to the one-month LIBOR plus 2.50% for the most creditworthy eligible borrowers with a cosigner; and
- the interest rate charged on a SOP loan adjusts monthly based on the one-month LIBOR that is in effect on the 25th day of the immediately preceding month.

The following model disclosure form for loans under the SOP contains information that the Federal Reserve Board requires to be disclosed to students and their families:

SALLIE MAE BANK
P.O. Box 9435
Wilkes-Barre, PA 18773-9435
(888) 272-5543

Loan Interest Rate & Fees

Your **starting interest rate** will be between

2.875% and **11.25%**

After the starting rate is set, your rate will then vary with the market

Your Starting Interest Rate (upon approval)

The starting interest rate you pay will be determined after you apply. It will be based upon your credit history, which repayment option you choose, and other factors. If approved, we will notify you of the rate you qualify for within the stated range.

Your Interest Rate during the life of the loan

Your rate is variable. This means that your rate could move lower or higher than the rates on this form. The variable rate is based upon the one-month LIBOR Rate (as published by the Reuters on its Reuters Screen LIBOR01). For more information on this rate, see the reference notes.

There is no limit on the amount the interest rate can increase.

Loan Fees

Application Fee: $0. **Disbursement Fee:** The fees that we charge to make this loan are 0% to 0% of total loan amount. **Late Charge**: 5% of the amount of the past due payment, or $5 whichever is greater.
Returned check charge: up to $20. **Fee when you begin repaying the loan:** 0% of loan balance.

Loan Cost Examples

The total amount you will pay for this loan will vary depending upon when you start to repay it. This example provides estimates based upon the repayment option available to you while enrolled in school.

Repayment Option (while enrolled in school and during the six-month separation period)	**Amount Provided** (amount provided directly to you or your school)	**Interest Rate** (highest possible starting rate)	**Loan Term** (how long you have to pay off the loan)	**Total Paid over life of loan** (includes associated fees)
PAY ONLY THE INTEREST Make interest payments but defer payments on the principal amount while enrolled in school and during separation.	$10,000	10.25%	7 years starting after the in school period	$18,302.43
MAKE FIXED PAYMENTS Make fixed payments of $25 each month while enrolled in school and during separation. Interest will be charged and unpaid interest will be added to your loan.	$10,000	11.25%	10 years starting after the in school period	$23,572.60

About this example

The repayment example assumes that you remain in school for 4 years and have a 6-month separation period before beginning repayment. It is based on the **highest starting rate currently charged** and associated fees. Please note that if you elect to make $25 Fixed Payments while in school and during the separation period, your interest rate and your monthly principal and interest payment after the separation period ends may be higher as compared to electing the Interest Only option. So long as you do so prior to finalizing this loan, you can change your repayment option election by calling 1-888-272-5433. Principal and interest repayment terms vary from 5 to 15 years and are based upon the borrower's cumulative outstanding Sallie Mae-serviced private student loan balance and the student's school-certified academic grade level.

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Federal Loan Alternatives

Loan program	Current Interest Rates by Program Type
PERKINS for Students	5% fixed
STAFFORD for Students	5.6% fixed Undergraduate subsidized
	6.8% fixed Undergraduate unsubsidized and Graduate
PLUS for Parents and Graduate/Professional Students	8.5% fixed Federal Family Education Loan (New FFELP loans cease after June 30, 2010)
	7.9% fixed Federal Direct Loan

You may qualify for Federal education loans.
For additional information, **contact your school's financial aid office or the Department of Education at:**

www.federalstudentaid.ed.gov

Next Steps

1. **Find Out About Other Loan Options.**
   Some schools have school-specific student loan benefits and terms not detailed on this form. Contact your school's financial aid office or visit the Department of Education's web site at: www.federalstudentaid.ed.gov for more information about other loans.
2. **To Apply for this Loan, Complete the Application and the Self-Certification Form**.
   You may get the certification form from your school's financial aid office. If you are approved for this loan, the loan terms will be available for 30 days (terms will not change during this period, except as permitted by law and the variable interest rate may change based on the market).

REFERENCE NOTES

Variable Interest Rate

- This loan has a variable interest rate that is based on a publicly available index, the one-month London Interbank Offered Rate (LIBOR). Your rate will be calculated each month by adding a margin between +2.50% and +10.875 to the LIBOR.
- The rate will not increase more than once a month, but there is no limit on the amount that the rate could increase at one time.

Eligibility Criteria

Borrower

- You must attend an eligible school, be an undergraduate student, or attending an eligible associate, graduate or technical/trade program at least half-time. In some circumstances, the Smart Option Student Loan is available to less-than-half-time students and students enrolled in a continuing education program.
- Must have attained the age of majority in your state of residence at the time of loan application. Otherwise, a cosigner is required.

Cosigners

- A cosigner is not required, but may help you qualify and/or receive a lower interest rate.
- Must have attained the age of majority in their state of residence at the time of loan application.

Bankruptcy Limitations

- If you file for bankruptcy you may still be required to pay back this loan.

More information about loan eligibility and repayment deferral or forbearance options is available in your loan application and Promissory Note.

CitiAssist Student Loan Program

Loans made under the CitiAssist Student Loan Program (the "CLP") are made available to eligible students by Citibank, N.A. The CLP was designed to help eligible students fill the funding gap when federal and state student financial aid sources do not fully cover the students' cost of education. CLP loans are not guaranteed by the federal government and may cost an eligible student more than federal loans. Under the CLP, an eligible student may borrow from $1,000 up to the cost of the student's Daniel Webster College education, less all federal and state grant and loan aid received by the student and his or her parents for the student's Daniel Webster College education, not to exceed $120,000 in total.

A student borrower can defer payments of principal and interest on his or her CLP loans during a student's enrollment and for six months after the student's enrollment in any program at the College ends. The maximum loan repayment period for CLP loans to undergraduate students is 15 years and for CLP loans to graduate students is 20 years. To qualify for a CLP loan:

- the borrower or a cosigner must be a U.S. citizen or permanent resident alien with a valid Social Security number;
- the borrower or cosigner(s) must meet the lender's creditworthiness criteria;
- the borrower and cosigner(s) must be at least 18 years of age, 19 years of age in Alabama and Nebraska, and 21 in Mississippi and Puerto Rico; and
- the student must be attending the College on at least a part-time basis.

As of the date this catalog was published:

- no loan origination fee was charged on a CLP loan;
- the interest rate charged on a CLP loan was a variable rate that ranged from the three-month LIBOR plus 11.00% for the least creditworthy eligible borrowers to the three-month LIBOR plus 3.25% for the most creditworthy eligible borrowers; and
- the interest rate charged on a CLP loan adjusts quarterly based on the three-month LIBOR that is in effect on the 30th day preceding the quarter.

The following model disclosure form for loans to undergraduate students under the CLP contains information that the Federal Reserve Board requires to be disclosed to students and their families:

Citibank, N.A.
P.O. Box 6074
Sioux Falls SD 57117-6074
1-800-967-2400

Loan Interest Rate & Fees

Your **starting interest rate** will be between

3.625% and **11.375%**

After the starting rate is set, your rate will then vary with the market.

Your Starting Interest Rate (Upon Approval)

The starting interest rate you pay will be determined after you apply. Your interest rate will be based upon your credit score, the credit score of any co-signer and other factors. If approved, we will notify you of the rate for which you qualify within the stated range.

Your Interest Rate During the Life of the Loan

Your rate is variable. This means that your rate could move lower or higher than the rates on this form. The variable rate is based upon the 3-month LIBOR Rate as published in *The Wall Street Journal*. For more information on this rate, see the reference notes.

There is no limit on the amount the interest rate can increase.

Loan Fees

Loan Fee: None
Late Charge: $15 per delinquent payment.

Loan Cost Examples

The total amount you will pay for this loan will vary depending upon when you start to repay it. This example provides estimates based upon three (3) different repayment options available to you while enrolled in school.

Repayment Option (while enrolled in school)	**Amount Provided** (amount provided directly to you or your school)	**Interest Rate** (highest possible starting rate)	**Loan Term** (how long you have to pay off the loan)	**Total Paid Over 180 Months** (includes associated fees)
1. DEFER PAYMENTS Make no payments while enrolled in school. Interest will be charged and added to your loan.	$10,000.00	11.375%	180 months starting after the deferment period	**$31,574.89**
2. PAY ONLY THE INTEREST Make the interest payments but defer payments on the principal amount while enrolled in school.	$10,000.00	11.375%	180 months starting after the deferment period	**$26,003.34**
3. MAKE FULL PAYMENT Pay principal and interest amounts in fully amortizing payments while enrolled in school.	$10,000.00	11.375%	180 months starting after your first payment	**$20,884.59**

About This Example
The repayment examples assumes that you remain in school for 48 months and have a 6 month grace period before beginning repayment. The maximum repayment period is 180 months, starting once the initial principal payment is made. It assumes that unpaid accrued interest is capitalized at the end of the grace period. It is based on the highest starting rate currently charged and associated fees. A $50 minimum monthly payment is required.

Federal Loan Alternatives

Loan Program	Current Interest Rates by Program Type	
PERKINS for Students	5.00% fixed	
STAFFORD for Students	4.50% fixed	Undergraduate subsidized
	6.80% fixed	Undergraduate unsubsidized & Graduate
PLUS For Parents and Graduate/Professional Students	7.90% fixed	PLUS Loans

You May Qualify for Federal Education Loans.
For additional information, **contact your school's financial aid office or the Department of Education at:**

www.federalstudentaid.ed.gov

Next Steps

1. **Find Out About Other Loan Options.**
   Some schools have school-specific student loan benefits and terms not detailed on this form. Contact your school's financial aid office or visit the Department of Education's web site at www.federalstudentaid.ed.gov for more information about other loans.

2. **To Apply for this Loan, Complete the Application and the Self-Certification Form**.
   You may get the self-certification form from your school's financial aid office. If you are approved for this loan, the loan terms will be available for 85 days (terms will not change during this period, except the variable interest rate may change based on adjustments to the index).

REFERENCE NOTES

Variable Interest Rate
- This loan has a variable interest rate that is indexed to the 3-month London Interbank Offered Rate (LIBOR), as published in the "Money Rates" section of *The Wall Street Journal*, rounded up to the nearest one-eighth of one percent, plus or minus a margin. Your rate is calculated quarterly by adding a margin between 3.25% and 11.00% to the LIBOR.
- Your rate will not increase more than once every three months, but there is no limit on the amount that the rate could increase at one time.

Eligibility Criteria

Borrowers
- Students must be enrolled at least part-time in an educational program at an accredited and approved college or university in the U.S.
- Students must be at least 18 years of age, 19 in AL and NE, and 21 in MS and PR, or apply with a creditworthy co-signer.
- Permanent residents and international students are eligible for this loan and must provide applicable immigration documentation.
- International students must apply with a creditworthy U.S. citizen or permanent resident co-signer.

Co-signers
- Interest rates are typically higher without a co-signer. Since private loans are credit based, applying with a creditworthy co-signer may increase the likelihood of your approval and may help you qualify for a lower interest rate.
- Must be a U.S. citizen or permanent resident who is at least 18 years of age, 19 in AL and NE, and 21 in MS and PR.

Bankruptcy Limitations
- If you file for bankruptcy, you may still be required to pay back this loan.

More information about loan eligibility and repayment deferral or forbearance options are available in your loan application and loan agreement.

The following model disclosure form for loans to graduate students under the CLP contains information that the Federal Reserve Board requires to be disclosed to students and their families:

Citibank, N.A.
P.O. Box 6074
Sioux Falls SD 57117-6074
1-800-967-2400

Loan Interest Rate & Fees

Your **starting interest rate** will be between

3.625% and **11.375%**

After the starting rate is set, your rate will then vary with the market.

Your Starting Interest Rate (Upon Approval)

The starting interest rate you pay will be determined after you apply. Your interest rate will be based upon your credit score, the credit score of any co-signer and other factors. If approved, we will notify you of the rate for which you qualify within the stated range.

Your Interest Rate During the Life of the Loan

Your rate is variable. This means that your rate could move lower or higher than the rates on this form. The variable rate is based upon the 3-month LIBOR Rate as published in *The Wall Street Journal*. For more information on this rate, see the reference notes.

There is no limit on the amount the interest rate can increase.

Loan Fees

Loan Fee: None
Late Charge: $15 per delinquent payment.

Loan Cost Examples

The total amount you will pay for this loan will vary depending upon when you start to repay it. This example provides estimates based upon three (3) different repayment options available to you while enrolled in school.

Repayment Option (while enrolled in school)	**Amount Provided** (amount provided directly to you or your school)	**Interest Rate** (highest possible starting rate)	**Loan Term** (how long you have to pay off the loan)	**Total Paid Over 240 Months** (includes associated fees)
1. DEFER PAYMENTS Make no payments while enrolled in school. Interest will be charged and added to your loan.	$10,000.00	11.375%	240 months starting after the deferment period	**$32,607.60**
2. PAY ONLY THE INTEREST Make the interest payments but defer payments on the principal amount while enrolled in school.	$10,000.00	11.375%	240 months starting after the deferment period	**$28,231.66**
3. MAKE FULL PAYMENT Pay principal and interest amounts in fully amortizing payments while enrolled in school.	$10,000.00	11.375%	240 months starting after your first payment	**$25,387.91**

About This Example
The repayment examples assumes that you remain in school for 24 months and have a 6 month grace period before beginning repayment. The maximum repayment period is 240 months, starting once the initial principal payment is made. It assumes that unpaid accrued interest is capitalized at the end of the grace period. It is based on the highest starting rate currently charged and associated fees. A $50 minimum monthly payment is required.

Federal Loan Alternatives

Loan Program	Current Interest Rates by Program Type	
PERKINS for Students	5.00% fixed	
STAFFORD for Students	4.50% fixed	Undergraduate subsidized
	6.80% fixed	Undergraduate unsubsidized & Graduate
PLUS For Parents and Graduate/Professional Students	7.90% fixed	PLUS Loans

You May Qualify for Federal Education Loans.
For additional information, **contact your school's financial aid office or the Department of Education at:**

www.federalstudentaid.ed.gov

Next Steps

1. **Find Out About Other Loan Options.**
   Some schools have school-specific student loan benefits and terms not detailed on this form. Contact your school's financial aid office or visit the Department of Education's web site at www.federalstudentaid.ed.gov for more information about other loans.

2. **To Apply for this Loan, Complete the Application and the Self-Certification Form**.
   You may get the self-certification form from your school's financial aid office. If you are approved for this loan, the loan terms will be available for 85 days (terms will not change during this period, except the variable interest rate may change based on adjustments to the index).

REFERENCE NOTES

Variable Interest Rate
- This loan has a variable interest rate that is indexed to the 3-month London Interbank Offered Rate (LIBOR), as published in the "Money Rates" section of *The Wall Street Journal*, rounded up to the nearest one-eighth of one percent, plus or minus a margin. Your rate is calculated quarterly by adding a margin between 3.25% and 11.00% to the LIBOR.
- Your rate will not increase more than once every three months, but there is no limit on the amount that the rate could increase at one time.

Eligibility Criteria

Borrowers
- Students must be enrolled at least part-time in an educational program at an accredited and approved college or university in the U.S.
- Students must be at least 18 years of age, 19 in AL and NE, and 21 in MS and PR, or apply with a creditworthy co-signer.
- Permanent residents and international students are eligible for this loan and must provide applicable immigration documentation.
- International students must apply with a creditworthy U.S. citizen or permanent resident co-signer.

Co-signers
- Interest rates are typically higher without a co-signer. Since private loans are credit based, applying with a creditworthy co-signer may increase the likelihood of your approval and may help you qualify for a lower interest rate.
- Must be a U.S. citizen or permanent resident who is at least 18 years of age, 19 in AL and NE, and 21 in MS and PR.

Bankruptcy Limitations
- If you file for bankruptcy, you may still be required to pay back this loan.

More information about loan eligibility and repayment deferral or forbearance options are available in your loan application and loan agreement.

Institutional Scholarships

The FIRST Scholarship is the only institutional scholarship available to new students effective January 1, 2011. The following is a partial list of the institutional scholarships available at the College for all students actively enrolled as of December 2010. Students should contact the Finance Department at the College for the terms of each scholarship, including, without limitation, the amount of, and the eligibility, qualification and application requirements associated with, each scholarship:

Daniel Webster College Presidential Scholarship
Daniel Webster College Scholarship for Academic Performance
Transfer Student Presidential Scholarship Program
Transfer Student Scholarship for Academic Performance
Daniel Webster College Flight Scholarship
Daniel Webster College Excellence in Leadership Scholarship
Daniel Webster College Scholarship for Outstanding Achievement
Daniel Webster College Alumni Scholarship
FBLA Gateway to Daniel Webster College Award
Daniel Webster College Performance Scholarship for Returning Students
Daniel Webster College Opportunity Grant
FIRST Scholarship

FEDERAL AND PRIVATE EDUCATION LOAN CODE OF CONDUCT AND DISCLOSURES

Federal education loans and private education loans (collectively, "Loans") are two types of financial aid that are available to qualifying Daniel Webster College students and their parents. It is important for Daniel Webster College student and parent borrowers to understand Daniel Webster College's position with respect to Lenders, which are defined to include:

- private lenders who make Loans that Daniel Webster College student and parent borrowers can use to help pay the cost of a Daniel Webster College education;
- the entities that service, guaranty and/or securitize those Loans; and
- the entities, such as trade or professional associations, that receive money related to Loan activities from those private lenders, servicers, guarantors and securitizers.

Code of Conduct: Daniel Webster College has adopted the following code of conduct with respect to Lenders:

(1) Daniel Webster College officers and employees (collectively, "Agents") will avoid real and perceived conflicts of interest between their duties and responsibilities at Daniel Webster College and the Loans or other student financial aid made available to qualifying Daniel Webster College students and their parents.

(2) No Agent will solicit, accept or receive any Gift (as defined below) from a Lender.

(3) No Agent who is employed in the College's Finance Department or has any responsibilities with respect to student financial aid will:

- serve or participate on any advisory board, commission or group established by a Lender; or
- accept from a Lender or an affiliate of a Lender any fee, payment or other financial benefit (including the opportunity to purchase stock) as compensation for any type of consulting arrangement or other contract to provide services to, or on behalf of, a Lender relating to federal or private Loans.

(4) An Agent, who is not employed in the College's Finance Department or does not have any responsibilities with respect to student financial aid, may serve on any board of any publicly traded or privately held company and solicit, accept and receive remuneration or expense reimbursement related thereto, regardless of whether that company is a Lender.

(5) Daniel Webster College will not:

- accept or request any Gift from a Lender in exchange for any advantage or consideration provided to that Lender related to the Lender's Loan activities;
- solicit, accept or receive any payments, referral fees, revenue sharing or similar financial arrangements from any Lender in exchange for referring or recommending that Lender to Daniel Webster College's student and parent borrowers;
- permit any employee or other agent of a Lender to:
  - identify himself or herself to Daniel Webster College's student or parent borrowers as an employee, representative or agent of Daniel Webster College; or
  - work in the Finance Department or any call center operation of Daniel Webster College;
- direct any of its student or parent borrowers to any electronic promissory notes or other loan agreements with respect to any Lender's Loans that do not provide the student or parent borrowers with a reasonable and convenient alternative to select their Lender for a particular type of Loan and complete that Lender's Loan documentation;
- refuse to certify, or delay certification of, any Lender's Loan based on the Lender selected by its student or parent borrowers; or
- request or accept from any Lender any offer of funds to be used for private Loans to its student or parent borrowers, in exchange for Daniel Webster College providing concessions or promises to the Lender:
  - that may prejudice any other of its student or parent borrowers; or

- in the form of a specified number of federal or private Loans, a specified volume of those Loans or a preferred lender arrangement with respect to those Loans.

(6) Daniel Webster College will allow all of its student and parent borrowers to select the Lender of their choice, and will not otherwise assign any of its student or parent borrowers' Loans to a particular Lender.

(7) If Daniel Webster College refers or recommends any Lender(s) to its student or parent borrowers, Daniel Webster College will:

- disclose the process by which it selected the Lender(s), including the method and criteria that it used in determining to refer or recommend the Lender(s) and the relative importance of those criteria;
- disclose to students and their parents that they are free to use any Lender;
- only refer or recommend a Lender that, as a whole, it has determined offers Loans that have competitive rates, terms, borrower benefits, services and loan administration (collectively, "Terms");
- review annually the competitiveness of the Terms of the Loans offered by the Lender(s) that it refers or recommends to its student and parent borrowers;
- update annually the Lender(s) that it refers or recommends to its student and parent borrowers;
- obtain each Lender's assurance that any repayment benefits that the Lender advertised with respect to the Lender's Loans made to its student and parent borrowers will continue to apply to those Loans, regardless of whether the Lender sells those Loans;
- inquire whether the Lender has any agreement to sell the Loans made to its student and parent borrowers to an unaffiliated Lender and, if the Lender informs Daniel Webster College that the Lender has such an agreement, Daniel Webster College will disclose that information to its student and parent borrowers; and
- not refer or recommend any Lender more favorably for a particular type of Loan, in exchange for the Lender providing more favorable Terms to student or parent borrowers in connection with a different type of Loan.

(8) "Gift" is defined as any money, discount, favor, gratuity, inducement, loan, stock, prize or thing of value, including, without limitation, any entertainment, hospitality, service, honoraria, transportation, lodging, meal, registration fee, forbearance, promise, computer hardware, printing or assistance with call center or Finance Department staffing, whether provided in kind, by purchase of a ticket, payment in advance or by reimbursement. A Gift to a family member of an Agent, or to any other individual based on that individual's relationship with an Agent, is considered to be a Gift to the Agent, if:

- the Gift was given with the knowledge and acquiescence of the Agent; and
- the Agent has reason to believe that the Gift was given because of the Agent's duties or responsibilities at Daniel Webster College;

A "Gift" does not include, however, any of the following:

- standard informational material, activities or programs on issues related to a Lender's Loan, default aversion, default prevention or financial literacy, such as a brochure, workshop or training;
- food, refreshments, training or informational material furnished to an Agent as an integral part of a training session that is designed to improve the Lender's service to Daniel Webster College, if such training contributes to the professional development of the Agent;
- favorable Terms on a Lender's Loan provided to a student employed by Daniel Webster College, if such Terms are comparable to those available to all Daniel Webster College students;
- educational counseling, financial literacy or debt-management materials provided to borrowers, if the identification of any Lender that assisted in preparing, providing or paying for any of those materials is disclosed on the materials;
- entrance and exit counseling services provided by Lenders to student borrowers to meet Daniel Webster College's responsibilities under federal law, provided that:
  - Daniel Webster College staff is in control of the services;
  - the services are not provided in-person by any Lenders; and
  - the Lender does not promote or secure applications for its Loans or other products or services during the provision of those services;

- items of de minimus value that are offered as a form of generalized marketing or advertising, or to create good will; and
- other services provided by Lenders to Daniel Webster College or an Agent that are identified and approved by the U.S. Department of Education.

Disclosures:

(1) All Agents with responsibilities for Loans or other student financial aid are required to obtain annual training on the Code of Conduct above.

(2) Student and parent borrowers:

- **may qualify for federal student financial aid available at Daniel Webster College, and are advised to consider all federal student aid that is available, which:**
  - **is specified in Daniel Webster College's school catalog;**
  - **is explained in detail in The Guide to Federal Student Aid, published by the U.S. Department of Education and available at http://studentaid.ed.gov/students/publications/student_guide/index.html; and**
  - **includes federal Loans, which may charge lower rates of interest and offer other more favorable Terms than private Loans, which may cost borrowers more than federal Loans;**
- **have the right and ability to select the Lender of their choice;**
- **are not required to use any Lender referred or recommended by Daniel Webster College; and**
- **will not be penalized for selecting a Lender that is not referred or recommended by Daniel Webster College.**

(3) The maximum amount of federal grant and federal Loan aid available at Daniel Webster College is as follows:

Type of Grant or Loan	Maximum Amount Subject to Qualification[1]
Federal Pell Grant	$0 to $5,550 for the 2010/2011 award year
Federal Academic Competitiveness Grant	Up to $750 for the first academic year Up to $1,300 for the second academic year
Federal National Science and Mathematics Access to Retain Talent Grant	Up to $4,000 for each of the third and fourth academic years
Federal Supplemental Education Opportunity Grant	$100 to $4,000 for each academic year
Direct Subsidized Federal Stafford Loan	Up to $3,500 for the first academic year Up to $4,500 for the second academic year Up to $5,500 for each of the third and subsequent academic years Up to $8,500 for each academic year of a graduate degree program
Direct Unsubsidized Federal Stafford Loan	
(a) Undergraduate (i) independent student or (ii) dependent student whose parents fail to qualify for a Direct Federal PLUS Loan	Up to $6,000 for each of the first and second academic years Up to $7,000 for each of the third and subsequent academic years
(b) Undergraduate dependent student whose parents are not rejected for a Direct Federal PLUS Loan	Up to $2,000 for each academic year

(c) Graduate student	Up to $12,000 for each academic year
Direct Federal PLUS Loan	Up to the cost of the student's education each academic year, less all other federal aid received
Federal Perkins Loan Program	$500 for each academic year of an undergraduate program and $500 for each academic year of a graduate program, based on the current funding level at the College

(1) The maximum amount listed is the amount that is in effect as of July 1, 2010. The actual amount available to a student or parent borrower is subject to the borrower's qualification pursuant to U.S. Department of Education regulations, the moneys available under each program from time to time and the funding level at the College.

(4) Specific disclosures for private Loans:

- Daniel Webster College typically refers student and parent borrowers to the following list of Lenders of private Loans ("Private Lenders") to assist its students in obtaining financial aid to help pay their cost of education that federal student financial aid does not cover:
  - Citibank, N.A. ("CB"), or
  - Sallie Mae Bank ("SMB")
- CB is not affiliated with any of the other Private Lenders. SMB is not affiliated with any of the other Private Lenders.
- Daniel Webster College believes that many of its students would be unable to pursue and pay the cost of their education without access to private Loans, because, in many cases, the amount of other available financial resources is insufficient or those resources are inaccessible for student and parent borrowers to use to cover the students' cost of education.
- Daniel Webster College typically refers the Private Lenders to student and parent borrowers, because of the Terms and availability of their private Loans. Daniel Webster College compares the Terms of private Loans that Lender's may offer to Daniel Webster College student or parent borrowers on an annual basis through an informal process. The most important Terms include the interest rates and fees charged on the private Loans, the borrower benefits associated with the private Loans (such as repayment benefits and loan consolidation), the credit criteria that borrowers must satisfy to qualify for the private Loans and various aspects of the administration of the private Loans (such as the manner and ease by which the private Loans are processed, funded and serviced).
- Daniel Webster College believes that the Terms of the Private Lenders' private Loans are highly competitive with the Terms of private Loans offered by other Lenders that may be available to Daniel Webster College student and parent borrowers. Daniel Webster College's goal is to refer Lenders that offer to Daniel Webster College student and parent borrowers, as a whole, private Loans with highly competitive Terms, and that administer those private Loans efficiently. The general Terms of the private Loans offered by the Private Lenders to Daniel Webster College student and parent borrowers were determined through negotiations conducted on behalf of Daniel Webster College by its parent corporation, which has experience negotiating similar arrangements for other institutions. Daniel Webster College believes that this approach can generally help reduce the rates and improve the other Terms of the private Loans, because its parent corporation, through its past experience, has greater knowledge of the Terms and rates available for Private Loans in the market. **Daniel Webster College cannot assure any student or parent borrower, however, that the Terms of the Private Lenders' private Loans contain lower rates or other Terms that are more beneficial, or are administered more efficiently, than private Loans offered by other Lenders that a student or parent borrower may be able to obtain.**
- The Private Lenders have made assurances that any repayment benefits advertised with respect to any private Loans that student and parent borrowers obtain from any of the Private Lenders will continue to apply to their private Loans, regardless of whether that Private Lender sells their private Loans.
- The Private Lenders may now or in the future have an agreement to sell the private Loans made to Daniel Webster College's parent and student borrowers to unaffiliated Lenders.
- Daniel Webster College encourages student and parent borrowers to:

- shop around to obtain private Loans from Lenders who offer the best combination of Terms for the borrower's particular circumstances;
- choose Lenders that can process and fund the borrower's private Loans electronically, in order to avoid a slower paper process which may result in delays in funding the borrower's private Loans; and
- make certain that all repayment benefits advertised by the Lender with respect to the borrower's private Loans (such as discounts for a certain number of consecutive timely private Loan payments) are specified in the borrower's private Loan documents and will remain part of the Terms if the private Loans are subsequently sold by the Lender.

Daniel Webster College's financial aid professionals are available to assist student and parent borrowers and answer any questions that they may have regarding the federal and private Loans available for those who qualify.

Student Development

Philosophy

Student Development intentionally develops programs that encourage the growth of the whole person through cultural, intellectual, physical and social activities. It is our belief that involvement in these activities will assist students in becoming mature, responsible, productive and caring members of the campus community and society in general.

Housing and Residential Education

The residence halls at Daniel Webster College offer students a variety of living styles, options and alternatives. More than just a place to live, our residences provide the opportunity for education outside of the classroom. Community living is predicated upon a student development philosophy of mutual respect for individual rights. The residence halls offer a special environment encouraging independence, lifelong friendships, and an appreciation of community living.

The residence halls and a townhouse area offer a variety of room options, from singles to doubles to triples. The majority of students are assigned to double rooms, with single rooms mostly being assigned to upper class students based on priority. The townhouse area offers apartment-style living for upper class students based on merit and seniority. Fagan Hall contains a section of suites, each housing from four to seven students. Each suite has its own bathroom, living room, and dining area. The remainder of Fagan Hall contains traditional single, double and triple rooms. All rooms on campus have cable TV, telephone, computer network connections and laundry facilities. Most halls have lounges, and two halls have kitchen facilities.

Upper class students have the opportunity to participate in individual room and roommate selection, whereas new student placement is determined through roommate preference forms. The placement of students living in the residence halls is structured to ensure the benefit of the whole community, while balancing the particular desires of the individuals. Any first or second year student who does not live within commuting distance (less than 30 miles) to Daniel Webster College is required to live in the residence halls.

Residence hall accommodations are offered to students when the college is in regular session. Daniel Webster College recognizes the need of some students for on campus housing during semester and spring breaks. To meet this need, limited accommodations are available for break periods; however, there is a weekly charge for this service. In addition, no students are permitted to reside on campus between the end of the fall semester and when the office opens following New Year's Day. All traditional halls are closed during the summer months; however, student accommodations are available during the summer day session on a limited basis, at an additional charge to the student.

Part-time students may request to live on campus. Any request must be submitted in writing and will be reviewed and approved by the Student Development staff. Permission may be granted on a space available basis, provided that tuition, room, board and activity fees have been paid.

Students who are of a nontraditional age are welcome to live on campus, provided appropriate housing is available. It is important that these students meet with a member of the professional staff to familiarize themselves with campus life.

As in any community, our residence halls operate under a specific set of behavioral guidelines. All policies, procedures, guidelines, and standards are listed in the Student Handbook and on the housing contract. Violation of the Community Standards can be grounds for dismissal from the residence halls and/or the College community.

Currently enrolled students leaving the halls (either voluntarily or for discipline reasons) while their contracts are still in effect are subject to a seven hundred and fifty dollar ($750.00) termination fee. Housing contracts go into effect upon receipt of a signed contract.

Security Deposit
A security deposit of $200 is required of residential students. This deposit must be maintained at $200 at the beginning of each semester. Any damage assessed to an individual room will be billed to the student(s) who reside in that room. Additionally, campus and common area damages are divided among members of the wing, floor, hall or the entire residential population if the responsible individual(s) cannot be determined. Students who have information about individuals responsible for damage are encouraged to report this information to the Student Development office. The balance of the damage deposit is returned to the student upon graduation or withdrawal from the College.

Other information relative to the residence hall system may be found in the Housing Contract, housing publications, the Student Handbook, or by contacting Student Development.

Commuter Services

Student Development at Daniel Webster College is committed to helping our commuter students become active participants in campus life at DWC. We strive to provide resources and programming to help with that. Commuter Students can contact Student Development at 603.577.6580 with any questions regarding the services provided for commuter students, or for general questions. Some of the services that are available for commuter students are:

The Collegium: DWC provides our commuter students with a gathering place specifically for commuter students that can be used when out of the classroom. The goal of the Collegium is to serve as a place for commuters to gather, to relax, and to connect with other students, faculty and staff.

The Collegium is not your ordinary student lounge; rather it is a space exclusively for commuter students that serves as a "home away from home." The Collegium allows for the lives of commuter students to be easier and to foster community amongst commuter students. The Collegium is located in Townhouse #1 and accessible during posted hours.

Some of the resources provided in the Collegium are: refrigerator for storing food and drinks; the ability to prepare food using a microwave, hot pot, and coffee maker; selection of games, books and puzzles; community bulletin board for announcements; lockers for storage, couches and chairs for lounging, relaxing or reading; study tables and chairs; and tables for workspace.

Public Transportation: DWC partners with the Nashua City Bus and members of the DWC community are able to ride for free by showing their DWC ID.

Lockers: Lockers are available in the Collegium for commuter students. Lockers are on a "first come first served" basis and students provide their own padlock/combination lock.

Dining: There are various meal options for commuter students while on-campus. All students are welcome to dine in the DWC Dining Hall. For information on menus, hours, costs and more, please visit the Dining Services website. Information about the Commuter Meal Plan is also available on the website. The Library houses a student center on the ground floor and quick meals on the go or a place to just sit and enjoy your meal from home can be accessed here.

Dining Services

Daniel Webster College and its food service vendor firmly believe that today’s hard-working college student should be rewarded with a dining service that makes eating on campus palate-pleasing, healthy, and entertaining. Our dining program does just that – with an emphasis on good taste and good nutrition – by working together with Daniel Webster College students. Using input from students and others through comment cards, personal contact and regular meetings with food committees, the dining service has remained in step with customers’ needs and desires. Students are urged to take advantage of any of the above methods of connecting with the staff so that they can continue to maintain an innovative, nutritional, and creative dining service.

Student Involvement and Leadership

The Student Involvement & Leadership program provides advice and direction to recognized and registered student organizations, particularly the Student Senate and its sanctioned organizations, and the Student Activities Board (SAB). The staff, in conjunction with

other offices, clubs, and departments hosts a variety of special events and programs throughout the year. These include, but are not limited to the Student Organization Expo, Family Weekend, Spring Break trip, Distinguished Service Awards Ceremony and Block Party.

The program's mission is twofold: (a) to provide opportunities for students to integrate recreational, civic and social experiences with their academic experience; and (b) to empower students to make thoughtful, responsible decisions that affect their lives outside the classroom. Students are at the forefront of the decision-making process from the types of programming offered to the most effective use of student activity funds. We are committed to the notion that students develop their leadership skills, create new friendships, and become more socially responsible and culturally enriched through their participation in co-curricular activities.

Student Senate
The Student Senate, which represents all day students, is composed of Executive Board members and a council of campus representatives (Senators). The Executive Board meets every week, and meets with the Senators every other week. All students are welcome to attend the Senate meetings. As the main voice for the student body, the Student Senate maintains an open line of communication between and among the administration, faculty, and students. It encourages student input regarding College policies, facilities improvements, and campus activities events. The Student Senate also has the responsibility to provide recognition for new clubs and organizations, and to fund recognized student organizations.

The Student Activities Board
The Student Activities Board (SAB) is an organization comprised of students whose responsibility is to plan and implement a wide variety of events for the DWC community. SAB members and leaders organize events including: musical performers, movies, comedy nights, dinners, cultural events, off-campus outings, annual events, and novelty performers. SAB meets weekly, and encourages interested students to attend the meetings.

Student Center
The ground floor of the library building also serves as a student center. This area includes the student mailboxes, a game room with pool table, the Student Activities Board (SAB) office, and is also a venue to purchase snacks and to re-charge laundry cards. There are lots of tables and chairs for students to gather in small groups or to work independently. Questions or concerns about these resources should be brought to the attention of the Student Development staff in the College Center.

New Student Programs

New Student Orientation
A comprehensive New Student Orientation Program is scheduled for entering first year and transfer students each fall. The program is designed to prepare students a successful transition to Daniel Webster College. The orientation program aims to assist in the transition to an educational environment which requires personal responsibility and accountability for successful college achievement. In addition, the program provides opportunities for the students to become more familiar with college resources and to begin to establish connections with other members of the DWC community. An orientation program is also offered each January for students matriculating in the Spring Semester.

DW 101 Strategies for Success
Incoming first year students participate in **DW 101**: **Strategies for Success,** a course designed to continue supporting the students' transition by introducing them to the people, resources, and services available at DWC. The course encourages students to assess and practice sound academic and interpersonal skills, to investigate campus issues which define the culture of Daniel Webster College, and to explore the rights and responsibilities of our learning community. The course is facilitated by Student Affairs staff members in collaboration with student leaders.

Campus Spiritual Life

Daniel Webster College recognizes that in addition to intellectual needs, students have spiritual needs. To accommodate those needs, Student Development provides referrals for spiritual counseling on an individual basis. A broad variety of religious services are available in the greater Nashua area.

Anti-Harassment

It continues to be the policy of Daniel Webster College that sexual harassment of students or applicants for admission in any form is unacceptable conduct which will not be tolerated. Sexual harassment includes unwelcome sexual flirtations, advances or propositions, requests for sexual favors, verbal abuse of a sexual nature, subtle pressure or request for sexual activities, unnecessary touching of an

individual, graphic verbal commentaries about an individual's body, sexually degrading words used to describe an individual, a display in the school of sexually suggestive objects or pictures, sexually explicit or offensive jokes, physical assault and other verbal, visual or physical conduct of a sexual nature. No student, applicant, faculty member or other employee of Daniel Webster College shall threaten or insinuate, either explicitly or implicitly, that a student's or applicant's refusal to submit to sexual advances will adversely affect that person's admission, enrollment, grades, studies or educational experience at Daniel Webster College. Similarly, no faculty member or other employee of Daniel Webster College shall promise, imply or grant any preferential treatment in connection with any student or applicant with the intent of rewarding for or engaging in sexual conduct.

Other types of harassment that will not be tolerated include any unwanted or unwelcome words, gestures or actions of a persistent or offensive nature involving any person's race, religion, color, age, sex, sexual orientation, national origin, disability, gender or any other protected status. Harassment of this nature also includes any conduct, whether verbal, visual or physical, relating to or involving a person's race, religion, color, age, sex, sexual orientation, national origin, disability, gender or any other protected status that is sufficiently pervasive or severe to: (I) unreasonably interfere with a student's education at the school or a student's admission to a program offered by the school; or (II) create an intimidating, hostile or offensive learning environment for students.

Any student or applicant who feels that he or she is a victim of prohibited harassment (including, but not limited to, any of the conduct listed above) by any student, applicant, faculty member or other Daniel Webster College employee, or visitor or invitee of the school in connection with the educational experience offered by Daniel Webster College, should bring the matter to the immediate attention of the Dean for Student Development, 603-577-6580.

Daniel Webster College will promptly investigate all allegations of prohibited harassment in as confidential a manner as the school deems reasonably possible and take appropriate corrective action, if warranted.

Center for Career Development

The Center for Career Development believes that students begin their career path as soon as they enter college. During their time at Daniel Webster College, students will have opportunities to gain knowledge and skills that can be used in the workplace. In addition, students must develop the skills necessary to effectively transition from college to the workplace and from job to job over the course of their lifetime. The Center for Career Development is here to assist students in these endeavors.

The Center's staff works with students at every level and provides services to meet each student's needs. Individual career consultations may be arranged with the staff to discuss career options, to have a resume reviewed, or to role-play a job interview. A year-round workshop schedule includes resume and cover letter writing, interview skills, business etiquette and job search strategies. In addition, the Center coordinates the internship program, working closely with students and faculty to find suitable and challenging placements congruent with each student's career goals. For students pursuing an internship for academic credit, it is essential to seek faculty approval for an experience prior to applying.

The Center for Career Development holds a variety of programs during the year. These include DWCareer Day, Etiquette Dinner and alumni networking panels. We believe in the value of our alumni and students are encouraged to connect with these professionals.

The Center has print materials on a wide range of career development topics. Students may visit the Center to browse through these materials and to pick-up appropriate handouts. Several books on career topics are housed in the library and students are encouraged to utilize these resources. The Center of Career Development receives job postings on a regular basis and makes these available to students via www.dwcareers.com, our employer information and job listing site.

Athletics

Daniel Webster College believes that physical, intellectual and emotional fitness is integral to the educational process and that participation in college athletics enables a person to become more well-rounded and capable. The department of Athletics is proud of its long-standing commitment to students and continues to help students strive towards the highest standards of excellence, on and off the field of play.

The College believes that athletic competition provides opportunities for personal growth that can transcend intellectual, social, cultural, ethnic and economic barriers. These opportunities are available through intercollegiate athletics, intramural competition and wellness programs.

The College is a member of the National Collegiate Athletic Association (NCAA), Division III, Eastern College Athletic Conference (ECAC), and New England Collegiate Conference (NECC). The College subscribes and adheres to the academic and athletic requirements of these affiliations. The DWC athletic program focuses on the "athlete" as "student," keeping in mind the overriding importance of the academic enterprise. The Mario Vagge Gymnasium houses a multipurpose raised wood floor that includes the varsity basketball and volleyball courts, as well as a weight/exercise room. The varsity soccer, field hockey, baseball, and softball fields are located on the campus grounds and student athletes have the opportunity to participate in the following sports during the academic year:

Fall:	Men: Cross-Country, Golf, Soccer Women: Cross-Country, Field Hockey, Soccer, Volleyball
Winter:	Men: Basketball, Ice Hockey (ACHA), volleyball Women: Basketball
Spring:	Men: Baseball, Lacrosse, Volleyball Women: Lacrosse, Softball

For students who want to participate in a DWC athletic program, such student-athletes must have appropriate and adequate insurance coverage in place for athletically related injuries that may occur during this academic year. Coverage must exist up to the current deductible of the NCAA Catastrophic Injury Insurance program and is provided through one of the following:

(A) Parents' or guardians' insurance coverage;
(B) Participant's personal insurance coverage; or
(C) Some combination of the above.

Campus Safety

The Campus Safety Department is responsible for maintaining a safe campus environment for the students and other members of the Daniel Webster College community. Campus safety is on duty 24 hours a day, 7 days a week and the office is located in the College Center. Red emergency phones with blue lights are strategically located throughout the campus to provide quick response to emergency needs. There are also two red emergency phones located on the first and second floors of Daniel Webster Hall. Each residence hall has an emergency phone as well. A campus safety officer can be reached at all times by dialing (603) 315-0471.

Campus Parking

Parking is readily available with a valid parking permit. All students who commute to the campus or have a vehicle on campus must obtain a parking permit from Campus Safety at no charge. Permits are valid for one year.

College Identification Cards

College IDs are issued to all new DWC students. Returning day students must have their ID cards validated at the beginning of each academic year. Any student who loses their college ID card must have it replaced in the Safety Office for a fifteen dollar ($15.00) fee.

Emergency Response

Daniel Webster College has an Emergency Response Team which is called together in the event of a campus emergency.

If an emergency occurs on campus, members of the campus community receive information in the following ways:

- Sounding of sirens on campus
- A text message sent to those who have opted into our text message system
- A website, alerts.dwc.edu can be accessed giving a description of the emergency and the instructions to follow on campus
- Instructions and further information will also be recorded on a phone line 1-866-451-8580.

Academic Information and Regulations

Academic programs at Daniel Webster College are designed to enable students to prepare for successful professional careers in selected fields and to assume the responsibilities that professional and civic leadership demands. These programs integrate academic instruction and co-curricular experiences for the development of professional competencies in the chosen major along with providing a strong general education experience for the student. The New Student Orientation Program, designed to assist new and transfer students with their transition to DWC, explores academic and co-curricular services, expectations of college life, and other issues focusing on information and skills needed for student success. Students continue working this exploration into their first semester through DW 101 Strategies for Success.

The following information is presented to help students have a successful academic experience at DWC.

Academic Course Planning

The College operates with the philosophy that each student is ultimately responsible for his/her academic planning and progress, meeting all requirements, and operating within the policies and regulations of the College. In order to enhance opportunities for success, students are assigned a faculty advisor who will discuss proposed plans and offer insight, advice, and recommendations. Students are required to meet with their advisor during Course Planning Week and are encouraged to meet with them at any time for general discussions of academic program and professional concerns. During course planning, students present their course selections for the next term (based on their degree audit or program review sheet), and discuss their progress, any potential problems, and possible alternatives.

At any time prior to the start of any program course that the student is registered to take in any term, the college may cancel the program. If the college cancels the program, the student’s enrollment in the program will have been canceled by the college.

The words semester and term are often used interchangeably in this catalog when referring to course schedules. Students should be aware that some classes may follow alternate schedules such as flight practica and computer skills courses. The deadlines are proportional for add/drop, refunds, midterm warnings, completing work to satisfy incomplete course grades, and the like, may vary.

Registration
After meeting with an advisor during Course Planning Week, students go to the Student Service Center at or after their designated time during Registration Week to register for classes. Students whose financial clearance has been verified are allowed to complete registration. Since admission to a course is based on availability of seats, failing to register at the designated registration time may jeopardize the student's chance of enrollment into desired courses. Students not properly registered and checked-in by end of the first day of classes may lose their space in class. Course attendance does not constitute registration. For flight students, placement in a time block may not be confirmed until the beginning of the term. Registration and Check-In must be completed each semester by the conclusion of the first day of classes to avoid a late check-in fee of $100.

The usual course load at Daniel Webster College is 15-16 credit hours per semester (9-12 credit hours for the summer semester). A student must be enrolled in at least 12 credit hours of college courses for the semester to be accorded full-time status.

We encourage first-year students to maintain a credit load of not more than 15-16 credit hours per semester to facilitate their transition to the College community. Occasionally, a student will elect to take more than the usual course load. In order to enroll in more than 18 credit hours of classes (which will subject the student to additional overload charges), a student must have achieved a minimum 3.00 Cumulative Grade Point Average (CGPA) and receive permission from his/her advisor and the Vice President for Academic Affairs. Credit load is determined by number of hours enrolled throughout the term or semester after the drop/add dates. Withdrawal from a course after the drop date does not constitute a reduction in course load for computing overload charges.

Class schedules are as accurate as possible at the time of advanced registration. The College reserves the right to cancel courses or change schedules as needs dictate. It is the student’s responsibility to check Student Online Access to Records (SOAR) before and during add drop to identify any changes in his/her schedule.

Course Add/Drop
Courses may be added to or dropped from the student’s previously registered schedule at the beginning of each term during the period indicated on the Academic Calendar. Students must obtain the approval of their faculty advisor and the faculty whose course is being

added, if the course is full. Add/Drop forms are available in the Registrar's Office. Computation of full-time status includes all courses for which a student is enrolled during the semester after the add/drop period.

Residency Requirements
The last 30 credits of any degree program must be completed at DWC. Transfer students must complete a minimum of 30 semester credit hours at Daniel Webster College, of which at least 6 credit hours must be earned in the student's major field for the associate degree, and 12 credit hours must be earned in the major field for the baccalaureate degree. A minimum of five DWC flight courses are required for the bachelor's degree and two for the associate's degree.

Transfer Credits
Transfer credits are awarded at the time of enrollment. Once enrolled at Daniel Webster College, students must have written permission from their advisor and the appropriate Dean prior to taking courses at another institution that are intended to count toward their graduation requirements at DWC. This requires a review of the course description and frequently the syllabus of the course intended for transfer.

Normally, there is no limitation on the age of credit accepted for transfer. Transfer credits will be reflected on the student's academic transcript. However, they may not all apply to degree requirements. All credits transferred are noted on the transcript and do not add or detract quality points or affect the grade point average.

Off-Campus Study
Current matriculating students are required to obtain permission from their advisors and the appropriate Dean before taking a course off-campus intended to count toward graduation requirements. Students must request that official transcripts be forwarded from the sending institutions before credit will be recorded. A grade of C or better is required. Successful completion of the course will be noted by a "T" grade on the DWC transcript.

CLEP, DSST, and ACE Recommendations
College Level Examination Program (CLEP) and Dantes Subject Standardized Tests (DSST) are available for students to earn course credit or waiver(s). Both offer an opportunity to the student who has done college-level work outside of college and can demonstrate his/her competency through testing. Daniel Webster College accepts all recommendations of the American Council on Education (ACE), provided the credit recommended is considered to be at least at the associate or bachelor degree level, and the awarding of such credit does not contradict any existing DWC academic policy. An official CLEP or DSST Score Report is required prior to credit being recorded.

Other standardized tests may be eligible for credit. Check with the College Registrar to verify acceptability. Successful completion of the examination(s) will be noted by a CR on the DWC transcript.

Credit by Examination (CBE)
In addition to the CLEP and DSST programs, students at Daniel Webster College who believe they have mastered the content for a required course may petition to satisfy course requirements and receive academic credit by passing an examination produced by DWC faculty.

Scheduling for these examinations is required through the Office of Academic Affairs or the applicable school of study Dean. Students must petition to take the examination a minimum of four weeks prior to the date on which it is scheduled by submitting the application and the Credit by Examination fee ($100.00 per credit). The appropriate Dean will determine whether or not the student's prior experience or knowledge warrants the examination. The fee will be returned if it is determined that the student is not eligible to take the exam.

Other requirements for CBE are:

1. Credit by examination is not allowed if there is an appropriate exam offered by CLEP.
2. The applicant must have successfully completed any prerequisite for the course.
3. Courses which the student has previously attempted at Daniel Webster College and courses taken off campus without prior permission are not eligible for credit by examination. (Additional restrictions apply to flight courses.)
4. A grade of C or better on the examination is required for credit to be awarded. However, the grade will not be included in grade-point computations. Successful completion of the examination will be noted by a CR on the transcript.
5. Any specific CBE test for credit cannot be repeated. The grade earned is final. If a student fails the CBE, he/she must take the course through traditional means.
6. The credit by examination procedure is subject to the regular appeal or grievance process.
7. The College will award no more than 30 credit hours from CLEP, DSST, Credit by Examination or other standardized tests combined. Credit for prior learning (GCS students only) is part of the 30 credit hour limit.
8. The fee for Credit by Examination must be paid in advance and is nonrefundable.

Independent Study and Directed Study
Independent Study and Directed Study are available only to Bachelor of Science degree students. A student must have a CGPA (Cumulative Grade Point Average) of 3.0 or above to qualify for either. No more than two Independent Study and/or Directed Study courses may be taken in any baccalaureate program. Independent Study and Directed Study credits are included in calculating the student's semester work load which cannot exceed the allowable credit load for that individual during the semester. Independent Study and Directed Study courses must follow College policy regarding the design and implementation of such courses.

Students or faculty may initiate the Independent Study and/or Directed Study by discussing ideas for study, learning goals, and a reading list. A written agreement is prepared between the student and the faculty advisor with whom the student will work. The faculty member may suggest alternatives and/or additions to the proposed course of study. College guidelines pertaining to Independent Study and Directed Study must be followed. Forms are available in the Registrar's office that will provide the structure for the written agreement between the student and faculty member.

Directed Study courses are used to replace DWC courses not currently scheduled; approval from a student's advisor and the appropriate Dean is required. The currently used syllabus will serve as a course guide. Directed Study courses are not intended to serve as a repeat option for normal course offerings in which a failing grade was earned.

Independent Study may be used to explore a special topic that is not part of the current curriculum. Independent Study courses may vary from 1-3 credit hours per course as arranged between the student and the faculty member, through a written agreement and with approval from the student's advisor and the Dean of the school hosting the course.

Internships
The internship experience is more than just a job, it is an experiential learning opportunity that should bring together the curriculum content and relate it to the profession as it operates in practice. Career Services acts as the central clearinghouse for internship information; in addition each academic division has one or more faculty internship coordinators. Requirements for interning vary by major and students should discuss qualifications with the appropriate faculty internship coordinator. The number of hours a student spends at an internship is directly related to the number of credits that are being earned as well as the academic expectations. A minimum of 3 hours per credit per week (15 weeks) and a minimum of two days per week at the host site is required. A student can earn a minimum of 3 credits and a maximum of 12 credits for a single experience.

Audited Courses
An audited course is one in which a student is enrolled, has paid the audit charge (60% of tuition), but is not obligated to prepare assignments or take examinations. Faculty are not obligated to grade work presented by students who are auditing. Audited courses yield no academic credit. Neither a flight practicum nor an associated flight course taken concurrently with a flight practicum may be audited. Courses taken by audit may not be converted to credit after the add /drop date, and credit courses may not be switched to audit after the add /drop date. Courses taken by audit are noted by AU on the transcript and do not add or detract any quality points or credit hours, or affect the grade point average.

Topics Courses
In order for students to undertake upper-level studies of specific issues of importance to their specialties, each academic division offers a limited number of "topics" courses. These courses carry 200, 300, or 400 numbers appropriate to their level. Students may repeat Topics Courses for credit if the issues studied differ from prior courses. The titles of Topics Courses are indicated on the student's transcript.

System of Grading

To determine the quality of the student's academic performance, the following grading system is employed at Daniel Webster College:

Grade	Quality Points per Credit Hour
A	4.00
A-	3.66
B+	3.33

B	3.00
B-	2.66
C+	2.33
C	2.00
D	1.00
F	0.00

The term/semester grade point average (TGPA) is computed by multiplying the quality points (QP) by the total number of credits for a particular course, summing the products and dividing by the total number of graded credit hours attempted for the semester. The cumulative grade point average (CGPA) is calculated by summing the quality points for all semesters and dividing by the total number of graded credit hours attempted in all semesters. Courses for which no traditional letter grade (following the scale above) is given are not included in the calculation.

Other grade notations which yield no quality points may be indicated on the transcript. They are:

AU **Audit.** This grade is awarded to a student who has elected to audit a course. The student is enrolled, has paid 60% of the tuition, but is not obligated to prepare assignments or take examinations.

CR **Credit.** This grade is recorded for the successful completion of CLEP, other standardized tests, and Credits by Examination. This grade does not affect the grade point average.

I **Incomplete.** The grade of Incomplete is recorded when, due to extenuating circumstances, a student is unable to complete the requirements of a course but has been making acceptable progress. The incomplete work must be completed by the midpoint of the following term. In a flight practicum, the schedule may not coincide with the end of the academic term. However, the length of time permitted to complete a course will be equal. An Incomplete grade is assigned for a student who is still active and meeting his/her obligation, but who is prevented from completing the practicum due to unforeseen circumstances beyond the student's control. If the work is not completed to the satisfaction of the course instructor within the designated time frame, a grade of F (or NC for a flight practicum) will be entered for the course.

IP **In progress.** This grade is recorded while the student is enrolled in a course or flight practicum which is in progress. The grade is for record-keeping purposes only.

MT **Mid-term warning.** A Mid-Term Warning is an official notification indicating the current level of student performance is below a satisfactory level. A student who receives a Mid-Term Warning should meet with his/her instructor to identify a plan of action to improve performance.

NC **No credit.** This grade is used with EN 100 and all flight practica, and indicates the student did not successfully complete all course requirements for the course in question and hence is ineligible for academic credit for this course and advancement in the sequence. A student must re-enroll and satisfactorily complete the course to receive credit, which may be subject to additional tuition charges and, in the case of flight practica, subject to a re-enrollment fee. A student who fails to successfully complete all flight practicum requirements will be issued a grade of NC.

P **Pass.** The pass grade indicates the student has successfully completed all course requirements at a grade level of C or better. It is used in a limited number of unique situations where it is not possible to accurately assess the quality level of satisfactory performance, or for those courses for which a grade may be recorded according to the "Pass/Fail Option" criteria.

PD **Pass with distinction.** This grade is used with flight practica and indicates the student has successfully completed all course requirements and has demonstrated consistently distinguished performance, placing the student among the top few of all flight students.

T **Transfer.** The grade recorded for courses completed at other institutions and given "transfer" credit at Daniel Webster College. This grade does not affect the grade point average.

W **Withdrawal.** This grade is recorded when a student has officially withdrawn from a course by the required date or through an administrative withdrawal. Failure to officially withdraw will result in the grade recorded as earned.

Pass/Fail Option
A student in good standing enrolled in a B.S. degree program who has declared a major and has completed a minimum of 60 credits may elect to complete certain courses on a pass/fail basis. This option allows students to explore a topic outside of their chosen major without penalty. The student must state her or his intentions in writing to the instructor of the course by the seventh day following the end of the Add/Drop period. A grade of P is equivalent to a grade of C or better as stated above. A course successfully completed under this option will count for credit, but will have no bearing on the student's CGPA. To elect this option, the course must not be required for the declared major or minor or be a designated course in the student's degree program. (This ordinarily limits this option to those courses designated "General Electives" for a given degree program.) A maximum of two courses under this option may be counted toward the student's degree.

Repeated Course Grades
A student may repeat a course by reregistering for the same course. While the original grade(s) will always appear on the transcript, the quality points received for the repeated effort in residence will replace the earlier quality points in determining the student's grade point average. If the course is repeated at any other institution, only the credits (not the grade) will be transferred back and the quality points for the first grade are not deleted. If the course is not successfully completed after the third try, permission to reenroll in the course must be requested, justified by the student, and approved by the student's advisor and Dean. Failure to complete specific courses (these courses vary by degree program) will prevent further progress toward the degree.

While the original grade(s) will always appear on the transcript, the *grade* received for the repeated effort in residence will replace the *earlier grade* in the calculation of the student's *cumulative* grade point average. If the course is repeated at any other institution, only the credits (not the grade) will be transferred back and the *grade for the first attempt of the course* will not be *removed from the GPA calculation.*

Attendance Requirements
In keeping with the educational philosophy at Daniel Webster College, class attendance and participation are expected of all students. It is the responsibility of each student to keep informed of all assignments and examinations and to meet all the requirements of any course. Each faculty member shall set the attendance requirements for his/her class and clearly inform students of this policy. Students should be aware that classroom participation is an important portion of all courses and that they may fail a course because of limited participation and poor attendance whether the absences were excused or not. Non-participation does not constitute a withdrawal and students may be held liable for full tuition.

The college's distance education offerings support the same philosophy. Interaction is an integral component to the learning process. Students are expected to participate in online courses as required by the instructor and non-participation does not constitute a withdrawal from the course.

Examinations
Faculty regularly schedule tests and examinations throughout the semester. Final examinations may be given at the end of each academic term. Once the final exam schedule has been set, it may not be modified by students or the instructor. Instructors indicate the content, scope, and method of examination in their syllabus. Students are expected to be present at all examinations and should confirm work and vacation travel arrangements around the exam schedule. Unexcused absences from examinations may result in a failing course grade. Prior approval from the course instructor is required for excused absences and is rarely approved.

Graduation Requirements

Undergraduate Requirements

Daniel Webster College awards diplomas three times a year. For those graduates who have completed all requirements by the day of Commencement at the end of the spring semester, the diplomas are dated the day of commencement. Graduates who complete their degree requirements after the day of commencement but prior to September 1 will receive diplomas dated August 31. Graduates who complete their degree requirements after August 31 and prior to January 1 will receive diplomas dated December 31.

Course requirements for each degree program are listed on official degree audits and in the College Catalog. Students follow the degree plan for the year in which they entered DWC or the year the major is declared, provided that reasonable continuous and satisfactory progress is being made toward the degree. If students "drop or stop out" for longer than 12 months and the degree requirements change, they may be required to meet the new degree requirements. Students should monitor their progress using the catalog and the degree audit found in SOAR (Student Online Access to Records) to be sure all degree requirements are met.

Students who wish to participate (march) in the Commencement ceremony must be within 7 credit hours of degree completion, plan to complete their degree requirements in the next summer term, and must satisfy all financial obligations with the college.

In addition to completing the courses specified in the degree plan, the following graduation requirements apply:

1. **Application for Degree Procedure:** Any student wishing to receive a degree from Daniel Webster College must file an Application for Degree form before beginning the final semester's course work. This form is available in the Registrar's Office or online at the Student Portal.
2. **Number of Credits:** To qualify for the Bachelor of Science degree, students must complete a minimum of 120 semester credit hours, varying upward by curriculum (several majors require more than 120 credits). For the Associate in Science degree, students must complete a minimum of 60 credits, varying upward by curriculum.
3. **Grade Point Average:** To graduate from Daniel Webster College, a cumulative grade point average of 2.0 or better is required and a minimum grade of C is required in all major courses. Students must obtain grades of C or better in those major-related courses indicated within each curriculum for the course to count toward graduation requirements. Other grade and course requirements are outlined in the curriculum listings.
4. **Financial Obligations:** To qualify for graduation, students must have satisfied all financial obligations to the College.

Graduate Requirements

Students must complete the 13 course (39 credit hours) program of study with a grade of C (2.00 GPA) and a cumulative GPA of 3.0 or better in order to graduate. Each student will be required to research, develop and present a comprehensive consultant's report and action plan that analyzes a problem or opportunity of employer, community or personal professional interest. The research project is the capstone of the program and students are expected to demonstrate a mastery of:

- Research and analytical skills needed to make effective/critical decisions;
- Refined communication and reasoning skills (oral and written) that clearly and concisely convey plans and ideas
- Effective application of theoretical and management techniques to complex business decisions.

Time Limit

Students in the MBA programs will have one year to complete their capstone research project once the capstone research course is completed. Students will be required to pay current course tuition for the final six months of this one year extension.

Degree Options

Daniel Webster College students are encouraged to seek breadth and diversity in their undergraduate education through the elective requirements of their degree program or additional course work in other fields. Students who pursue additional course work in other fields may have their efforts formally recognized as a double major, a minor, a concentration, or by earning two degrees through the approved degree programs. This additional course work is noted on the student's transcript.

The requirements of all double majors, concentrations, and minors must be completed prior to the awarding of the appropriate degree. When two degrees are earned through approved programs, they may be completed and awarded in different years or in the same year, subject to the restrictions noted.

Double Majors
Students enrolled in a Bachelor of Science program who fulfill all requirements of two distinctly different degree programs qualify for one degree, with a double major noted on their transcript. Similarly, students enrolled in an Associate in Science program who fulfill all requirements of two distinct A.S. degree programs qualify for one degree, with a double major noted on their transcript. College grade minimums and transfer maximum requirements apply.

1. Students who have previously declared a double major must request this designation when filing the "Application for Degree". Double majors may not be awarded retroactively.

2. Students must fulfill all requirements of both programs. Requirements that are common to both programs are counted toward both programs.
3. Students should be aware that earning a double major may involve substantial additional course work and will usually require a minimum of one additional semester or more in residence.

Minors

Students enrolled in a Bachelor of Science program who fulfill the requirements for a minor in another distinct B.S. program field qualify for one B.S. degree with both major and minor noted on the transcript. Students enrolled in an Associate in Science program are not eligible for minors. College grade minimum and transfer maximum requirements apply.

1. Students who have previously declared a minor must request this designation when filing the "Applicaiton for Degree". Minors may not be awarded retroactively.
2. Students must earn at least 12 credits in courses numbered 200 or higher in the minor field, including at least 6 credits in courses numbered 300 or higher in that field, exclusive of, and in addition to, any course required for their major. Prerequisite requirements may necessitate the completion of more than the 12 credit hour minimum
3. To be awarded a minor in any of the degree programs listed below, students must satisfy the specified eligibility and course requirements.

   Aviation Management: AM 201, AM 205, and 6 credits of Aviation Management electives numbered 300 or higher. **NOTE 1:** Flight operations majors must take two alternative AM courses in lieu of AM 201 and AM 205. **NOTE 2:** AM 205 has a prerequisite of AE 205 or AF 128. Students without an aviation background should also plan to take one of these courses.

   Business Management: 12 credits in courses in the Management Division (noted by the prefixes AC, BL, BM, EC, FI, MK, or SM), numbered 200 or higher, including at least 6 credits in Management courses numbered 300 or higher. BM 310 and BM 410 may not be applied toward a minor in Business Management.

   Psychology: 16 credit hours are required. Required: PY 3X7 Experimental Methods in Psychology. One of the following: PY 3X1 Sensation and Perception, PY 336 Learning and Memory, PY 3X2 Physiological Psychology, PY 3X3 Biopsychology, PY 3X4 Evolutionary Psychology. Three of the following: HS 120 Ideology, Conflict, and Terror, PY 202 Social Psychology, PY 214 Developmental Psychology, PY 2X2 Forensic Psychology, PY 322 Abnormal Psychology, PY 331 Personality Psychology, PY 3X2 Motivation and Emotion, PY 320 Organizational Psychology, PY 3X5 Espionage, PY 3X6 Cross Cultural Psychology, PY 4X1 Assessment and Measurement. Only one 200-level or lower course is allowed.

   Social Science: SS 301, 9 credits in courses in the Social Science Division*, and a minimum of 20 hours of community service.

   *Courses noted by the prefixes HI, PY, SO or SS. Courses must be at the 200-level or higher, with at least one at the 300-level, and must come from at least two disciplines listed.

4. Students seeking to enroll in a course to fulfill the requirements for a minor must meet all prerequisites and other requirements for the course (except for restrictions based on the field or major).

Two Degrees

Under some circumstances, students enrolled in a degree program at the College, or graduates of the College may seek recognition of additional study by earning a second DWC degree. For example:

1. Students who have completed the requirements for an A.S. degree may then elect to continue their studies and subsequently earn a B.S. degree in the same or different field.
2. Students enrolled in a B.S. program may wish to pursue studies in a different field, one that the College offers at the A.S. level with the exception of an A.S. degree in general studies. This A.S. degree is meant for those who are not planning to pursue a B.S. degree.
3. Graduates of an A.S. or B.S. degree program may wish to return to the College to earn a second degree of the same rank in a different field. The requirements and restrictions for earning two degrees are explained below.

Continuing to a B.S. Degree
Students enrolled in, or graduates of, an A.S. degree program at Daniel Webster College are encouraged to continue their studies to earn a B.S. degree.

1. Students who continue their studies without interruption in the associated B.S. program may do so without being formally readmitted to the College and without a change in the Catalog year.
2. Students who continue their studies without interruption but in a different B.S. program may do so without being formally readmitted to the College, but they are considered to have changed their academic major and are subject to the degree requirements then in effect for that major.
3. Students or graduates of an A.S. program who interrupt their studies for more than one semester and then wish to continue in a B.S. program must seek readmission to the College and are subject to the degree requirements then in effect.

While this progression is reasonable and appropriate, students should understand that earning an A.S. and a B.S. degree in the same field is redundant. For this reason, students are not permitted to qualify for an A.S. and a B.S. degree in the same field in the same year.

Combined B.S./A.S. Program
Students enrolled in a B.S. program who fulfill all the requirements of the B.S. degree and all requirements for a separate A.S. degree qualify to receive both degrees except for an A.S. degree in general studies. The degrees may be awarded at the same time subject to the following restrictions.

1. The College will not award an A.S. degree and a B.S. degree in the same major/concentration at the same time, nor will the College award an A.S. degree after awarding a B.S. degree in the same major/concentration.
2. Students must declare their intent to pursue two degrees prior to being awarded the B.S. degree.
3. Students must file an Application for Degree for each degree in the period they wish to receive it.

Daniel Webster College Graduates Seeking a Second Degree
An A.S. graduate seeking a second A.S. degree or a B.S. graduate seeking a second degree (A.S. or B.S.) is subject to the following requirements:

1. The student must complete all requirements for the second degree.
2. For a second A.S. degree, the student must complete a minimum of 15 additional credits in residence beyond those required for the first degree, including at least 9 credits beyond the introductory (100) level, for a minimum of 75 credit hours.
3. For a second B.S. degree, the student must complete a minimum of 30 additional credits in residence beyond those required for the first degree, including at least 24 credits beyond the introductory (100) level, for a minimum of 150 credit hours.

Changes in Degree Requirements
Students are held to the academic degree requirements published in the Catalog the year they entered the College. In the event that changes are made in the degree requirements of any academic program, all students enrolling in or changing to that program (changing majors, for instance) after the date when the changes become effective will be subject to the requirements of the new program. However, students who maintain continuous enrollment may leave the A.S. program to enter the associated B.S. program without being subject to the new requirements.

Students already enrolled in programs when the changes are made can choose the new program with the approval of their advisor and the Dean. Thus, such students either (a) meet the requirements set forth in the Catalog for the year in which they entered, or (b) if they elect to follow the requirements of a later Catalog and get permission to do so, meet the new requirements in their entirety. Readmitted students are subject to the requirements of the program in effect at the time of readmission.

Academic Honors
DWC recognizes the academic accomplishments of our students. The Dean's List is comprised of full-time students who, during the previous semester, earned a grade point average of 3.5 or greater, provided that the average included no grade lower than C.

A student will be named to the President's List after qualifying for the Dean's List in three consecutive semesters. Graduation Honors are awarded to students who have completed requirements with the following grade point averages:

Baccalaureate Degree	**GPA**
Cum Laude	3.5

Magna Cum Laude	3.7
Summa Cum Laude	3.9

Associate Degree	**GPA**
Honors	3.5
High Honors	3.7
Highest Honors	3.9

To qualify for graduation honors, a student must:

- have earned a minimum of 60 credit hours in residence for baccalaureate degree honors, 30 credits in residence for associate degree honors;
- have earned a minimum of 90 credit hours in residence for valedictorian or salutatorian status;
- earn the degree within eight years for a bachelor's program--four years for a two-year or transfer program;
- have a minimum GPA of 3.5.

Alpha Chi
Alpha Chi, founded in 1922, is a nationally recognized honor society, the purpose of which is to promote academic excellence and exemplary character among college and university students and to recognize and honor those students who achieve such distinction. Induction of new members takes place annually on the Daniel Webster College campus.

Alpha Chi admits to membership students from all academic disciplines who rank academically at the top of their junior and senior classes. Members receive recognition as distinguished scholars and members of a society that is growing in number of chapters and in prestige throughout the country.

Academic Standing

Class Standing and Satisfactory Progress
A student is considered to be making satisfactory progress if his or her CGPA is 2.00 or higher and is making reasonable progress toward completing a degree. Undergraduate students should expect to enroll for a minimum of 12 credits a semester. Class standing is defined by the following credit totals:

0-29	Freshman status
30-59	Sophomore status
60-89	Junior status
90+	Senior status

Any student who is not making satisfactory progress may be placed on probation, suspended, or dismissed.

The completion of an Academic Contract, designed to focus on improving study skills and habits, is recommended for any student whose TGPA does not meet the satisfactory progress level. A student with a CGPA below 2.00 who wishes to participate in College events and activities (such as Student Government, Student Activities Board, athletic teams, the flight team, or work study), is required to complete the Academic Contract, request permission to participate in the activities, and follow its procedures.

Academic Standing
Academic transcripts showing the academic performance of each student are maintained in the Registrar's Office. Academic progress is evaluated at the end of each semester for the purpose of determining academic standing. A report of the student's grades is available on SOAR (Student Online Access to Records). Official transcripts with the College Seal are furnished at the written request of the student, providing no balance is due through the Student Financial Services offices. There is no charge for official transcripts.

Good Academic Standing
Any student having a cumulative grade point average (CPGA) of 2.00 or higher is in good standing. A student given a semester warning for failure to maintain a 2.00 semester grade point average (TGPA) in the previous term may still be in good academic standing if his or her CGPA equals or exceeds 2.00. A student is given three semesters to regain satisfactory academic standing. After that time he or she may be suspended for one semester.

Academic Warning
A student whose semester GPA or cumulative GPA falls below 2.00 at the conclusion of any regular semester, summer session, or intersession will receive an Academic Warning. The student will be notified of the academic warning by the Chief Academic Officer for Academic Affairs. The student is urged to seek academic support services and to work with his or her academic advisor in order to regain academic good standing. Also a student who receives an Academic Warning is encouraged to complete an Academic Contract.

Academic Probation
A student will be placed on Academic Probation in the following circumstances:

- following two consecutive semesters or combination of semesters and sessions (intersessions or summer sessions) below a 2.00 CGPA, or
- following two consecutive semesters or combination of semesters and sessions below a 2.00 semester GPA even though the CGPA is above 2.00. The student will be notified of academic probation by the Chief Academic Officer. Probationary status entails the following:
- the student may not enroll for more than 13 credit hours (15 credits) hours if one of the courses is being repeated because of a failing grade);
- the student shall not serve as a member of the Student Senate, Student Government, any DWC intercollegiate team, the student newspaper or yearbook, hold office in any College sponsored organization, or participate as a work-study student.

A student on probation who wishes to continue participating in the campus activities listed above must complete a formal plan or action called an Academic Contract, request permission to participate in the activities, and follow its procedures. The Academic Contract will be planned in conjunction with the Director of Academic Resources.

Academic Suspension
A student will be suspended if he or she:

- has been placed on academic probation for three consecutive semesters or any combination of semesters, intersessions, and summer sessions, and has a CGPA below 2.0; or
- has earned a semester GPA of 0.5 or lower for two consecutive semesters or any combination of semesters, intersessions, and summer sessions.

The student will be advised by the Chief Academic Officer that he or she is suspended from the College after the appropriate records are reviewed. An appeal of suspension which describes any extenuating circumstances may be submitted in writing to the Chief Academic Officer. The Chief Academic Officer's decision is final.

A suspended student will not be allowed to re-enroll until after the next regular semester. The Registrar's Office may readmit a suspended student with the approval of the Chief Academic Officer.The Chief Academic Officer will:

- decide the number of credit hours a student will be allowed to carry in the first semester after readmission;
- allow a student from one to as many as three semesters to attain the minimum GPA readmission;
- require a semester GPA of at least 2.00 for each semester after readmission until the minimum CGPA is achieved.

Academic Dismissal
Repeated suspensions will result in dismissal from the College. No appeal of academic dismissal is permitted.

Readmission
A student who seeks readmission after academic suspension must petition the Chief Academic Officer in writing. The request should include a discussion of the student's strategy for academic success. The Chief Academic Officer will consult with the student and his/her advisor and, working with an Academic Contract, prior to readmission, devise a plan for monitoring student performance. A student readmitted to the College immediately following the suspension period is bound to the requirements of the catalog in effect at the time of his/her suspension. A student who chooses to apply for readmission beyond the one-semester period is bound to the requirements of the catalog in effect at the time of readmission.

Withdrawal from Courses
A student may officially withdraw from a course at his/her discretion prior to the "Last Day to Withdraw" listed in the Academic Calendar. The student should consult with the course instructor and his/her advisor prior to withdrawing from a course. Withdrawing from a course is accomplished by completing the Course Withdrawal Form and submitting it to the Registrar. Non-attendance is not considered official withdrawal and will result in a failing grade. Course withdrawal after the add/drop period does not constitute a reduction in load for computing overload charges. The date that the student officially requests withdrawal is the date of record for refund considerations, provided that the necessary procedures and paperwork are completed within three working days of the request. The official date of withdrawal can have an effect on tuition refunds and financial aid.

A withdrawal generates a final grade recorded on the transcript as W. After the "Last Day to Withdraw" date, a withdrawal may be assigned by administrative action only when the student is unable to complete a course due to nonacademic circumstances such as prolonged illness, family emergencies, etc.

An administrative withdrawal may be requested by the student or the instructor or recommended by the advisor or other academic personnel. The request must be received in writing with specified justification for the action and is subject to review and confirmation by the Chief Academic Officer. The administrative withdrawal for Professional Studies students shall be recommended by the Dean of the School of Business and Management in consultation with the student and the instructor. A student who subsequently wishes to renew his/her studies in the course must reenroll and retake the course.

Ethical Standards

Academic Honesty
Intellectual curiosity is at the heart of the academic enterprise. Students, faculty and administration at Daniel Webster College consider such violations as cheating and plagiarism to be so unethical as to call into question whether the violator should continue as a member of the College community.

Transcripts that misrepresent academic performance not only endanger students' chances for success in their careers but also damage the integrity and reputation of the institution.

Student Honor Pledge
Daniel Webster College believes that all students have the right to learn in an academic community that insures fair competition, and respects truth and honesty. Academic dishonesty is not tolerated at Daniel Webster College. The Student Honor Pledge is intended to create a community of fairness, respect and responsibility in the pursuit of academic enterprise. All students are expected to write and sign the Student Honor Pledge.

I pledge on my honor, as a student at Daniel Webster College, that I have neither given nor received any unauthorized aid on this assignment/examination.

Each faculty member will indicate when and where the Pledge is required on assignments, papers, and exams. Students who are unwilling to sign the Pledge must work with faculty to find a suitable alternative to the Pledge that provides compliance to the Daniel Webster College policy and expectations regarding academic honesty.

Cheating
Cheating is difficult to define in a general setting, and may depend on the context of the situation and the parties involved. Instructors have certain learning objectives in mind; any attempt to circumnavigate those objectives may constitute cheating. So that students understand the importance and expectation of academic honesty, instructors should define what constitutes plagiarism or cheating on each syllabus and describe the corresponding penalties. If a student has any remaining questions he or she should seek clarification from the instructor of the course. Remember: ignorance does not equate to innocence.

A list of activities that are widely held as cheating is provided, but is not limited to:

- using unauthorized sources of information on an exam (cheat sheets, storing notes and formulas in a calculator, other students' work, etc.)
- stealing, obtaining, or distributing unauthorized copies of exams.
- plagiarizing — The act of presenting the ideas or writings of another's as one's own. There are various forms such as:
    - word-for-word plagiarism
    - patchwork plagiarism - consisting of piecing together unacknowledged phrases and sentences quoted verbatim or nearly verbatim unacknowledged paraphrasing — consisting of using another's ideas or facts without acknowledging the source.
- impersonating another student or allowing oneself to be impersonated.
- altering another student's work without their consent, or to intentionally provide incorrect information.
- using past graded coursework as work for a current course.

There are other violations of academic honesty that do not fall under the category of cheating, but carry the same penalties. Some examples might be:

1. loaning the use of one's computer log-in privileges.
2. destroying another person's computer files.

Obligations to Report Cheating
All members of the academic community, including students, have the obligation to report instances of perceived cheating to the instructor of the course. See Section VII of "Student Life, Community Policies and Procedures," the Student Code of Conduct. The instructor of the course has the right to determine what constitutes cheating and will inform students of this in their syllabus.

Penalties
A student who has been found guilty of academic dishonesty, either through admission or though the academic grievance procedure outlined in the next section, will have two levels of penalties applied: Academic penalties and Disciplinary penalties.

Academic Penalties
The instructor of the course will levy the academic penalties in accordance with the policies described on the course syllabus. These may include, but are not limited to:

- A warning.
- A low or failing grade for the assignment in which the offense occurred.
- An additional assignment.
- A reduction of the final grade.
- A failing grade for the course.
- Some combination of the above.

An administrative F supersedes the right of the student to withdraw from the course.

Disciplinary Penalties
After applying the academic penalties, the instructor must then report the incident in writing to the Chief Academic Officer, who will prescribe the appropriate action. This may include but is not limited to:

- No additional action.
- A written warning about consequences for future cases of academic dishonesty.
- Temporary or permanent dismissal from the institution.

In making the determination of any penalty, the Chief Academic Officer may seek the advice of the instructor that initiated the charge.

In addition, the Chief Academic Officer will maintain records of all students found guilty of academic misconduct. Repeat offenders will be subject to more stringent penalties.

A student accused of cheating has the option of presenting his/her case by pursuing the academic grievance procedure to clear his/her name. All penalties will be assessed after the student has confessed or is determined to be guilty by the College Appeal Panel or Academic Judicial Board through the academic or grievance procedure.

Note: Although the determination of academic penalty, including the choice to pursue the case, is in the hands of the instructor, any member of the academic community has the obligation to report instances of cheating. For reference, see: "Student Life, Community Policies and Procedures," the Student Code of Conduct.

Appeals and Grievance Procedure

A student is expected to abide by the social and academic rules and regulations outlined in the Student Handbook and in the Catalog. The College reserves the right, and the student concedes such right, to require withdrawal of any student, at any time, for any reason, deemed sufficient.

Academic Grievance Procedure
Purpose
The primary purpose of the grievance procedure is to reach an equitable solution to the problems of those students who have disputes either with an academic unit or the classroom conduct or grading practices of faculty members.

Grievance
A grievance means a difference, presented in writing that may arise between a faculty or academic staff person and a student or grievant, with respect but not limited to:

1. a violation of established academic policies and regulations such as those governing examinations, advisement, and registration;
2. arbitrary and capricious grading practices;
3. a violation of the student's academic freedom, defined in the Student Handbook as " . . . the freedom to inquire, to discuss, to seek evidence, to speak, and to exchange ideas"
4. failure to meet obligations to students in such matters as adherence to scheduled class hours, taking timely action, or correcting errors.

A grievant shall mean either an individual student or a group of students having the same grievance.

Working Day
A working day means any day on which the College is open for the transaction of business. For purposes of handling grievances, working days between the end of the Fall semester examination period and the first day of classes of Spring semester, or during the Spring recess, shall not be used to compute the time limitations contained in this procedure unless agreeable to all the parties involved.

Procedure for Handling Complaints
If a student has a complaint, it should first be discussed informally with the faculty or staff person involved. Any settlement, withdrawal, or disposition of a complaint at this stage shall not constitute a binding precedent in the settlement of similar complaints.

Procedures for Handling Grievances
The formal grievance should be presented in person, in writing, to the faculty or staff member involved as soon as possible after the grievant feels that an abridgment of his or her rights has occurred, but in no case shall it be more than 10 working days later. (This time limit will not apply if a purely clerical error is discovered.)

The statement of grievance must include a summary of not more than one typewritten page stating the exact nature of the grievance, the specific action(s) on which it is based, and the remedy being sought. Supplementary materials may be presented to support the grievance.

Resolution of the grievance may occur at any of three different steps or levels:

Step 1: The Faculty or Staff Member involved
The grievant shall present the grievance to the faculty or staff member involved. The parties shall attempt to resolve the grievance and shall, within 10 working days of receipt of the grievance, render a written decision to the grievant with copies to the Chief Academic Officer for Academic Affairs.

Step 2: Dean of the School
If the grievance is not resolved at Step 1, the grievant has 10 working days to submit, in writing, the grievance to the Dean of the School.

Within 10 working days of receipt of the grievance, the Dean of the School shall meet to discuss the grievance with the grievant and the faculty or staff person involved, either jointly or separately. This discussion may include the Dean or Unit Head, as appropriate.

Within 10 working days of this formal discussion, the Dean of the School shall issue a decision in writing to the grievant and to the faculty or staff person involved, and shall explain the reasons for it.

Step 3: Chief Academic Officer
If the grievance is not resolved at Step 2, the grievant has 10 working days to submit, in writing, the grievance to the Chief Academic Officer.

Within 10 working days of receipt of the grievance, the Chief Academic Officer shall meet to discuss the grievance with the grievant and the faculty or staff person involved, either jointly or separately. This discussion may include the Dean or Unit Head, as appropriate.

Within 10 working days of this formal discussion, the Chief Academic Officer shall issue a decision in writing to the grievant and to the faculty or staff person involved, and shall explain the reasons for it.

Step 4: The President
If the grievance remains unresolved at Step 2, the grievant has 10 working days after receipt of the decision of the Chief Academic Officer for Academic Affairs to submit the grievance, in writing, to the President.

Within 10 working days of receipt of the grievance, the President shall meet with the grievant and the faculty or staff member involved, either jointly or separately, to discuss the grievance.

Within 10 working days of this formal discussion, the President will issue a decision in writing, with supporting reasons, to the grievant, the faculty or staff person involved, the Chief Academic Officer for Academic Affairs, and the appropriate Dean.

The decision of the President is final and binding on all parties involved.

General Provisions

1. The above stated procedures supersede any previous grievance procedures.
2. Since it is important that grievances be processed as rapidly as possible, the number of days indicated at each level should be considered as maximum and every effort made by parties involved to expedite the process. Time may be extended only by mutual consent and only when so specified in writing, or for extenuating circumstances as determined by the next higher level of appeal.
3. Failure at any step of the procedure to communicate the decision on a grievance within the specified time limits shall permit the grievant of a faculty or staff member to lodge an appeal at the next step of the procedure.
4. In cases of grievances concerning grades, the Chief Academic Officer for Academic Affairs shall appoint an ad hoc committee of three faculty members to hear the matter. The decisions of the committee shall be final, unless, upon appeal, the officer at the next higher level of appeal determines that the cause of the grievance is other than disagreement with academic judgment.
5. A faculty or staff member may appeal any decision to the next higher level within the time limits specified in that step for the grievant.
6. Appeals under this procedure shall not operate to stay any action resulting from the appealed action or grade, although the Chief Academic Officer for Academic Affairs has authority to waive academic policy, with appropriate rationale and justification.

Transfer and Withdrawal from the College

Withdrawal from the College
A student wishing to withdraw from the College must obtain a Withdrawal Form from the Registrar’s Office, must receive signatures from the offices indicated, and participate in withdrawal interviews in Financial Assistance and the Office of Academic Resources. Non-attendance is not considered official withdrawal and will result in failing grades. Refunds for tuition and board are subject to the Refund Policy. Housing and lab fees are not refundable.

Students seeking to return after official withdrawal from the College are subject to the academic requirements of the degree program in effect at the time of readmission and may re-enter the College through the readmit process. Readmit forms are available through the Registrar’s Office.

Flight Withdrawal
Flight enrollment for flight students will normally be maintained continuously and concurrently with academic enrollment in the College. Flight enrollment will be terminated upon change of program (unless enrolled in flight courses for elective credits), leave of absence, withdrawal from college or from courses that are co-requisites, suspension, or dismissal from the College. For most flight practica, students are expected to complete it during the semester in which they are enrolled. If they are not able to complete the practicum in that semester, they are expected to remain available for flights during the periods when the Aviation Center is open during college breaks and summer terms.

Privacy of Student Records

Family Educational Rights and Privacy Act of 1974, as Amended

Statement of Compliance
1. General Policy
Under the authority of the Family Educational Rights and Privacy Act of 1974, as amended ("Act"), a student has the right to examine certain records concerning the student which are maintained by the school. The school must permit the student to examine such records within 45 days after the school receives a written request from the student. The school will also permit the student to obtain a copy of such records upon payment of a reproduction fee. A student may request that the school amend his or her education records on the grounds that they are inaccurate, misleading or in violation of the student's right of privacy. In the event the school refuses to so amend the records, the student may, after complying with the Student Complaint/Grievance Procedure, request a hearing. If the outcome of a hearing is unsatisfactory to the student, the student may submit an explanatory statement for inclusion in his or her education record. A student has the right to file a complaint with the Family Policy Compliance Office, U.S. Department of Education, 400 Maryland Avenue, S.W., Washington, DC 20202-4605, concerning the school's alleged failure to comply with the Act.
2. Education Records
Education records are records maintained by the school which contain information directly related to the student. Examples of education records are the student's education, career services and financial aid files. The only persons allowed access to such records are those who have a legitimate administrative or educational interest.
3. Exemptions
The following records are exempt from the Act:
(a) Financial records of the student's parents.
(b) Confidential letters and recommendations relating to admission, employment or honors to which the student has waived his or her right to inspect.
(c) Records about students made by faculty or administrators which are maintained by, and accessible only to, the faculty and administration.
(d) Records made or maintained by a physician, psychiatrist, psychologist or other recognized professional or paraprofessional acting or assisting in such capacity, and which are available only to persons providing the treatment.
(e) Employment records for school employees who are also current or former students.
(f) Records created or received after an individual is no longer a student at the school and are not directly related to the individual's attendance as a student at the school.
(g) Grades on peer-graded papers that have not been collected and recorded by an instructor.
4. Review of Records
It is the policy of the school to monitor educational records to insure that they do not contain information which is inaccurate, misleading or otherwise inappropriate. The school may destroy records which it determines, in its discretion, are no longer useful or pertinent to the student's circumstances.
5. Directory Information
Directory Information (as defined below) is that information which may be unconditionally released without the student's consent, unless the student specifically requests in writing that such information not be released. The school requires that such request must (I) specify what categories of Directory Information are to be withheld by the student and (II) be delivered to the school Director within 15 days after the student starts class. Any such request must be renewed annually by the student. "Directory Information" means information contained in a student's education record which would generally not be considered harmful or an invasion of privacy if disclosed. Directory Information includes, but is not limited to, the student's name; address(es); telephone number(s); electronic mail address(es); photograph; grade level; enrollment status (e.g., full-time or part-time); date and place of birth; program of study; extracurricular activities; credentials, awards and recognition (i.e., honors) received; last school attended; dates of attendance (i.e., enrollment period(s), not daily attendance record); and student or user ID number (other than a social security number), but only if the identifier cannot be used to gain access to education records except when used in conjunction with one or more factors that authenticate the user's identity which are known or possessed only by the authorized user.

6. Access Without Student Consent

The school may release a student's education records without written consent of the student to:

(a) Other school officials who have a legitimate educational interest.

(b) Other schools where the student has applied for admission, so long as the information is for purposes related to the student's attendance at those other schools.

(c) Authorized representatives of the U.S. Department of Education, state and local education authorities, the Comptroller General of the United States or the Attorney General of the United States.

(d) Providers of financial aid (and services in connection therewith) for which the student has applied or received, including, without limitation, lenders, guaranty agencies, Veterans Administration, state vocational rehabilitation agencies and collection agencies.

(e) State and local authorities where required.

(f) Accrediting agencies.

(g) A parent (whether a natural parent, guardian or an individual acting as a parent in the absence of a parent or guardian) of a student who is a dependent of the parent for purposes of the Internal Revenue Code. The school is not required, however, to release such records.

(h) Any court in which the student or a parent of the student initiates a legal action against the school, but only with respect to the student's education records that are relevant for the school to defend itself.

(i) Any court in which the school initiates a legal action against the student or a parent of the student, but only with respect to the student's education records that are relevant for the school to prosecute the legal action.

(j) Any person pursuant to and in compliance with a judicial order or subpoena, provided that the school reasonably attempts to notify the student prior to compliance (unless the order or subpoena specifies that the student must not be notified).

(k) Appropriate persons or agencies in the event of a health or safety emergency, where such release without consent is deemed necessary by the school under the circumstances.

(l) Organizations conducting studies to develop, validate and administer predictive tests, to administer student aid programs or to improve instruction.

(m) The public, if the school determines, in its discretion, that the student, as an alleged perpetrator, has committed a Crime of Violence (as defined below) or a Non-forcible Sex Offense (as defined below) in violation of the Conduct section of this catalog, but only the following information from the student's education records: the student's name, the violation committed; and any sanction imposed by the school on the student. A Crime of Violence means an act that would, if proven, constitute any of the following offenses or offenses to commit the following offenses: arson; assault offenses; burglary; criminal homicide, whether manslaughter by negligence, murder or non-negligent manslaughter; the destruction, damage or vandalism of property; kidnapping or abduction; robbery; or forcible sex offense. A Non-forcible Sex Offense means an act that would, if proven, constitute statutory rape or incest.

(n) The purported victim, regardless of whether the school determines that the student, as an alleged perpetrator, committed a Crime of Violence or a Non-forcible Sex Offense in violation of the Conduct section of this catalog, but only the following information from the student's education records: the student's name; the violation committed; and any sanction imposed by the school on the student.

(o) Any person, if the education records disclosed are Directory Information on the student.

(p) The student, or the student's parents if the student is less than 18 years old.

(q) A parent of the student regarding the student's violation of any federal, state or local law or any rule or policy of the school concerning the use or possession of alcohol or a controlled substance, if the student is under the age of 21 and the school has determined that the student has violated the Conduct section of this catalog with respect to that use or possession.

(r) The United States Attorney General (or designee not lower than an Assistant Attorney General) pursuant to an ex parte court order concerning investigations or prosecutions of an offense listed in 18 U.S.C. 2332b(g)(5)(B) or an act of domestic or international terrorism as defined in 18 U.S.C. 2331.

(s) The public, if the disclosure concerns an individual required to register under section 170101 of the Violent Crime Control and Law Enforcement Act of 1994, 42 U.S.C. 14071, and the information was provided to the school under 42 U.S.C. 14071 and applicable federal guidelines.

Daniel Webster College will obtain the written consent of the student prior to releasing the student's education records to any other person or organization, except with respect to Directory Information.

Solomon Amendment

A recent federal law requires the institution to release to the military information about students registered at Daniel Webster College. The college must disclose this information each semester as requested. The information is for recruiting purposes and includes name, address, date of birth, phone number, major, year in school, and expected date of graduation. Students who wish to restrict this information from release must do so in writing in the Student Service Center. Once the information is restricted, the college may not release it to any outside party, not just the military.

Permanent Address

Daniel Webster College policy requires that all correspondence is to be forwarded to the permanent address identified by the student. This includes — but is not limited to — grades (upon written request), academic status notices (warnings, probation, suspensions, and commendations), and billing notices. Copies will be issued to parents/guardian on written request and proof of dependency or designation by the student. Students are requested to confirm consent to share information with parents at the time of initial enrollment. Changes in permanent address and parent/guardian letters can be initiated by the student in writing at any time.

Degree Programs

Daniel Webster College offers three degrees with multiple majors. The degree programs offer a Master of Business Administration, Bachelor of Science or an Associate in Science degree in the following areas:

Master of Business Administration

- MBA
- MBA for Aviation Professionals (Distance Education)
- MBA - Sport Management
- MBA - Technology and Innovation Management

Bachelor of Science

- Aeronautical Engineering
- Aviation Management
- Aviation/Air Traffic Management
- Business Management
- Computer Science (Software Engineering)
- Computer Systems Engineering
- Game Design and Development
- Gaming, Simulation and Robotics
- Homeland Security
- Management Information Systems
- Marketing Management
- Mechanical Engineering
- Organizational Leadership
- Psychology
- Social Science
- Software Development
- Sport Management

Associate in Science

- Aeronautical Engineering
- Business Management
- Engineering Science
- General Studies
- Information Systems

General Education

Global connectivity, scientific and technological breakthroughs, inter-cultural relations, and changes in the balance of economic and political power are radically changing our world. The Daniel Webster College General Education program prepares students to make informed decisions and to take actions in the increasingly interconnected global environment. Through active participation in the discovery, evaluation, and production of knowledge, Daniel Webster College students are given the tools to become leaders in their various professions as well as responsible members of their communities. Our General Education Program centers on critical thinking, communication, and global citizenship.

Three Main Outcomes of General Education:

Communication Outcomes
The written and spoken word or symbol is the core of self-expression and it serves as the foundation of society. Communication provides several important functions in our lives. Communication skills are required for the basic exchange of information and the development of relationships, to the fulfillment of our social obligations and the ability to influence others. Daniel Webster College strives to provide a solid communication base, allowing students to not only practice various communication skills but also appreciate and critique the communication they are exposed to every day.

- Communicate clearly and effectively in written, oral, and electronic forms
- Demonstrate the ability to critique their own work and the work of peers based on grammar, organization, style, and logic
- Identify, Locate, Evaluate and Communicate information from various media into a coherent and integrated research analysis

Critical Thinking Outcomes
In the ever-changing world, individuals need to be able to think clearly and logically to adapt to new situations. Critical and creative thinking skills prepare students to integrate and transfer knowledge from one area to another as they proceed through their interdisciplinary course work in General Education. In the media driven global world, it is ever more important that individuals are able to evaluate evidence and form reasoned judgments about complex issues. As critical thinkers, students are encouraged to evaluate the work of others and their own thinking in order to improve the accuracy, preciseness, and depth of thought. Our General Education program is designed to encourage students to understand, evaluate, and generate knowledge through critical analysis and creative integration.

- Demonstrate the ability to describe and evaluate the logic of an argument or analysis
- Demonstrate the ability to apply theories from a variety of disciplines to develop reasoned and integrated explanations for real-world situations
- Apply quantitative reasoning skills to solve problems

Cultural and Community Engagement Outcomes
In the inter-connected world, individuals need to understand the basis and implications of such interconnections in order to be active participants. The ability to analyze research on political, social, and economic issues is key to understanding cultural relationships. Knowledge of these issues can be better understood if applied in real world settings where students will actively use this knowledge and experience for the betterment of their community. As community members, students are encouraged to explore the personal and social ramifications of individual and group behavior. Our General Education program is designed to prepare global citizens by encouraging students to understand the dynamics of the global society and to use such knowledge to promote the common good. Within and outside the Daniel Webster College community, students will:

- Apply principles of citizenship and social responsibility
- Employ analytical and practical reasoning to evaluate the potential consequences of personal choices on other individuals and the broader community
- Collaborate effectively with others in shared pursuits of gathering and applying knowledge

The DWC General Education Core includes:

DW 101 Strategies for Success	**1 credit hour**
Communications:	**12 credit hours**
EN 115 College Writing	3 credit hours
Professional Communication	3 credit hours
Upper Level Writing Intensive Course [W]	3 credit hours
Information Technology	3 credit hours
Critical Thinking*	**9-12 credit hours**
Human Behavior	3-6 credit hours
Mathematics	3 credit hours
Natural or Physical Lab Science Course	3 credit hours
Cultural and Community Engagement*	**15-18 credit hours**
ID 101 First Year Seminar	3 credit hours
One HU 200-level course or One SS 200-level course	3 credit hours
Cultural Studies Course	6-9 credit hours
Courses in cultural studies are selected with the advice and consent of the Academic Advisor demonstrating coherence and including at least one 200-level course and at least one 300-level courses in Economics (EC), History (HI), Humanities (HU), Political Science (PS), Psychology (PY), Sociology (SO), Social Science (SS), and one 300-level Humanities (HU) course.	
Senior Seminar	**3 credit hours**
Total General Education Requirements	**40 credit hours**

*The **Human Behavior** component and **Cultural and Community Engagement requirement** must total 21 credits combined.
[W] If upper-level writing course is within the major, it fulfills the general education upper-level writing intensive requirement and the credits are applied toward major requirements. This course is subject to all minimum grade requirements for major requirements. Other upper-level writing intensive courses are offered outside of the major.

The general education requirements for the associate degree programs vary depending upon the specific degree program. However, they constitute approximately one-third of the total required semester credit hours.

All first-time college students are expected to enroll in DW 101, Strategies for Success. This course is also recommended for transfer students with less than one year of college credits.

General Electives
A General Elective is any course taken which is not listed as a required course to meet the degree requirements. ROTC courses may count as general electives.

DWC Writing Program

Designed to provide entering students with instruction appropriate to their experience and abilities, the DWC Writing Program offers a two sequence program:

- EN 100 - Developmental Writing
- EN 115 - College Writing and Research
    - EN 105 - College Writing & Research Lab paired with EN115.

Students choose EN100 or EN115/EN105 based on guidance (specific criteria) provided by the college. A minimum grade of C+ plus is required to pass EN 115. Students without transfer credit for these courses normally complete the Writing Program during their first two to three semesters at DWC.

Goals of the Writing Program
All of the courses in the Writing Program help students to develop their skills in reading, writing, research, creativity, and critical thinking needed to succeed at the college level and in their chosen professions. Class and off-site service learning activities require students to act as self-directed learners, locate resources, prepare assignments independently, and contribute to group projects. Students in the Writing Program courses frequently critique one another's work through peer editing.

Additional Information about Writing at DWC
In addition to the first-year curriculum, the Writing Program offers courses to help students develop their writing throughout their college . In the junior year, students will take either a Writing Intensive course (a course in students' majors but with enhanced writing assignments) or a Writing Studies course (a course focusing on a specific genre or topic of writing). Additional writing assignments appropriate to the discipline will be an integral part of many upper-level major and general education courses.

Cultural and Interdisciplinary Studies

In addition to meeting the writing requirements described above, each student graduating from DWC has the opportunity to explore a rich variety of cultural, social, and historical topics as part of general education requirements. These requirements are met through a variety of courses in the School of Arts and Sciences. Topics may vary each semester.

Service Learning at DWC

Service-learning is a method of experiential education in which students participate in an organized service activity that meets identified community needs to broaden student appreciation of their discipline, further understand course content and enhance their sense of civic responsibility. Like internships and other forms of experiential "hands-on" earning, service-learning is an important part of a DWC education and is incorporated into the curriculum in a number of courses.

ROTC

Army ROTC

The U.S. Army Reserve Officers Training Corps program is designed to prepare top-quality men and women to become commissioned officers in the U.S. Army, Army Reserve, or Army National Guard. Military Science training is designed to complement the students academic classes and is integrated into the regular academic curriculum.

Daniel Webster College students may enroll in Army ROTC through the University of New Hampshire, Durham, NH at (603) 862-1078. Contact your local Army ROTC unit for further information.

Air Force ROTC

AFROTC is a commissioning program designed to educate and train men and women from all academic disciplines to be officers in the United States Air Force. The Air Force offers over 200 different career specialties. The AFROTC program is divided into two phases: (1) the General Military Course (GMC) and (2) the Professional Officer Course (POC). The GMC lower division courses consist of one hour of class per week. The POC upper division courses consist of three hours of class per week. These courses teach communications, leadership, management, and organizational skills which can apply to either a military or civilian environment.

In addition to the GMC and POC classes, students who are members of the Reserve Officer Training Corps must also enroll in a Leadership Lab meeting weekly. For commissioning, a student must complete either a four- or five-week field training course during the summer between the sophomore and junior years. Students are highly encouraged to participate in AFROTC for the full four years (GMC + POC) as there are significant advantages in education and scholarship opportunities for four-year cadets. For acceptance into the POC, students must pass a physical examination and fitness test, an officer qualification test, possess an acceptable academic record (2.0 or better), and be able to meet all Air Force commissioning requirements. Uniforms, equipment, and textbooks required for AFROTC will be supplied free of charge.

Once all POC and academic requirements for a degree are completed, the student may be commissioned as a second lieutenant in the Air Force. Commissionees must serve at least four years on active duty. Any student may take ROTC academic classes without obligation to enter the Air Force. Students pursuing a commission normally become obligated to the Air Force upon entering their junior year of

undergraduate studies. Students on scholarship, however, may incur an obligation earlier. Scholarships, which are available on a competitive basis, may pay tuition and most laboratory, textbook, and incidental fees. In addition, AFROTC scholarship recipients will receive free room at Daniel Webster College. Scholarship recipients and POC cadets receive $300-$500 in a tax-free stipend each month during the school year. Other tuition assistance programs may also be available to POC cadets.

Additional information on Air Force class schedules, scholarships, and eligibility requirements is available by calling AFROTC Detachment 345 at the University of Massachusetts at Lowell, (978) 934-2252 or e-mail: afrotc345@uml.edu.

Students may enroll in the Air Force Reserve Officers Training Corps (AFROTC) program through the University of Massachusetts at Lowell. Students attend Air Force ROTC classes at the University of Massachusetts at Lowell, MA and at Daniel Webster College.

Air Force ROTC Course Descriptions

AS 101, AS 102, AS 201, and AS 202 count as one credit hour each. AS 301, AS 302, AS 401, and AS 402 count as three credit hour courses. When both AS 301 and AS 302 are completed, AS 302 substitutes for PY 320. ROTC courses meet the general elective requirements of all DWC programs.

General Military Course (GMC) Subjects

AS 101 - The Air Force Today

AS 201 - Development Air Power

AS 202 - Development Air Power

AS 102 - The Air Force Today

Professional Officer Course (POC) Subjects

AS 301 - Air Force Management

AS 401 - National Security Forces

AS 302 - Air Force Management

AS 402 - National Security Forces

ROTCL Leadership Lab (non credit)

All students must enroll in the Leadership Lab to be eligible for a commission in the United States Air Force. The lab must be taken each semester.

Army ROTC Courses

Army ROTC Courses are available though University of New Hampshire and are also accepted as general electives.

School of Aviation Sciences

Dean:	Jonathan Prohaska
Professors:	Phillip Poynor
Associate Professor:	Shirley Phillips
Assistant Professors:	John Kreeft, Greg Thibeault, Peter Wyman
Adjunct Instructors/Lecturers:	John Andrick, David Bourdelais, Ronald Brender, Lynn de Grace, Kostas latrou, Konstantinos Kalligiannis, Thomas Kubishta, Henry Lehrer, Michael Lyman, Kenneth MacDonald, Michael Martini, Felipe Reyes, Ananthanarayan Sainarayan

Master of Business Administration

- MBA for Aviation Professionals (Distance Education)

Bachelor of Science

- Aviation Management
- Aviation/Air Traffic Management

The School of Aviation Sciences offers master's, bachelor's, and associate degree programs designed to provide the knowledge and skills important to a career as an aviation professional.

To provide a broad base of academic skills and intellectual capacity, all programs include a general foundation of arts and humanities, behavioral and social sciences, the natural sciences, mathematics, computer science, and effective communication. Further, the Aviation Management and Air Traffic Management programs include a business management foundation that equips the student with basic business and management skills in fields such as finance, accounting, economics, marketing, and personnel management.

To complete student preparation, each program provides a sequence of management or professional courses in aviation selected to help equip them to pursue a position in the aviation industry, including opportunities in air transportation, airports and facilities management, fixed-base operations, air traffic control, or flight operations as a professional pilot.

All three DWC Aviation Bachelor's degree programs are accredited by the Aviation Accreditation Board International (AABI).

Aviation Management
Bachelor of Science Degree

The Aviation Management program combines general academic preparation with the development of business management skills and the specialized knowledge of the unique aspects of aviation business. Graduates of this program will have the skills in communications, quantitative reasoning, and critical thinking; the understanding of general business practices; and the knowledge of the aviation industry.

Students in the Aviation Management degree program pursue tracks designed for work in the general aviation industry, the airline industry or at airports. Typically, graduates begin at entry level operations positions and use their educational qualifications and backgrounds to move into jobs with supervisory responsibilities or staff positions. In addition, graduates have the general education and business background to make them particularly well qualified for master's degree programs in business, public administration, or law.

The Aviation Management major prepares students for careers in a wide variety of fields, but includes specialized courses and experiences that enhance the student's opportunities for entry into the aviation field. This is accomplished by strongly emphasizing the importance of general education as well as a core of traditional business courses, and then complementing these with courses and experiences in the aviation industry that help the graduate to quickly become a productive member of an aviation organization.

All Aviation Management majors must complete the aviation core courses. In addition, each student will select a track that consists of 12 credit hours of course work that prepares one for entry into a particular segment of the aviation industry and a three-credit culminating experience. The culminating experience is a course or internship designed to: expose the student to problems and situations that will be intellectually stimulating; require the application of their knowledge, values, skills, and technical competence to current problems in the aviation industry; enable one to start developing a network of contacts within the industry; and provide feedback to the aviation division on how well the program goals are being achieved. The tracks that are available and the courses that qualify as culminating experiences are listed at the end of the curriculum.

Degree Requirements

Daniel Webster Success:

- DW 101 - Strategies for Success

Communications:

- EN 115 - College Writing and Research
- *Upper-level Writing Intensive course within the major (designated with a ^{W}) or, if not required within the major, a different writing intensive course outside of the major*
- IS 101 - Information Technology/Applications I

One of the following:

- EN 208 - Public Speaking
- EN 215 - Professional Writing
  designated Communications elective

Mathematics and Natural Science:

- MA 115 - College Trigonometry
- MA 122 - College Algebra w/Applications
- MA 152 - Introduction to Calculus
- MA 240 - Probability & Statistics
- Physics or Chemistry

Human Behavior:

- EC 101 - Macroeconomics
- PY 101 - Principles of Psychology
- PY 320 - Organizational Behavior

Cultural and Community Engagement:

- ID 101 - First Year Seminar

Cultural Studies Core

Courses in cultural studies include at least one 200-level course and at least one 300-level course in Economics (EC), History (HI), Humanities (HU), Political Science (PS), Psychology (PY), Sociology (SO), Social Science (SS), and one 300-level Humanities (HU) course.

- 200-level Humanities (HU) or Social Science
- 300-level Humanities (HU)[W]
- 300-level Social Science course
- ID 400-level Interdisciplinary Senior Seminar

Major Courses:

Grade of C or higher required

Management Foundation - 21 credit hours

- AC 201 - Financial Accounting
- BL 201 - Business Law
- BM 101 - Principles of Business Management
- BM 205 - Human Resource Management
- BM 212 - Operations Analysis and Management
- EC 102 - Microeconomics
- MK 201 - Principles of Marketing

Aviation Core - 15 credit hours

- AE 205 - Aircraft Operations
- AM 201 - Aviation Law
- AM 205 - Aircraft Operating Economics
- AM 220 - Airport Operations
- MT 201 - Meteorology

Aviation Management Specialization - 15 credit hours

- AM ___ - Aviation Management Track (12)
- AM ___ - Aviation Management Culminating Experience

Aviation Management Track Options:

General and Corporate Aviation Management

- AC 203 - Managerial Accounting OR
- FI 320 - Corporate Finance
- AM ___ - General/Corporate Aviation internship or other Culminating Experience
- AM 215 - General Aviation Operations
- AM 330 - Business & Corporate Aviation
- BM 231 - Entrepreneurship & Small Business Management

Airline Operations

- AM ___ - Airline Internship or other Culminating Experience
- AM 320 - Air Carrier Operation
- AM 404 - Studies/International Aerospace
- BM 215 - Principles of Transportation
- BM 305 - Labor Management Relations

Airport Management

- AM ___ - Airport Internship or other Culminating Experience
- AM 320 - Air Carrier Operation
- AM 340 - Airport and Airspace Capacity Management
- AM 360 - Airport Planning and Management

- BM 305 - Labor Management Relations

Culminating Experience Options for all Tracks

- AE 408 - Flight Safety
- AM 406 - National Internship-Aviation
- AM 407 - Internship in Aviation Management
- AM 410 - Trends/Current Problems Av Management
- AM 445 - Aviation Policy Seminar

General Electives - 21 credit hours

Total Credits Required - 120 credit hours

Suggested Course Sequence:

Fall	Spring
Freshman	
AE 205 Aircraft Operations*	BM 101 Principles of Business Management*
DW 101 - Strategies for Success	EC 102 Microeconomics*
EC 101 Macroeconomics	ID 101 First Year Seminar
EN 115 - College Writing and Research	MA 115 College Trigonometry (2)
IS 101 - Information Technology/Applications I	PY 101 Principles of Psychology
MA 122 - College Algebra w/Applications	
Sophomore	
AC 201 Financial Accounting*	AM 205 Aircraft Operating Economics*
AM 201 Aviation Law*	AM 220 Airport Operations*
MA 152 Introduction to Calculus	BM 212 Operations Analysis and Management*
MK 201 Principles of Marketing*	_____ Professional Communication
_____ Cultural Studies Core	_____ Cultural Studies Core
Junior	
BL 201 Business Law*	AM ___ Aviation Management Track*
MA 240 Probability and Statistics	AM ___ Aviation Management Track*
_____ Cultural Studies Core	BM 205 Human Resource Management*
_____ Physics or Chemistry	MT 201 Meteorology*
_____ Upper level Writing Intensive Course	PY 320 Organizational Behavior
Senior	
AM ___ Aviation Management Track*	AM ___ Aviation Management Culminating Experience*
AM ___ Aviation Management Track*	_____ General Elective
_____ 400-level Interdisciplinary (ID) Seminar	_____ General Elective
_____ General Elective	_____ General Elective
_____ General Elective	_____ General Elective

* Major Course: Grade of C or higher required

Please Note: All courses are three credits unless designated otherwise. AF 128 may be used as a substitute for AE 205. Credit will not be received for AE 205 if credit already exists for AF 128.

Aviation/Air Traffic Management

Bachelor of Science Degree

The Aviation/Air Traffic Management program leads to a Bachelor of Science degree and combines general academic preparation, professional education in air traffic control (ATC), and management education. *****The program is one of a limited number recognized by the Federal Aviation Administration (FAA) as part of the Air Traffic Collegiate Training Initiative (AT-CTI). The purpose of AT-CTI is to include collegiate aviation programs as the primary means of meeting the future needs of the national air space system for air traffic control. For employment with the FAA as an air traffic controller, individuals must meet FAA-prescribed medical standards and obtain an initial appointment with the FAA prior to their 31st birthday.

Graduates may qualify for appointment as Air Traffic Control Specialists with the Federal Aviation Administration (FAA), and possess the broad education, management, and communication skills to serve effectively in supervisory or management positions with the Air Traffic Division of the FAA, supervisory or management positions in a variety of aviation business settings, or for continued education in an appropriate master's degree program Degree Requirements

*Daniel Webster College has participated in the Air Traffic Collegiate Training Initiative ("AT-CTI") program of the Federal Aviation Administration ("FAA") for a number of years. The AT-CTI program is designed to provide qualified applicants to fill developmental air traffic control specialist positions. Graduates of the program are eligible to bypass the Air Traffic Basics Course, which is the first five weeks of qualification training at the FAA Academy in Oklahoma City. Academy training consists of option-specific (terminal or en route) initial training. Students must successfully complete all required training at the FAA Academy to continue employment with FAA.

The FAA's participation criteria for the AT-CTI program include a requirement that a college be organized as a not-for-profit organization under the federal tax laws. Since June 2009, Daniel Webster College has not been organized as a not-for-profit organization under the federal tax laws. The College initiated communication with the FAA in the spring of 2009 to determine whether the change in the College's organizational structure would result in any change in the College's participation in the AT-CTI program. As of the date of publication of this catalog, the FAA has not yet informed the College if the FAA will permit Daniel Webster College to continue participating in the AT-CTI program, but the College continues to be listed on the FAA web site as an approved AT-CTI program participant. The College cannot assure you that it will be allowed to continue to participate in the AT-CTI program.

Degree Requirements

Daniel Webster Success:

- DW 101 - Strategies for Success

Communications:

- EN 115 - College Writing and Research
- *Upper-level Writing Intensive course within the major (designated with a ^{W}) or, if not required within the major, a different writing intensive course outside of the major*
- IS 101 - Information Technology/Applications I

One of the following:

- EN 208 - Public Speaking
- EN 215 - Professional Writing

Mathematics and Natural Science:

- MA 122 - College Algebra w/Applications
- MA 115 - College Trigonometry
- MA 152 - Introduction to Calculus
- MA 240 - Probability & Statistics
- Physics or Chemistry

Human Behavior:

- EC 101 - Macroeconomics
- PY 101 - Principles of Psychology
- PY 320 - Organizational Behavior

Cultural and Community Engagement:

- ID 101 - First Year Seminar

Cultural Studies Core

Courses in cultural studies include at least one 200-level course and at least one 300-level course in Economics (EC), History (HI), Humanities (HU), Political Science (PS), Psychology (PY), Sociology (SO), Social Science (SS), and one 300-level Humanities (HU) course.

- 200-level Humanities (HU) or Social Science
- 300-level Humanities (HU)
- 300-level Social Science course
- ID 400-level Interdisciplinary Senior Seminar

Management Foundation - 15 credit hours

Grade of C or higher required

- BM 101 - Principles of Business Management
- BM 205 - Human Resource Management
- BM 212 - Operations Analysis and Management
- BM 305 - Labor Management Relations
- BM 319 - Management Decision Making

Major Courses - 45 credit hours

Grade of C or higher required

- AE 205 - Aircraft Operations
- AE 306 - Human Factors/Flight [W]
- AE 408 - Flight Safety
- AM 201 - Aviation Law
- AM 340 - Airport and Airspace Capacity Management
- AM ___ - Aviation Management Elective
- AT 110 - Fundamentals of Air Traffic Control
- AT 210 - Air Traffic Control Tower Operations
- AT 310 - Airspace and Air Traffic Systems Management
- AT 315 - AT Management/Operating Environment
- AT 410 - Sector Resource Management
- AT 415 - AT Management/AS Mod/Pol/DM
- MT 201 - Meteorology

General Electives - 9 credit hours

Total Credits Required - 120 credit hours

Suggested Sequence of Courses:

Fall	Spring
Freshman	
AE 205 Aircraft Operations*	AT 110 Fundamentals of Air Traffic Control*
DW 101 Strategies for Success (1)	BM 101 Principles of Business Management*
EN 115 College Writing	EC 101 Macroeconomics
IS 101 Information Technology/Applications I	ID 101 First Year Seminar
MA 122 College Algebra	MA 115 College Trigonometry (2)
PY 101 Principles of Psychology	
Sophomore	
BM 205 Human Resource Management*	AM 201 Aviation Law*
MA 152 Introduction to Calculus	AT 210 Air Traffic Control Tower Operations* (4)
MT 201 Meteorology*	BM 212 Operations Analysis and Management*

_____ Cultural Studies Core

_____ Physics or Chemistry

_____ Professional Communication

_____ Cultural Studies Core

Junior

AT 310 Airspace and Air Traffic Systems Management* (4)

MA 240 Probability and Statistics

_____ Cultural Studies Core

_____ General Elective

AE 306 Human Factors of Flight * [W]

AT 315 Air Traffic Management Operating Environment * (4)

BM 305 Labor Management Relations*

PY 320 Organizational Behavior

Senior

AM 340 Airport and Airspace Capacity Management* (4)

AT 410 Sector Resource Management* (4)

BM 319 Managerial Decision Making*

_____ 400-level Interdisciplinary (ID) Seminar

AE 408 Flight Safety*

AM ___ Aviation Management Elective*

AT 415 AT Management/AS Mod/Pol/DM Decision Making* (4)

_____ General Elective

_____ General Elective

* Major Course: Grade of C or higher required.

[W] Upper-level writing intensive requirement: The courses designated may be used to satisfy both the upper-level writing intensive requirement and the designated major course requirement.

AF 128 may be used as a substitute for AE 205. Credit will not be received for AE 205 if credit already exists for AF 128.

MBA for Aviation Professionals (Distance Education)
Master of Business Administration Degree

The MBA for Aviation Professionals provides a broad understanding of business and management principles while helping student's develop specific aviation knowledge and skills to advance their career. This program offers the greatest flexibility: a completely online program with asynchronous classes.

The DWC MBA-AP program emphasizes three of the most fundamental aspects of management: leadership, communication, and effective decision-making based on quantitative and qualitative data. Courses in leadership, organizational behavior, and marketing cultivate the specific social skills needed in a team-based organizational environment. Finance, accounting, and operations courses provide a solid foundation for the Quantitative and financial management of any business. Aviation-specific topics develop a higher level of expertise in the student's chosen profession.

The program fosters an integrated approach to learning through the use of real-world, classical and contemporary aviation case studies, collaborative online learning, course sequencing and completion in a cohort model. Each MBA class (or cohort) admitted to the program functions as a “virtual class” and advances together through all 13 courses required for the degree in sequence.

Required course of study

- AC 299 - Introduction to the Online MBA Experience (No credit)

Group A

- BM 530 - Leadership in Times of Change
- BM 540 - Advanced Managerial Accounting
- BM 543 - Marketing Management
- BM 545 - Finance for Managers
- BM 555 - Research Methods
- BM 575 - Applied Techniques/Organizational Behavior

Group B

- AM 608 - The Air Transportation System
- AM 615 - Economics in Air Transportation
- AM 635 - Aviation Safety and Security
- AM 655 - Global Aviation Management and Law
- BM 580 - Operations Management
- BM 680 - Strategic Management

Culminating Course

- AM 695 - Capstone Research Project

School of Business and Management

Dean : Roland E. Livingston

Associate Professors: Thomas Anastasi, Robert Brown, Neil Parmenter

Assistant Professors: Monika Bissell, Mary Lee, J.R. Thomas

The School of Business and Management helps students prepare for careers in business, homeland security and sport management. Our programs emphasize the three “P’s”: **Professional** knowledge; **Practical** application of that knowledge; and the **Personal** ability to work with and through others.

The School of Business and Management helps to provide its' graduates with the tools, skills, and experience necessary to make positive contributions in a period of dynamic technological, economic, global and environmental change.

Master of Business Administration

- MBA
- MBA for Aviation Professionals (administered in conjunction with the School of Aviation Sciences**)
- MBA - Sport Management
- MBA - Technology and Innovation Management

Bachelor of Science

- Aviation Management (administered in conjunction with the School of Aviation Sciences**)
- Business Management
- Organizational Leadership
- Game Design and Development
- Homeland Security
- Management Information Systems
- Marketing Management
- Sport Management

Associate of Science

- Business Management
- Information Systems

Refer to the School of Aviation Sciences for program details.

The Masters Degree in Business Administration (MBA) emphasizes three of the most fundamental aspects of business management: leadership, communication, and decision-making. The approach is to offer versatility by developing critical thinking, intellectual flexibility, analytical and applied research skills, creativity, and high standards for professional integrity and ethics.

The MBA is a one night per week, 18-month program.

The Bachelor of Science in Aviation Management combines general academic preparation with the development of business skills and knowledge of the unique aspects of aviation business. Graduates of this program seek to employ their skills in communications, business fundamentals, quantitative reasoning, and critical thinking to support the aviation industry.

The Bachelor of Science in Business Management helps students prepare for a career in business. Students work to achieve competence in the three essential functions of a business (finance, marketing, and operations) and learn the four functions of a manager (planning, organizing, leading and controlling).

The Bachelor of Science degree in Game Design and Development is intended to help students blend business and graphics arts classes. Graduates are provided with an opportunity to develop knowledge and skills that can help them begin their careers in a variety of entry-level positions as graphic designers, game developers, and game producers.

The Bachelor of Science in Homeland Security is an interdisciplinary program that helps students prepare to serve in public or private sector positions that involve the complex skill sets needed to respond to crisis, natural or man-made, here at home or around the globe. A hallmark of this program is its devotion to understanding the nature of the problems, including the balance between security and freedom. Through classroom study, field experience and internships, students are exposed to the dynamics of complex human-made and natural threats, and how to best understand, prepare, respond, manage, and recover from them through risk management assessment, and analysis methods. Emergency management planning and executive principles are examined, with exercises to appreciate multifaceted challenges associated with crisis management, while preserving continuity of the government, infrastructure, and helping communities reclaim their sense of stability and security. Following study of a transnational perspectives through either area study, or language, students select a technology emphasized concentration in either aviation security, computer security, or a custom designed concentration in other specialties, such as strategic intelligence, and border or shoreline command and control security systems.

The Bachelor of Science in Marketing Management helps students prepare for a career in marketing management. Students achieve competence in the management major providing them with a foundation they will carry into a marketing career (strategy, advertising, consumer behavior, sales management, and research), and learn to carry out the responsibilities of management including planning, organizing, leading, and controlling. As part of this process, students develop an understanding of the skills necessary to perform the tasks associated with the various disciplines within the marketing environment. Students develop a focused understanding of the marketing departments' relationship to customers, distribution channels, products and services, communications and promotion, pricing and the use of marketing information and information systems for marketing decisions.

The Bachelor of Science in Sport Management helps students prepare for a career in the sport industry. Students achieve competence in the sport management major providing them with the knowledge and skills necessary to become tomorrow's sport industry leaders. This is accomplished through the delivery of theories in a number of focused subject areas including; governance and globalization, ethics and sociocultural issues, facility and event management, sport marketing and communications, legal aspects, economics and finance, management and leadership, as well as, many topic and industry specific electives. Students then are afforded the chance to apply the theory in real-world situations through experiential learning; and these opportunities provide them with the ability to expand their knowledge, network with professionals in the industry, and provide them with knowledge and experience, allowing them to be prepared and confident when applying for positions in the sport industry. The Sport Management program has earned national approval by the Sport Management Program Review Council (SMPRC), which is coordinated through the regulatory bodies of the sport management educational industry — the North American Society of Sport Management (NASSM) and the National Association of Sport and Physical Education (NASPE).

The Bachelor of Science in Management Information Systems was developed in response to the demand for business employees with the skills and knowledge necessary to operate effectively in today's rapidly expanding hi-tech business world. The U.S. Department of Labor, Bureau of Labor Statistics, states, "Employment is expected to increase much faster than the average as organizations continue to expand their use of technology."

Business Management

Associate in Science Degree

The Associate in Science degree program in Business Management is designed to meet the needs of those students who wish to seek immediate employment after graduation, as well as those who wish to continue on to a baccalaureate program.

Degree Requirements

General Education Core (AS)

Communications - 9 credits

- EN 115 - College Writing and Research
- EN 208 - Public Speaking OR
- EN 215 - Professional Writing AND
- IS 101 - Information Technology/Applications I

Mathematics - 6 credits

- MA 120 - Survey of Mathematics OR
- MA 122 - College Algebra w/Applications AND
- MA 240 - Probability & Statistics

Human Behavior - 3 credits

- EC 101 - Macroeconomics OR
- PY 101 - Principles of Psychology OR
- SO 101 - Introduction to Sociology

Cultural and Community Engagement - 6 credits

- 200-level Humanities or Social Science
- 200-level Humanities or Social Science

Management Core - 33 credit hours
Grade of C or higher required

- AC 201 - Financial Accounting
- AC 203 - Managerial Accounting
- BL 201 - Business Law
- BM ___ Business Elective (3 Credits)
- BM 101 - Principles of Business Management
- BM 205 - Human Resource Management
- BM 212 - Operations Analysis and Management
- BM 231 - Entrepreneurship & Small Business Management
- EC 102 - Microeconomics
- FI 320 - Corporate Finance
- MK 201 - Principles of Marketing

General Elective - 3 credit hours

Total Credits Required - 60 credit hours

Information Systems
Associate in Science Degree

The Associate in Science degree program in Information Systems is for students who are pursuing another 4-year, non-computing degree or for students who are not able to make a four-year academic commitment. Students will complete the Computer Science core courses so that they are positioned to complete a bachelor degree when their circumstances permit. Graduates of this program may seek employment opportunities in entry-level positions as a junior programmer, an application developer, or an end-user specialist.

Degree Requirements

Communications - 9 credits

- EN 115 - College Writing and Research
- EN 208 - Public Speaking OR
- EN 215 - Professional Writing AND
- IS 101 - Information Technology/Applications I

Mathematics - 6 credits

- MA 120 - Survey of Mathematics OR
- MA 122 - College Algebra w/Applications AND
- MA 240 - Probability & Statistics

Human Behavior - 3 credits

- EC 101 - Macroeconomics OR
- PY 101 - Principles of Psychology OR
- SO 101 - Introduction to Sociology

Cultural and Community Engagement - 6 credits

- 200-level Humanities or Social Science
- 200-level Humanities or Social Science

Major Core - 34 credit hours
Grade of C or higher required

- BM 101 - Principles of Business Management [W]
- CS 111 - Discrete Mathematics I
- CS 113 - Introduction to Programming
- CS 114 - Intro to Software Engineering
- CT 155 - Introduction to Computer Networks
- CT 280 - Internet Concepts and Applications
- IS 112 - Introduction to Information Systems
- IS 219 - Computer Architecture/Information Systems
- IS 223 - Database Application I
- IS 224 - Database Application II

General Elective - 3 credit hours

Total Required Credits - 61 credit hours

Business Management

Bachelor of Science Degree

The Business Management degree program is designed to help students develop the knowledge and skills used for general administration in business management, general management, and marketing management.

Degree Requirements

Daniel Webster Success:

- DW 101 - Strategies for Success

Communications:

- EN 115 - College Writing and Research
- EN 208 - Public Speaking
- *Upper-level writing intensive course within the major (designated with a [W]) or, if not required within the major, a different writing intensive course outside of the major*
- IS 101 - Information Technology/Applications I

Mathematics and Natural Science:

- MA 120 Survey of Mathematics OR
- MA 122 - College Algebra w/Applications
- MA 216 - College Math for Business & Economics II
- MA 240 - Probability & Statistics
- Natural or Physical Lab Science

Human Behavior:

- EC 101 - Macroeconomics
- PY 101 - Principles of Psychology
- PY 320 - Organizational Behavior

Cultural and Community Engagement:

- ID 101 - First Year Seminar

Cultural Studies Core

Courses in cultural studies include at least one 200-level course and at least one 300-level course in Economics (EC), History (HI), Humanities (HU), Political Science (PS), Psychology (PY), Sociology (SO), Social Science (SS), and one 300-level Humanities (HU) course.

- 200-level Humanities (HU) or Social Science
- 300-level Humanities (HU)
- 300-level Social Science course
- ID 400-level Interdisciplinary Senior Seminar

Major Courses:

Grade of C or higher required.

Management Foundation:

- AC 201 - Financial Accounting
- BM101 – Principles of Business Management [W]
- BM 212 - Operations Analysis and Management
- BM 319 - Management Decision Making
- EC 102 - Microeconomics
- MK 201 - Principles of Marketing

Business Management Major:

- AC 203 - Managerial Accounting
- BL 201 - Business Law
- BM 205 - Human Resource Management
- BM 224 - Introduction to Leadership
- BM 310 - Business Policy [W]
- BM 408 - Business Ethics and Social Responsibility
- BM 410 - Seminar in Business Management
- FI 320 - Corporate Finance
- Business and Management Electives (12)*

General Electives - 24 credit hours
Total Credits Required - 121 credit hours

Suggested Sequence of Courses:

Fall	Spring
Freshman	
BM 101 Principles of Business Management*	EC 102 Microeconomics
DW 101 Strategies for Success (1)	EN 208 Public Speaking
EC 101 Macroeconomics	MA 216 College Math for Business and Economics II
EN 115 College Writing	PY 101 Principles of Psychology
MA 122 College Algebra w/Apps	IS 101 Information Tech/Applications I
ID 101 First Year Seminar	
Sophomore	
AC 201Financial Accounting I*	AC 203 Managerial Accounting*
BM 205 Human Resource Management*	BM 212 Operations Analysis and Management*
MA 240 Probability and Statistics	BM 224 Introduction to Leadership*
MK 201 Principles of Marketing*	EN 215 Professional Writing
_____ Cultural Studies Core	_____ General Elective
Junior	
BL 201 Business Law*	FI 320 Corporate Finance*
BM 319 Managerial Decision Making*	_____ Cultural Studies Core
_____ Cultural Studies Core	_____ Business and Management Electives* (6)
_____ Business and Management Elective*	_____ General Elective
_____ Natural Science Elective	_____ Writing Intensive Courses
Senior	
BM 310 Business Policy*	BM 410 Seminar in Business Management*
BM 408 Business Ethics & Social Responsibility*	ID 400 Senior Interdisciplinary Seminar
_____ Business and Management Elective*	_____ General Electives (6)
_____ General Elective (6)	

*Grade of C or higher required.

Please Note: All courses are three credits unless designated otherwise.

Organizational Leadership

Bachelor of Science Degree

The evolution of organizational and market structures towards team-based and networked ways of working has placed a great importance on the multi-disciplinary skills for managers and all employees. Coupled with increased complexity and the rapid change associated with business, this evolution places increased emphasis on the ability of managers to create new visions for the organization, to promote important values, to motivate people, and to communicate effectively with them. The Organizational Leadership degree program is designed to provide students with the opportunity to develop a knowledge base in business and management theory, and to promote growth in both the highly interpersonal skill and hands-on practice of leadership roles within an organization.

Degree Requirements

Communications - 9 credits

- EN 115 - College Writing and Research
- EN 208 - Public Speaking OR
- EN 215 - Professional Writing AND
- IS 101 - Information Technology/Applications I

Mathematics - 9 credits

- MA 120 - Survey of Mathematics OR
- MA 122 - College Algebra w/Applications AND
- MA 240 - Probability & Statistics AND
  Natural or Physical Science

Human Behavior - 6 credits

- EC 101 - Macroeconomics AND/OR
- PY 101 - Principles of Psychology AND/OR
- SO 101 - Introduction to Sociology

Cultural and Community Engagement - 12 credits

- 200-level Humanities or Social Science
- 200-level Humanities or Social Science
- 300-level Humanities
- 300-level Social Science

Business Management Core - 42 credit hours
Grade of C or higher required

- AC 201 - Financial Accounting
- AC 203 - Managerial Accounting
- BL 201 - Business Law
- BM 101 - Principles of Business Management
- BM 212 - Operations Analysis and Management
- BM 224 - Introduction to Leadership
- BM 310 - Business Policy
- BM 319 - Management Decision Making
- BM 322 - Executive Leadership
- BM 408 - Business Ethics and Social Responsibility
- BM 410 - Seminar in Business Management
- FI 320 - Corporate Finance
- MK 201 - Principles of Marketing

General Electives - 42 credit hours

Total Required Credits - 120 credit hours

Game Design and Development
Bachelor of Science Degree

The Bachelor of Science degree in Game Design and Development is intended to help students blend business and graphics arts classes that may be relevant to a variety of positions in the electronic game industry. The program is designed to help graduates prepare for entry-level positions as graphic designers, game developers, and game producers.

Degree Requirements

Daniel Webster Success:

- DW 101 - Strategies for Success

Communications:

- EN 115 - College Writing and Research
- *Upper-level Writing Intensive course within the major (designated with a ^{W}) or, if not required within the major, a different writing intensive course outside of the major*
- EN 208 - Public Speaking
- IS 101 - Information Technology/Applications I

Mathematics and Natural Science:

- MA 120 Survey of Mathematics OR
- MA 122 - College Algebra w/Applications
- MA 216 - College Math for Business & Economics II
- MA 240 - Probability & Statistics
  Natural or Physical Science

Human Behavior:

Two of the following:

- EC 101 - Macroeconomics OR
- PY 101 - Principles of Psychology OR
- SO 101 - Introduction to Sociology

Cultural and Community Engagement:

- ID 101 - First Year Seminar

Cultural Studies Core

Courses in cultural studies include at least one 200-level course and at least one 300-level course in Economics (EC), History (HI), Humanities (HU), Political Science (PS), Psychology (PY), Sociology (SO), Social Science (SS), and one 300-level Humanities (HU) course.

- 200-level Humanities (HU) or Social Science
- 300-level Humanities (HU)
- 300-level Social Science course
- ID 400-level Interdisciplinary Senior Seminar

Management Foundation - 24 credit hours

- AC 201 - Financial Accounting
- BM 101 - Principles of Business Management
- BM 212 - Operations Analysis and Management
- BM 424 - Project Management
- MK 201 - Principles of Marketing
- MK 202 - Advertising
- PY 320 - Organizational Behavior
- IS 2XX - Technical Writing

Game Development and Design - 39 credit hours

Grade of C or higher required.

- CT 100 - Fundamentals of Programming
- CT 155 - Introduction to Computer Networks
- CT 206 - Introduction to Web Design
- GD 115 - Introduction to Drawing
- GD 126 - Game Design I
- GD 127 - Game Design II
- GD 230 - Two Dimensional Graphics
- GD 240 - Three Dimensional Graphics

- GD 2X3 - Story Boarding and Game Animation
- GD 3X1 - Two Dimensional Game Development
- GD 3X2 - Three Dimensional Game Development
- GD 4X1 - Game Project Lab I (2 credits)
- GD 4X2 - Game Project Lab II (2 credits)
- GD 4X3 - Game Portfolio Workshop (2 credits) OR
- GD 4X4 - Game Development Internship (6 credits)

Game Design Electives - 6 credit hours
General Electives - 9 credit hours

Total Credits Required - 121 credit hours

Suggested Sequence of Courses:

Fall	Spring
Freshman	
DW101 Strategies for Success	BM101 Principles of Business Management*
EN 115 College Writing	CT100 Fundamentals of Programming
GD1X2 Game Development I	GD1X3 Game Development II
ID101 First Year Seminar	MA216 College Math for Business and Economics II
IS 101 Information Tech/App. I	_____ Human Behavior
MA122 College Algebra w/Apps	
Sophomore	
AC201 Financial Accounting I*	BM212 Operations Analysis and Management*
CT 155 Introduction to Networks	EN208 Public Speaking
GD1X1 Introduction to Drawing	GD3X1 Two Dimensional Game Development
GD2X1 Two Dimensional Graphics	MK201 Principles of Marketing*
_____ 200-level Cultural Studies	MA240 Probability and Statistics
Junior	
CT206 Introduction to Web Design	GD2X3 Story Boarding & Game Animation
IS3XX Technical Writing*	GD3X2 3-Dimensional Game Design
GD2X2 3-Dimensional Graphics	MK202 Advertising
SC____ Natural or Physical Science	_____ Human Behavior
_____ 300 level Cultural Studies	_____ 300-level Cultural Studies
Senior	
BM424 Project Management*	GD 4X4 Game Internship (6 credits) OR
ID 400 Senior Interdisciplinary Seminar	GD 4X3 Game Lab I (2 credits)
_____ Cultural Studies	GD 4X2 Game Lab II (2 credits)
_____ Game Elective	GD 4X1 Game Portfolio (2 credits)
_____ Game Elective	_____ General Elective
_____ General Elective	_____ General Elective

*Grade of C or higher required.
Please Note: All courses are three credits unless otherwise designated

Homeland Security

Bachelor of Science Degree

This interdisciplinary program helps students prepare for entry-level positions in the public or private sector that involve responding to crisis, natural or man-made, here at home or around the globe. A hallmark of this program is its devotion to understanding the nature of the problems, including the balance between security and freedom. Through classroom study, field experience and internships, students are exposed to the dynamics of complex human-made and natural threats, and how to best understand, prepare, respond, manage, and recover from them through risk management assessment and analysis methods. Emergency management planning and executive principles are examined, with exercises to appreciate multi-faceted challenges associated with crisis management, while preserving continuity of the government, infrastructure, and helping communities reclaim their sense of stability and security. Following study of a transnational perspectives through either area study, or language, students select a technology emphasized concentration in either aviation security, computer security, or a custom designed concentration in other specialties, such as strategic intelligence, and border or shoreline command and control security systems.

Degree Requirements

Daniel Webster Success:

- DW 101 - Strategies for Success

Communications:

- EN 115 - College Writing and Research
- *Upper-level Writing Intensive course within the major (designated with a* ^{W} *) or, if not required within the major, a different writing intensive course outside of the major*
- EN 208 - Public Speaking

One of the following:

- IS 101 - Information Technology/Applications I
- IS 201 - Information Technology/Applications II

Mathematics and Natural Science:

- CH 101 - Inorganic Chemistry I OR
- CH105 - Chemistry and Society OR
- MA 120 Survey of Mathematics OR
- MA 122 - College Algebra w/Applications
- MA 240 - Probability & Statistics
- PH205 - General Physics I and
- PH205L - General Physics I Lab

Human Behavior:

- EC 101 - Macroeconomics
- PY 101 - Principles of Psychology
- SO 101 - Introduction to Sociology

Cultural and Community Engagement:

- ID 101 - First Year Seminar

*Cultural Studies Core*Courses in cultural studies include at least one 200-level course and at least one 300-level course in Economics (EC), History (HI), Humanities (HU), Political Science (PS), Psychology (PY), Sociology (SO), Social Science (SS), and one 300-level Humanities (HU) course.

- 200-level Humanities (HU) or Social Science
- 300-level Humanities (HU)
- 300-level Social Science course
- ID 400-level Interdisciplinary Senior Seminar

Major Core Courses - 33 credit hours

Grade of C or higher required

- HS 101 - Introduction Homeland Security Studies
- HS 120 - Ideology Conflict and Terror
- HS 230 - Homeland Security Vulnerabilities and Threats
- HS 31X - Risk Management
- HS 32X - Crisis Management ^{W}
- HS 41X - Continuity and Recovery
- HS 42X - Acute Stress Management

- HS 490 - Homeland Security Internship (6 credits)
- PS 202 - American Government
- SO 210 - Sociology of Disasters

Language/Area Study - 6 credit hours
Grade of C or higher required

A minimum of one year of a foreign language or area study, relevant to the major. Preferred method to satisfy this requirement is through a combination of a computer-based adaptive language training program, combined with term papers discussing cultural / political aspects of a country employing the language. Other methods to satisfy this requirement require program director approval. Students possessing multi-language skills will be encouraged to explore an additional relevant language / area of study.

- LG 110 - Language & Area Study I
- LG 20X - Language or Area of Study II

Homeland Security Concentration - 21 credit hours
Grade of C or higher required for all concentration courses

Choose one of three concentrations:

Aviation Security Concentration - 21 credit hours

- AE 205 - Aircraft Operations
- AM 220 - Airport Operations
- AM 320 - Air Carrier Operation
- AT 110 - Fundamentals of Air Traffic Control
- HS 33X - Aviation Infrastructure Security
- HS 35X - Aviation Security Management
- HS 48X - Contemporary Issues in Aviation Security Management

Computer Security Concentration - 21 credit hours

- CS 238 - UNIX Programming
- CT 155 - Introduction to Computer Networks
- CT 232 - Introduction to UNIX
- CT 230 - Introduction to Computer Security
- CT 350 - Computer Security Seminar
- CT 382 - Cyber Terrorism
- IS 112 - Introduction to Information Systems
- IS 308 - Information Technology Ethics

Custom Designed Concentration - 21 credit hours
Selection of 7 approved courses (or 21 credits), with 3 at the 300 or 400 level, and approval of the academic advisor.
General Electives - 18 credit hours
The following elective courses are highly recommended:

- BM 101 - Principles of Business Management
- EN 215 - Professional Writing

Total Credits Required - 122 credit hours

Suggested Sequence of Courses:

Fall	Spring
Freshman	
DW 101 Strategies for Success (1)	MA 122 College Algebra
ID 101 First-Year Seminar	PS 202 American Government*
EN 115 College Writing and Research	SO 101 Introduction to Sociology
HS101 Introduction to Homeland Security*	Concentration Course 1*(IS 112, AT 110, or Customer Designed)
IS 101 Information Technology and Applications I	(15 Credits)
PY 101 Principles of Psychology	
(16 Credits)	

Sophomore

HS 120 Conflict, Ideology, and Terror*	HS 230 Homeland Security: Vulnerabilities and Threats*
CH 105 Chemistry and Society (4) or CH101 or PH205 and PH205L	SO 210 Sociology of Disasters*
Elective Course 1 (CT 100 or CS 113 for Computer Security	Elective Course 2 (EN 215 recommended)
Concentration Course 2* (CT 155, AE 205, or Custom Designed 2)	Concentration Course 3* (CT 232, AM 220, or Custom Designed 3)
LG 110 Language or Area Studies I*	LG 20X Language or Area Studies II*
(16 Credits)	(15 credits)

Junior

HS 31X Risk Management*	Cultural Studies Core (300 Level)
Cultural Studies Core (200 Level)	HS 32X Crisis Management *
Cultural Studies Core (300 Level)	MA 240 Probability & Statistics*
Elective Course 3 (CT 234 for Computer Security Concentration)	EN 208 Public Speaking
Concentration Course 4* (CT 230, AM 320, or Custom Designed 4)	Concentration Course 5* (CT 380, HS 330, or Custom Designed 5)
(15 Credits)	(15 Credits)

Senior

HS 41X Continuity and Recovery*	HS 42X Acute Stress Management*
Elective Course 4 (BM 101 recommended)	HS 490 Internship (6 credit hours)*
Elective Course 5 (EC 101 recommended)	ID 401 Senior Seminar (Terrorism recommended)
Elective Course 6	Concentration Course 7* (CT 350, HS 480, or Custom Designed 7)
Concentration Course 6* (IS 308, HS 350, or Custom Designed 6)	(15 Credits)

* Grade of C or higher required

Please Note: All courses are three credits unless designated otherwise.

[W] Upper-level writing intensive courses fill the general education third year writing requirement and the credits are applied toward major requirements. This course is subject the all minimum grade requirements for major requirements.

Management Information Systems
Bachelor of Science Degree

The bachelor of science degree in Management Information Systems is intended to help students respond to the demand for business employees with the skills and knowledge necessary to operate effectively in today's rapidly expanding hi-tech business world. Graduates will be prepared for entry level positions in organizations that see technology as a way to achieve competitive advantage in the markets in which they operate.

Degree Requirements

- DW 101 - Strategies for Success - **1 credit hour**

Communications - 9 credit hours

- EN 115 - College Writing
- EN 208 - Public Speaking
- IS 101 - Information Technology & Applications I

Mathematics and Natural Science - 12 credit hours

- MA 120 - Survey of Mathematics OR
- MA 122 - College Algebra w/Applications
- MA216 - College Math for Business & Economics II
- MA240 - Probability and Statistics
- _____Natural or Physical Science

Human Behavior - 6 credit hours

Two of the following:

- EC101 - Macroeconomics OR
- PY101 - Principles of Psychology OR
- SO101- Introduction to Sociology

Cultural and Community Engagement - 15 credit hours

- ID101 - First Year Seminar

Cultural Studies Core

Courses in cultural studies are selected with the advice and consent of the Academic Advisor demonstrating coherence and including at least one 200-level course and one 300-level course in Economics (EC), Humanities (HU), History (HI), Political Science (PS), Sociology (SO), Social Science (SS), and one 300-level Humanities (HU) course. One 400-level Interdisciplinary (ID) Seminar

Major Courses

Grade of C or higher required

Management Foundation - 21 credit hours

- AC 201- Financial Accounting I
- BL 201 - Business Law
- BM 101 - Principles of Business Management
- BM 212 - Operations Analysis and Management
- BM 319 - Managerial Decision Making
- EC 102 - Microeconomics
- MK 201 - Principles of Marketing

Management Information Systems - 37 credit hours

Grade of C or higher required.

- BM 243 - Technical Writing

- BM 424 - Project Management
- CT100 - Fundamentals of Programming
- CT 2X1 - Network Standards and Protocol
- IS223 - Database I and Lab (4) and
- IS 112 - Introduction to Information Systems
- IS 201 - Information Technology & Applications II
- IS 219 - Computer Architecture for Information Systems
- IS324 - Information Systems Life Cycle
- IS 450 - The Enterprise Experience (9)

Network and Network Security Concentration Option I

- CT 3X1 - Network Technology and Service Integration (4)
- CT 3X2 - Networking Application Services and Security (4)
- CT 3X3 - WAN Technology and Applications (4)

OR

Database and Data Security Concentration Option II

- IS224 & - Database II and Lab (4) and
- IS224 L
- IS3XX - SQL Server
- IS3XX - Information Security
- IS XXX - Course TBD

OR

MIS Electives - 12 credit hours

Students will work closely with advisors to develop a technology specialization. Courses may be chosen from MIS, CS, or CT courses. Specializations may include but are not limited to the following areas:

- Web design
- Web application development
- Computer Security
- Network technologies and applications
- Software Development
- Technical Support

General Electives - 6 credit hours

Total Required Credits - 122 credit hours

Suggested Sequence of Courses:

Grade of C or higher required.
Please Note: All courses are three credits unless otherwise designated

Fall

Freshman
BM101 Principles of Business Management*
DW101 Strategies for Success
EN 115 College Writing
ID101 First Year Seminar
IS101 Information Tech/Applications I

Sophomore
AC201 Financial Accounting I*
BL201 Business Law*
CT2X1 Network Standards & Protocols*
MK201 Principles of Marketing*

_____200-level Cultural Studies

Junior

BM 234 Technical Writing*
BM319 Managerial Decision Making*
IS219 Computer Architecture for Information Systems*
IS308 Information Technology Ethics*
_____ Natural or Physical Science

Senior

BM424 Project Management*
ID 400 Senior Interdisciplinary Seminar
_____ IS Elective
_____ IS Elective
_____ IS Elective

Spring

CT100 Fundamentals of Programming
EC102 Microeconomics*
IS112 Intro to Information Systems
IS201 Information Tech/Applications II
MA216 College Math for Business and Economics II

BM212 Operations Analysis and Management*
IS223 & Database I and Lab (4)*
IS223L
EN208 Public Speaking
MA240 Probability and Statistics
_____ Human Behavior

IS3XX Information Systems Life Cycle*
_____ IS Elective
_____ Human Behavior
_____300 level Cultural Studies (SS)
_____300-level Cultural Studies (HU)

IS450 The Enterprise Experience* (9)
_____ General Elective
_____ General Elective

**Grade of C or higher required.*
Please Note: All courses are three credits unless otherwise designated

Marketing Management
Bachelor of Science Degree

The Marketing Management degree program helps students prepare for entry-level marketing positions. The program seeks to provide the student with the knowledge and skills necessary to perform appropriate functions in a marketing environment. Students will work to gain an understanding of marketing strategy and how to develop and implement marketing strategies under various economic, legal and cultural conditions in a global setting.

In addition to the skills developed in this degree program, students will be presented with the creative and process aspects of the specialized disciplines within the full scope of marketing, including advertising, consumer behavior, sales and research.

Degree Requirements

Daniel Webster Success:

- DW 101 - Strategies for Success

Communications:

- EN 115 - College Writing and Research
- *Upper-level Writing Intensive course within the major (designated with a ^{W}) or, if not required within the major, a different writing intensive course outside of the major*
- EN 208 - Public Speaking
- IS 101 - Information Technology/Applications I

Mathematics and Natural Science:

- MA 122 - College Algebra w/Applications
- MA 120 - Survey of Mathematics OR
- MA 216 - College Math for Business & Economics II
- MA 240 - Probability & Statistics
- Natural or Physical Lab Science

Human Behavior:

- EC 101 - Macroeconomics
- PY 101 - Principles of Psychology

Cultural and Community Engagement:

- ID 101 - First Year Seminar

Cultural Studies Core

Courses in cultural studies include at least one 200-level course and at least one 300-level course in Economics (EC), History (HI), Humanities (HU), Political Science (PS), Psychology (PY), Sociology (SO), Social Science (SS), and one 300-level Humanities (HU) course.

- 200-level Humanities (HU) or Social Science
- 300-level Humanities (HU)
- 300-level Social Science course
- ID 400-level Interdisciplinary Senior Seminar

Major Courses:

Grade of C or higher required

Management Foundation - 30 credit hours

- AC 201 - Financial Accounting
- BL 201 - Business Law
- BM 101 - Principles of Business Management
- BM 205 - Human Resource Management
- BM 212 - Operations Analysis and Management
- BM 310 - Business Policy
- BM 319 - Management Decision Making
- EC 102 - Microeconomics
- FI 320 - Corporate Finance
- MK 201 - Principles of Marketing

The Marketing Management Major - 18 credit hours

- MK 202 - Advertising
- MK 312 - International Marketing

- MK 315 - Sales Management
- MK 328 - Consumer Behavior
- MK 410 - Marketing Strategy

Internships - 6-9 credit hours

A student must take a minimum of 6 internship credits combined with marketing management electives for a total of 15 credits.

- MK 406 - Marketing Internship

Marketing Management Electives - 6-9 credit hours

- BM 215 - Principles of Transportation
- BM 231 - Entrepreneurship & Small Business Management
- BM 326 - Purchasing & Supply Chain Management
- MK 322 - Strategic Retail Management
- SM 320 - Sport Marketing/Promotion

General Electives - 15 credit hours

Total Credits Required - 121 credit hours

Suggested Sequence of Courses:

Fall	Spring
Freshman	
BM 101 Principles of Business Management*	AC 201 Financial Accounting I*
DW 101 Strategies for Success (1)	EN 208 Public Speaking
EN 115 College Writing	MA 216 College Math for Business & Economics II
MA 122 College Algebra w/Apps	MK 201 Principles of Marketing*
PY 101 Principles of Psychology	IS 101 Information Tech/Applications I
ID 101 First-Year Seminar	
Sophomore	
EC 101 Macroeconomics	BM 212 Operations Analysis and Management*
BM 205 Human Resource Management*	EC 102 Microeconomics*
MA 240 Probability and Statistics	EN 215 Professional Writing
MK 206 Sales Management*	MK 205 International Marketing*
_____ 200-level Cultural Studies Core	
Junior	
BL 201 Business Law*	FI 320 Corporate Finance*
BM 319 Managerial Decision Making*	MK 202 Advertising*
MK 215 Consumer Behavior*	MK 207 Marketing Research*
_____ 300-level Cultural Core Studies	_____ 300-level Cultural Studies Core
_____ General or Marketing Management Elective*	_____ Natural/Physical Science Elective
	_____ Writing Intensive Course
Senior	
BM 310 Business Policy W*	MK 406 Internship in Marketing Management* (6-12)
ID 400 Senior Interdisciplinary Seminar	_____ General or Marketing Management Electives* (6-12)
MK 410 Marketing Strategy*	
_____ General or Marketing Management Electives* (6)	

*Grade of C or higher required

Sport Management

Bachelor of Science Degree

The Sport Management program helps students prepare for entry-level positions in the sport industry. The knowledge and skills provided through the program include the basic theory in the major content areas of sport management: Marketing, Economics, Finance, Culture of Sport; Governance, Law, Leadership; Management; Promotions; Facility Management and Operations; Event Management & Promotions; and Field Experience. This preparation may lead to opportunities with organizations in the sport industry ranging from professional and amateur sports teams, to non-profit, private, and club sport organizations to retail and tourism management. Similarly, students can focus in any number of specialized industries —including, but not limited to, sport marketing and sales management, public and media relations, facility management, program and event management, and intercollegiate athletic administration.

This major also includes a component of experiential learning, which provides students with the opportunity to gain experience in the industry; including working/organizing sporting events, promotions, media relations, and working with professional, amateur, and club organizations. These experiential learning opportunities are available to students starting in their first semester, and extending to the final semester. Included in this is a required internship which is carried out in a sector of the sport industry that is of primary interest to the student. Internships are developed, maintained, and supervised by members of the Sport Management faculty, and provide the student with an opportunity to embark on an in-depth, period of work, to provide both experience and opportunity to allow them to determine their preferred segment(s) of the sport industry.

Degree Requirements

Daniel Webster Success:

- DW 101 - Strategies for Success

Communications:

- EN 115 - College Writing and Research
- EN 208 - Public Speaking
- 300 or 400-level writing intensive course (EN)
- IS 101 - Information Technology/Applications I

Mathematics and Natural Science:

- MA 120 - Survey of Mathematics OR
- MA 122 - College Algebra w/Applications
- MA 240 - Probability & Statistics
- Natural or Physical Lab Science

Human Behavior:

- EC 101 - Macroeconomics
- PY 101 - Principles of Psychology

Cultural and Community Engagement:

- ID 101 - First Year Seminar

Cultural Studies Core

Courses in cultural studies include at least one 200-level course and at least one 300-level course in Economics (EC), History (HI), Humanities (HU), Political Science (PS), Psychology (PY), Sociology (SO), Social Science (SS), and one 300-level Humanities (HU) course.

- 200-level Humanities (HU) or Social Science
- 300-level Humanities (HU)
- 300-level Social Science course
- ID 400-level Interdisciplinary Senior Seminar

Business and Economics Core - 6 credit hours

- BM 205 - Human Resource Management
- BM 310 - Business Policy [W]

Major Courses

Grade of C or higher required

Management Foundation - 18 credit hours

- AC 201 - Financial Accounting
- BM 101 - Principles of Business Management

- BM 212 - Operations Analysis and Management
- BM 319 - Management Decision Making
- EC 102 - Microeconomics
- MK 201 - Principles of Marketing

The Sport Management Major - 24 credit hours

- SM 101 - Introduction to Sport Management
- SM 203 - Governance and Globalization in Sport
- SM 209 - Sport Facility and Venue Management
- SM 225 - Ethics and Sociocultural Issues in Sport
- SM 305 - Legal Issues in Sport Management
- SM 320 - Sport Marketing/Promotion
- SM 415 - Economics and Finance in Sport
- SM 440 - Seminar in Management and Leadership of Sport

Internships - 6-12 credit hours

A student must take a minimum of 6 internship credits combined with sport management electives for a total of 18 credits.

- SM 450 - Internship in Sport Management

Sport Management Electives - 12 credit hours

- SM 207 - Athletics Administration and Coaching
- SM 208 - Information and Communication Technology in Sports
- SM 212 - Health and Wellness
- SM 231 - Sport Tourism
- SM 310 - Sport Management Practicum
- SM 318 - Recreational Sport Management
- SM 323 - Sport Retail Management and Entrepreneurship
- SM 329 - Sport Promotions and Ticket Sales Management
- SM 336 - Sport Psychology
- SM 340 - Sports Information
- SM 400 - Selected Topics in Sport

General Electives - 15 credit hours

Total Credits Required - 121 credit hours

Suggested Sequence of Courses:

Fall	Spring
Freshman	
BM 101 Principles of Business Management*	EC 101 Macroeconomics
DW 101 Strategies for Success (1)	EN 208 Public Speaking
EN 115 College Writing	MK 201 Principles of Marketing*
MA 122 College Algebra w/Apps	PY 101 Principles of Psychology
SM 101 Introduction to Sport Management*	IS 101 Information Tech/Applications I
ID 101 First-Year Seminar	
Sophomore	
AC 201 Financial Accounting*	BM 212 Operations Analysis and Management*
EC 102 Microeconomics*	SM 209 Facility and Event Management*
MA 240 Probability and Statistics	SM 225 Ethics and Sociocultural Issues in Sport*
SM 203 Governance & Globalization in Sport*	_____ General Elective or Sport Management Elective (3-6)
_____ Cultural Studies Core	
Junior	
BM 205 Human Resource Management*	_____ Cultural Studies Core
BM 319 Managerial Decision Making*	SM 305 Legal Aspects of Sport*

SM 320 Marketing and Communications in Sport*

_____ Cultural Studies Core

_____ General or Sport Management Elective* (3-6)

SM 415 Economics and Finance in Sport*

_____ Natural/Physical Science Elective

_____ General or Sport Management Elective* (3-6)

_____ Upper level writing intensive course (EN)

Senior

BM 310 Business Policy [W]

ID 400 Senior Interdisciplinary Seminar

SM 440 Seminar in Management and Leadership of Sport*

_____ General or Sport Management Electives

SM 450 Internship in Sport Management* (6-12)

_____ General or Sport Management Electives* (6-12)

*Grade of C or higher required

Please Note: All courses are three credits unless designated otherwise.

MBA

Master of Business Administration Degree

Organizations today actively seek versatile, technologically-literate professionals who can actively contribute and thrive in a team environment. Daniel Webster College's MBA program is distinctively designed to focus on developing versatility through critical thinking, intellectual flexibility, analytical and applied research skills, creativity, and high standards for professional integrity and ethics.

The DWC MBA program emphasizes three of the most fundamental aspects of management: leadership, communication, and effective decision-making based on quantitative and qualitative data. Courses in leadership, organizational behavior, and project management cultivate the specific social skills needed in a team-based organizational environment. Finance, accounting, forecasting and analysis courses provide a solid foundation for the financial management of any business. E-business and global management topics provide exposure to interactive and international business models.

The program fosters an integrated approach to learning through the use of real-world, classical and contemporary case studies, in-class and online learning, course sequencing and completion in a cohort model.

Degree Requirements

Applied Management Core - 33 credit hours

- BM 530 - Leadership in Times of Change
- BM 540 - Advanced Managerial Accounting
- BM 543 - Marketing Management
- BM 545 - Finance for Managers
- BM 550 - Marketing Research and Marketing Strategies
- BM 575 - Applied Techniques/Organizational Behavior
- BM 580 - Operations Management
- BM 610 - Bus Models and Strategies for E-Business
- BM 650 - Global Management
- BM 680 - Strategic Management
- BM 695 - Capstone Research Project

Graduate Electives - 6 credit hours

Elective courses will be chosen by the program director. Offerings include:

- BM 556 - Advanced Business Law
- BM 560 - Forecasting and Demand Analysis
- BM 565 - Advanced Consumer Behavior
- BM 625 - Advanced Project Management

Total Credits Required - 39 credit hours

MBA - Sport Management
Master of Business Administration Degree

The multi-billion dollar sport industry in the United States is larger than the automotive, movie, and air transportation industries combined. As athletic departments, sports franchises, and other sport-related businesses expand, the potential for employment opportunities expands.

Degree Requirements

- BM 530 - Leadership in Times of Change
- BM 535 - Communication Management in Sport
- BM 540 - Advanced Managerial Accounting
- BM 543 - Marketing Management
- BM 545 - Finance for Managers
- BM 546 - Sport Law and Risk Management
- BM 576 - Human Resource Management in Sport
- BM 575 - Applied Techniques/Organizational Behavior
- BM 580 - Operations Management
- BM 612 - Sport Business in the International and Global Economy
- BM 627 - Governance and Administration of Sport Facilities and Events
- BM 680 - Strategic Management
- BM 695 - Capstone Research Project

Total Credits Required - 39 credit hours

MBA - Technology and Innovation Management

Master of Business Administration Degree

Technology and globalization are creating new industries, restructuring existing industries, and radically changing the way firms compete. The pace at which new product- and process- technology is generated throughout the world has advanced exponentially, creating new markets and rapidly changing sources of competition. Shorter product life cycles, rapid innovation, and constant competitive pressures are creating new challenges for leaders and professionals.

New skills and knowledge are needed for companies to compete in this fast paced, global environment. To meet this critical need, DWC offers a MBA with a concentration in Technology and Innovation Management.

Degree Requirements

- BM 530 - Leadership in Times of Change
- BM 543 - Marketing Management
- BM 540 - Advanced Managerial Accounting
- BM 545 - Finance for Managers
- BM 575 - Applied Techniques/Organizational Behavior
- BM 580 - Operations Management
- BM 6X1 - Human Resource Management in a Technology Environment
- BM 6X2 - New Product Design and Development
- BM 6X3 - Economics of Technological Change
- BM 6X4 - e-Business and Entrepreneurship
- BM 6X5 - Innovation Management and Strategy
- BM 625 - Advanced Project Management
- BM 695 - Capstone Research Project

Total Credits: 39 credits

School of Engineering and Computer Sciences

Dean:	Nicholas Bertozzi
Professors:	Nicholas Bertozzi, Jay Conant, Jeff Smith
Associate Professors:	Alejo Hausner, Frank Murgida, David Guo
Assistant Professors:	Bo Kim, Tim Kostar, Mohammad Sadraey
Adjunct Instructors/Lecturers:	Hal Bettle, Ron Brender, Stavani Donepudi, Robert Duhainy Paul Giacobbe, Antonio Martin, John Oates, Craig Putnam, Seyed Reihani, Peter Rosner, Robert Schaefer, Robert Sullivan, John Zavgren.
Engineering Laboratory Manager:	Christopher Carlstrom

The School of Engineering and Computer Science prepares students at the cutting edge of technology, immersing students in hands-on experience and theory from day one. All programs have been designed to provide a broad-based understanding of the relevant theories on which the areas of specialization are based. Students begin project based learning in the freshman year and work on increasingly complex projects as they move through the curriculum. All of our programs are focused on providing students with an intensive experience in their chosen specialization which may ultimately lead to either industry employment or graduate school. Information specific to each program follows.

Bachelor of Science

- Aeronautical Engineering
- Computer Science (Software Engineering)
- Computer Systems Engineering
- Gaming, Simulation and Robotics
- Mechanical Engineering
- Software Development

Associate in Science

- Aeronautical Engineering
- Engineering Science

Aeronautical Engineering

Associate in Science Degree

This program is designed for the student who wishes ultimately to pursue a bachelor of science degree in aeronautical engineering. The curriculum is current, relevant and easily transferable to ABET accredited bachelor's degree programs nationwide. The student must fulfill basic requirements in mathematics and science as well as general education courses. Small class size and individualized attention are the major strengths of the program. Note that this program normally takes five semesters to complete.

Degree Requirements

Daniel Webster Success: 1 credit hour

- DW 101 - Strategies for Success

Communications: 3 credit hours

- EN 115 - College Writing and Research

Humanities or Social and Behavioral Science: 3 credit hours

- PY 101 - Principles of Psychology

Cultural and Community Engagement (Engineering A.S.) 6 credit hours

- ID 101 - First Year Seminar

Cultural Studies Core

Select one 200-level course in cultural studies in one of the following areas: Economics (EC), History (HI), Humanities (HU), Political Science (PS), Psychology (PY), Sociology (SO), Social Science (SS).

- One 200-level Humanities (HU) or Social Science course.

Mathematics and Natural Science: 28 credit hours

- CH 101 - Inorganic Chemistry I
- MA 201 - Calculus I
- MA 202 - Calculus II
- MA 203 - Calculus III
- MA 205 - Differential Equations
- PH 215 - Physics I
- PH 215L - Physics I Lab
- PH 216 - Physics II
- PH 216L - Physics II Laboratory

Aeronautical Engineering core - 31 credit hours

Grade of C or higher required

- EG 110 - Engineering Design I
- EG 112 - Engineering Design II
- EG 200 - Statics
- EG 201 - Fluid Mechanics
- EG 202 - Strength of Material
- EG 203 - Dynamics
- EG 208 - Material Science
- EG 209 - Thermodynamics I
- EG 314 - Aerodynamics

Total Credits Required - 72 credit hours

Suggested Sequence of Courses:

Fall	Spring
Freshman	
DW 101 Strategies for Success (1)	ID 101 First Year Seminar
CH 101 Inorganic Chemistry (4)	EG 112 Engineering Design II* (3.5)
EG 110 Engineering Design I*	PH 215 Physics I
EN 115 College Writing and Research	PH 215L Physics I Lab (1)
MA 201 Calculus I (4)	MA 202 Calculus II (4)
PY 101 Principles of Psychology	
Sophomore	
PH 216 Physics II	EG 203 Dynamics* (3.5)
PH 216L Physics II Labe (1)	EG 202 Strength of Materials* (3.5)
EG 200 Statics* (3.5)	EG 209 Thermodynamics*
_____ Cultural Studies Core	EG 201 Fluid Mechanics* (3.5)
EG 208 Material Science* (3.5)	MA 205 Differential Equations (4)
MA 203 Calculus III (4)	
5 th Semester	
EG 314 Aerodynamics* (3.5)	

* Major Course: Grade of C or higher required

Please Note: All courses are three credits unless designated otherwise.

Engineering Science

Associate in Science Degree

This two-year program is designed to expose students to a variety of disciplines and basic requirements which will provide the background necessary to select an area of concentration. The basic program emphasizes fundamentals relative to engineering and stresses concepts applicable to different disciplines.

Degree Requirements

Daniel Webster Success 1 credit hour

- DW 101 - Strategies for Success

Communications: 3 credit hours

- EN 115 - College Writing and Research

Human Behavior: 3 credit hours

- PY 101 - Principles of Psychology

Cultural and Community Engagement (Engineering A.S.) 6 credit hours

- ID 101 - First Year Seminar

Cultural Studies Core

Select one 200-level course in cultural studies in one of the following areas: Economics (EC), History (HI), Humanities (HU), Political Science (PS), Psychology (PY), Sociology (SO), Social Science (SS).

- One 200-level Humanities (HU) or Social Science course

Mathematics and Natural Science: 31 credit hours

- CH 101 - Inorganic Chemistry I
- MA 201 - Calculus I
- MA 202 - Calculus II
- MA 203 - Calculus III
- MA 205 - Differential Equations
- MA 240 - Probability & Statistics
- PH 215 - Physics I
- PH 215L - Physics I Lab
- PH 216 - Physics II
- PH 216L - Physics II Laboratory

Engineering Science Core - 27.5 credit hours

Grade of C or higher required.

- EG 110 - Engineering Design I
- EG 112 - Engineering Design II
- EG 200 - Statics
- EG 201 - Fluid Mechanics
- EG 202 - Strength of Material
- EG 203 - Dynamics
- EG 208 - Material Science
- EG 209 - Thermodynamics I

Total Credits Required - 71.5 credit hours

Suggested Sequence of Courses:

Fall	Spring
Freshman	
CH 101 Inorganic Chemistry (4)	ID 101 First Year Seminar
EG 110 Engineering Design* I (3.5)	EG 112 Engineering Design II* (3.5)
EN 115 College Writing and Research	PH 215 Physics I
MA 201 Calculus I (4)	PH 215L Physics I Lab (1)
PY 101 Principles of Psychology	MA 202 Calculus II (4)
DW 101 Strategies for Success (1)	MA 240 Probability and Statistics
Sophomore	
PH 216 Physics II	EG 203 Dynamics* (3.5)
PH 216L Physics II Laboratory (1)	EG 202 Strength of Materials* (3.5)
EG 200 Statics* (3.5)	EG 209 Thermodynamics*I (3)
_____ Cultural Studies Course	MA 205 Differential Equations (4)
MA 203 Calculus III (4)	EG 201 Fluid Mechanics* (3.5)
EG 208 Material Science* (3.5)	

*Major course: Grade of C or higher required.

Please Note: All courses are three credits unless designated otherwise.

Aeronautical Engineering
Bachelor of Science Degree

Aeronautical engineering focuses on the analysis, design, development, modification, manufacture, and implementation of flight vehicles.

The vision for the engineering program at DWC is for students to have an educational experience that is intense, personal, and exciting, that firmly grounds them in theory and design, and that makes that makes them both competent and confident to take on any challenges they may face as practicing engineers.

Daniel Webster College is a collaborator in the international CDIO initiative (http://www.cdio.org/index.html), “an innovative educational framework for producing the next generation of engineers [that stresses] engineering fundamentals set in the context of Conceiving, Designing, Implementing, and Operating real-world systems and products.”

CDIO states, “We know some interesting facts about how experiences affect learning. Engineering students tend to learn by experiencing the concrete and then applying the experience to the abstract. Hands-on experience is a vital foundation on which to base theory and science.” At DWC we embrace this philosophy of engineering education.

The four-year Aeronautical Engineering curriculum contains a five-semester design sequence emphasizing hands-on design projects that requires students to work in teams. Students apply the theories they are learning in the classroom to the solution of open-ended problems. Commitment and responsibility to the design team are required and continually emphasized. As a result of this experience students gain both the confidence and competence necessary to tackle open-ended design problems and to excel in a team environment. They will be able to learn quickly and efficiently and to think strategically about the multiple issues involved in a project. We believe these skills are of critical importance for today’s engineersIn order to demonstrate their grasp of fundamental concepts, students frequently present their solutions to various problems. In many engineering courses, students will work in small teams and do these presentations bi-weekly.

The design sequence also provides students with systems integration experience that incorporates components such as vision systems, sensors, controls, and the software that ties them together. Examples of potential project work are unmanned flight applications, which could include aerospace, geographic and topographic exploration, and atmospheric research and security. Past and ongoing projects include the creation and testing of custom wings such as tubercle and dragonfly wings, aerial filming platform design, and participation in the American Institute of Aeronautics and Astronautics (AIAA) Design Build and Fly Competition (DBF).

One of the highlights of the Aeronautical Engineering program occurs during the junior and senior years in the three-semester sequences of courses: Aerodynamics, Flight Dynamics I (Performance) and Flight Dynamics II (Stability and Control). Students develop test plans and perform in-flight experiments using an aircraft equipped with a Calspan Miniature Flight Data Recording System (MFDRS). This highly sophisticated system is used to record twenty-eight different parameters at the sample rate of two hundred times per second. These parameters include the six components of rectilinear and rotational acceleration, aileron, elevator, and rudder positions, calibrated airspeed, static and dynamic pressure, etc. Once collected, the students analyze the data for comparison with theoretical predictions and published aircraft data. This level of in-flight experience is exceptional in undergraduate aeronautical engineering programs.

Finally, the faculty at DWC is dedicated to student success. We believe that a key contributor to student success is the faculty mentoring of students outside of the classroom. We assure prospective students that if they are willing to work hard, we will do all we can to help them succeed.

Program Educational Objectives:
Graduates of the Aeronautical Engineering programs at Daniel Webster College will

- Use the knowledge and problem solving skills developed as aeronautical engineering majors to undertake professional careers in Aeronautical Engineering or other disciplines;
- Approach engineering decisions with an informed consideration of global and societal contexts and consequences;
- Continue to expand their professional, personal, and interpersonal skills and engage in lifelong learning, including post-graduate education for some graduates;
- Contribute to industry and society through involvement with professional and other service activities;
- Assume increasing responsibility as they advance in their careers;
- Be regarded by their managers and peers as an effective and valued member of their work team.

Program Learning Outcomes:
Graduates of the Aeronautical Engineering program will have

- An ability to apply knowledge of mathematics, science, and engineering;
- An ability to design and conduct experiments, as well as to analyze and interpret data;
- An ability to design a system, component, or process to meet desired needs within realistic constraints such as economic, environmental, social, political, ethical, health and safety, manufacturability, and sustainability;
- An ability to function on multi-disciplinary teams;
- An ability to identify, formulate, and solve engineering problems;
- An understanding of professional and ethical responsibility;
- An ability to communicate effectively;
- The broad education necessary to understand the impact of engineering solutions in a global, economic, environmental, and societal context;
- A recognition of the need for, and the ability to engage in life-long learning;
- A knowledge of contemporary issues;
- An ability to use the techniques, skills, and modern engineering tools needed for engineering practice;
- A knowledge of aerodynamics, aerospace materials, structures, propulsion, flight mechanics, and stability and control;
- Design competence that includes integration of aeronautical topics;
- An ability to develop flight test plans and conduct in-flight experiments, as well as to analyze, interpret, and report the resulting data.

Degree Requirements

Daniel Webster Success: 1 credit hour

- DW 101 - Strategies for Success

Communications: 3 credit hours

- EN 115 - College Writing and Research
  Note: Engineering communications are studied, applied, and assessed throughout the five-course design sequence. In addition, the capstone design sequence will provide an upper-level intensive writing experience. All courses in this sequence are co-taught with a humanities faculty member.

Mathematics and Natural Science: 32 credit hours

- CH 101 - Inorganic Chemistry I
- MA 201 - Calculus I
- MA 202 - Calculus II
- MA 203 - Calculus III
- MA 205 - Differential Equations
- MA 315 - Linear Algebra and Introduction to Numerical Methods
- PH 215 - Physics I
- PH 215L - Physics I Lab
- PH 216 - Physics II
- PH 216L - Physics II Laboratory

Human Behavior: 6 credit hours

- EC 101 - Macroeconomics
- PY 101 - Principles of Psychology

Cultural and Community Engagement: 15 credit hours

- ID 101 - First Year Seminar

Cultural Studies Core
Courses in cultural studies include at least one 200-level course and at least one 300-level course in Economics (EC), History (HI), Humanities (HU), Political Science (PS), Psychology (PY), Sociology (SO), Social Science (SS), and one 300-level Humanities (HU) course.

- 200-level Humanities (HU) or Social Science
- 300-level Humanities (HU)
- 300-level Social Science course
- ID 400-level Interdisciplinary Senior Seminar

Major Courses - 78.5 credit hours

Grade of C or higher required

Aeronautical Engineering Core - 72.5 credit hours

- EG 110 - Engineering Design I
- EG 112 - Engineering Design II
- EG 200 - Statics
- EG 201 - Fluid Mechanics
- EG 202 - Strength of Material
- EG 203 - Dynamics
- EG 207 - Instrumentation & Measurements
- EG 208 - Material Science
- EG 209 - Thermodynamics I
- EG 308 - Gas Dynamics
- EG 310 - Engineering Design III
- EG 314 - Aerodynamics
- EG 316 - Electrical Engineering
- EG 325 - Intermediate Strength of Materials
- EG 326 - Aircraft Structures
- EG 330 - Propulsion
- EG 333 - Control Systems Analysis
- EG 418 - Flight Dynamics I/Performance
- EG 419 - Flight Dynamics II/Stability/Control
- EG 412 - Aircraft Design I
- EG 460 - Capstone Design I [(W)]
- EG 461 - Capstone Design II [(W)]

Technical Electives - 6 credit hours
(Note: Some of these courses are under development and may not be offered every year)

- EG 318 - Thermodynamics II
- EG 341 - Design of Machine Components
- EG 350 - Vibrations
- EG 409 - Composite Materials
- EG 410 – Heat Transfer
- EG 4X6 - Computational Methods in Aeronautical Engineering
- EG 4X7 - Supersonic Aerodynamics
- EG 420 - Thermal Design
- EG 424 – Robotics/Automation/Vision I
- EG 425 – Robotics/Automation/Vision II

Total Credits Required - 135.5 credit hours

Footnote

[(W)]Upper-level writing intensive courses fill the general education third year writing requirement and the credits are applied toward major requirements. This course is subject the all minimum grade requirements for major requirements

Suggested Sequence of Courses:

	Fall	Spring
Freshman		
	CH 101 Inorganic Chemistry (4)	ID 101 First Year Seminar
	DW 101 Strategies for Success (1)	EG 112 Engineering Design II* (3.5)
	EG 110 Engineering Design I* (3.5)	PH 215 Physics I
	EN 115 College Writing and Research	PH 215L Physics I Lab (1)

MA 201 Calculus I (4)	MA 202 Calculus II (4)
PY 101 Principles of Psychology	_____ 200-level Cultural Studies Core
Sophomore	
EG 200 Statics* (3.5)	EG 201 Fluid Mechanics* (3.5)
EG 207 Instrumentation & Measurements*	EG 202 Strength of Materials* (3.5)
EG 208 Material Science* (3.5)	EG 203 Dynamics* (3.5)
MA 203 Calculus III (4)	EG 209 Thermodynamics*
PH 216 Physics II	MA 205 Differential Equations (4)
PH 216L Physics II Laboratory (1)	
Junior	
EG 308 Gas Dynamics*	EG 310 Engineering Design III* (3.5)
EG 314 Aerodynamics* (3.5)	EG 326 Aircraft Structures*
EG 316 Electrical Engineering* (3.5)	EG 333 Control Systems Analysis* (3.5)
EG 325 Intermediate Strength of Materials*	EG 418 Flight Dynamics I (Performance)*
MA 315 Linear Algebra & Intro to Numerical Methods (4)	_____ 300-level Cultural Studies Core
Senior	
EG 412 Aircraft Design*	EG 461 Capstone Design II* W
EG 419 Flight Dynamics II (Stability and Control)*	ID 401 Senior Interdisciplinary Seminar
EG 460 Capstone Design I* W	EC 101 Macroeconomics
EG 3xx Technical Elective*	EG 330 Propulsion*
_____ 300-level Cultural Studies Core	EG 3xx Technical Elective*

*Grade of C or higher required.

Please Note: All courses are three credits unless designated otherwise.

Computer Science (Software Engineering)

Bachelor of Science Degree

Software is ubiquitous. Everywhere you go today in the developed world you encounter software: airports, aviation, medical offices, hospitals, home appliances, automobiles, traffic lights, elevators, games, data communications, manufacturing, management, military, entertainment, movies, schools, and many, many more. From the largest airplane to the smallest hearing appliance, software is the principal technology enabler requiring solid software engineering by working in multi-disciplinary project teams. The principal goal of the DWC Computer Science Division is to educate real world software engineers who can hit-the-ground-running. The demand for DWC graduates provides continuous evidence of reaching this goal.

Software engineering education must be hands-on and project based. The DWC Computer Science program is designed around the concept of project-based learning. In parallel with the traditional computer science and mathematics study, students start programming the very first day they start class and finish the first year of the program implementing a major team-based software development project. This parallel approach of solid academic study and serious project-based learning continues throughout the four year program culminating in a senior capstone software engineering project or an industry/government internship in the real world.

Employment support. Internships and part-time employment as students often leads to full-time jobs after graduation. It certainly isn't guaranteed, but DWC students generally have no problem obtaining internship and part-time opportunities here in New England. New England is a computer technology hot-spot, especially for software engineering.

Program Educational Objectives

Graduates of the Computer Science Program at Daniel Webster College will:

- Join the next generation of software development teams innovating new products and systems for industry, military, and government
- Undertake professional careers in the expanding software engineering field
- Continue their professional, personal, management, and interpersonal skills and engage in lifelong learning, including post graduate education
- Continue to develop into a highly regarded member of their work teams by managers and peers

Program Learning Outcomes

- An ability to apply knowledge of computing and mathematics appropriate to the discipline
- An ability to analyze a problem, and identify and define the computing requirements appropriate to its solution
- An ability to design, implement, and evaluate a computer-based system, process, component, or program to meet desired needs
- An ability to function effectively on teams to accomplish a common goal
- An understanding of professional, ethical, legal, security and social issues and responsibilities
- An ability to communicate effectively with a range of audiences
- An ability to analyze the local and global impact of computing on individuals, organizations, and society
- Recognition of the need for and an ability to engage in continuing professional development
- An ability to use current techniques, skills, and tools necessary for computing practice
- An ability to apply mathematical foundations, algorithmic principles, and computer science theory in the modeling and design of computer-based systems in a way that demonstrates comprehension of the tradeoffs involved in design choices
- An ability to apply design and development principles in the construction of software systems of varying complexity
- A real-world software engineering experience through a senior software engineering capstone or internships

Degree Requirements

Daniel Webster Success: 1 credit hour

- DW 101 - Strategies for Success

Communications: 6 credit hours

- EN 115 - College Writing and Research

- EN 208 - Public Speaking OR
- EN 215 - Professional Writing

Upper-level Writing Intensive course within the major (designated with a ^{W} *) or, if not required within the major, a different writing intensive course outside of the major*

Mathematics and Natural Science: 16 credit hours

- MA 201 - Calculus I
- MA 202 - Calculus II
- MA 250 - Linear Algebra with Computer Science Applications
- PH 215 - Physics I AND
- PH 215L - Physics I Lab

Human Behavior 6 credit hours

Two of the following:

- EC 101 - Macroeconomics
- PY 101 - Principles of Psychology
- SO 101 - Introduction to Sociology

- **Cultural and Community Engagement: 6 credit hours**ID 101 - First Year Seminar

Cultural Studies Core

Courses in cultural studies include at least one 200-level course and at least one 300-level course in Economics (EC), History (HI), Humanities (HU), Political Science (PS), Psychology (PY), Sociology (SO), Social Science (SS), and one 300-level Humanities (HU) course.

- 200-level Humanities (HU) or Social Science
- 300-level Humanities (HU)
- 300-level Social Science course
- ID 400-level Interdisciplinary Senior Seminar

Computer Science Core - 46 credit hours

Grade of C or higher required

- CS 113 - Introduction to Programming
- CS 114 - Intro to Software Engineering
- CS 111 - Discrete Mathematics I
- CS 112 - Discrete Mathematics II
- CS 203L - Sophomore Software Engineering Lab I
- CS 204L - Sophomore SE Lab II
- CS 217 - Data Structure and Algorithms I
- CS 218 - Data Structure and Algorithms II
- CS 219 - Computer Architecture I
- CS 238 - UNIX Programming
- CS 303L - Junior Software Engineering Lab I
- CS 304L - Junior Software Engineering Lab II
- CS 312 - Algorithms
- CS 317 - Computer Networks
- CS 320 - Programming Language Concepts ^{W}
- CS 361 - Computer Software/Operating Systems

Computer Science Electives - 12 credit hours

Grade of C or higher required

- CS 409 - 3-D Game Programming
- CS 411 - Artificial Intelligence
- CS 416 - Digital Circuits
- CS 427 - Computer Graphics
- CS 435 - Adv Computer Graphics/Algorithms
- EG 424 – Robotics/Automation/Vision I

Capstone - 6 credit hours

Grade of C or higher required

- CS 413 - Software Engineering Project I AND
- CS 414 - Software Engineering Project II OR
- CS 445 - Computer Science Internship

General Electives - 15 credit hours

Total Credits Required - 123 credit hours

Suggested Sequence of Courses:

Fall	Spring
Freshman	
CS 113 Introduction to Programming* (4)	CS 111 Discrete Mathematics I*
DW 101 Strategies for Success (1)	CS 114 Introduction to Software Engineering* (4)
EN 115 College Writing	ID 101 First Year Seminar
MA 201 Calculus I (4)	EN 208 Public Speaking or EN 215
PY101 Principles of Psychology	MA 202 Calculus II (4)
EC 101 Macroeconomics	
Sophomore	
CS 112 Discrete Mathematics II*	CS 204L Sophomore Software Engineering Lab II* (2)
CS 203L Sophomore Software Engineering Lab I* (2)	CS 218 Data Structures & Algorithms II*
CS 217 Data Structures and Algorithms I*	CS 238 UNIX Programming*
CS 219 Computer Architecture I*	MA 250 Linear Algebra w/ Apps (4)
	_____ General Elective
PH 215 and PH 215L with lab (4)	
Junior	
CS 303L Junior Software Engineering Lab I* (2)	CS317 Computer Networks*
CS 361 Computer Software/Operating Systems*	CS 304L Junior Software Engineering Lab II* (2)
_____ 200-level Cultural Studies Core	CS 320 Programming Language Concepts* [W]
CS ___ CS Elective*	_____ 300-level Cultural Studies Core
_____ General Elective	CS ___ CS Elective*
Senior	
CS 312 Algorithms*	CS 445 Computer Science Internship* (6) or
_____ 300-level Cultural Studies Core	CS 414 Software Engineering Project II*
CS ___ CS Elective *	_____ General Elective
CS ___ CS Elective *	_____ General Elective
CS 413 Software Engineering Project I	ID 401 Senior Interdisciplinary Seminar

* Major Course: Grade of C or higher required

Please Note: All courses are three credits unless designated otherwise.

Computer Systems Engineering

Bachelor of Science Degree

The Daniel Webster College Computer Systems Engineering Program is a cross between computer science and electrical engineering.

Network technology has enormous potential to change the way people and devices communicate. Future networks will allow people on the move to communicate with anyone, anywhere, at any time, using a range of multimedia services. Wireless communications will also enable a new class of intelligent home electronics that can interact with each other and with the Internet. A communications infrastructure is needed for automated highways and for sensor networks, and networked video will support applications such as distance learning and remote medicine using high speed broad band communications technologies.

There are many technical challenges that must be met in order to make this vision a reality. These challenges transcend all levels of the overall system design, including hardware, communication link design, and networking. In addition, synergies between the hardware, link, and network designs must be exploited in order to meet the demanding performance requirements of these future systems.

The Bachelor of Science in Computer Systems Engineering will provide the scientific knowledge and software tools to enable graduates to be effective knowledge workers in this cutting edge field.

Program Educational Objectives

Graduates of the Computer Systems Engineering Program at Daniel Webster College will:

- Implement the concepts and technologies of networks and data transmission;
- Develop concepts for wireless communication and its various applications, such as cellular phones and satellite communication;
- Implement network construction and implementation in a variety of lab environments;
- Implement the use of middleware in the development of network systems;
- Build software radio systems using open architecture and encapsulating software.

Program Learning Outcomes

Graduates of the Computer Systems Engineering Program at Daniel Webster College will have:

- an ability to apply knowledge of mathematics, science, and engineering;
- an ability to design and conduct experiments, as well as to analyze and interpret data;
- an ability to design a system, component, or process to meet desired needs within realistic;
- an ability to function on multidisciplinary teams;
- an ability to identify, formulate, and solve engineering problems;
- an understanding of professional and ethical responsibility;
- an ability to communicate effectively;
- the broad education necessary to understand the impact of engineering solutions in a global; economic, environmental, and societal context;
- a recognition of the need for, and an ability to engage in life-long learning;
- a knowledge of contemporary issues;
- an ability to use the techniques, skills, and modern engineering tools necessary for engineering practice;
- a knowledge of discrete mathematics;
- knowledge of mathematics through differential and integral calculus, basic sciences, computer science, and engineering sciences necessary to analyze and design complex software and systems containing hardware and software components;
- an ability to demonstrate a working knowledge of the key information and identify concepts in the areas of networking systems, communications and networking technology.

Degree Requirements

Daniel Webster Success: 1 credit hours

- DW 101 - Strategies for Success

Communications - 6 credit hours

- EN 115 - College Writing and Research
- *Upper-level Writing Intensive course within the major (designated with a ^{W}) or, if not required within the major, a different writing intensive course outside of the major*

One of the following:

- EN 208 - Public Speaking
- EN 215 - Professional Writing

Mathematics and Natural Science - 20 Credits

- MA 201 - Calculus I
- MA 202 - Calculus II
- MA 205 - Differential Equations
- MA 250 - Linear Algebra with Computer Science Applications -OR-
- MA 315 - Linear Algebra and Introduction to Numerical Methods
- PH 215 - Physics I
- PH 215L - Physics I Lab

Human Behavior: 3 credit hours

- PY 101 - Principles of Psychology

Cultural and Community Engagement: 18 credit hours

- ID 101 - First Year Seminar

Cultural Studies Core

Courses in cultural studies include at least one 200-level course and at least one 300-level course in Economics (EC), History (HI), Humanities (HU), Political Science (PS), Psychology (PY), Sociology (SO), Social Science (SS),
200-level course and one 300-level course in Humanities (HU).

- 200-level Social Science
- 300-level Humanities (HU)
- 300-level Social Science course
- ID 400-level Interdisciplinary Senior Seminar

Computer Science Core - 30 credit hours

Grade of C or better required

- CS 111 - Discrete Mathematics I
- CS 113 - Introduction to Programming
- CS 114 - Intro to Software Engineering
- CS 217 - Data Structure and Algorithms I
- CS 219 - Computer Architecture I
- CS 320 - Programming Language Concepts
  $^{(w)}$CS320 satisfies the Junior Level Writing Intensive Requirement
- CS 361 - Computer Software/Operating Systems
- CS 416 - Digital Circuits
  WS 3x1/3x1L - Middleware & Model Driven Architecture

Wireless Systems Major Core - 35 credit hours

Grade of C or better required

- CS 317 - Computer Networks
- CT 230 - Introduction to Computer Security
- EG 207 - Instrumentation & Measurements
- EG 316 - Electrical Engineering
- EG 333 - Control Systems Analysis
- WS 165 - Signals and Systems
- WS 210 - Continuous and Discrete Systems
- WS 306 - Electromagnetic and Radio Systems
- WS 4X1 - Linear Circuits and Systems
- WS 4X2 - Wireless Technologies and Systems
- WS 4X8 - Internship or Project - **Repeatable up to 9 credits, Senior Status**

Computer Science Electives - 6 credit hours

Select two (2) from the following courses:

- CS 218 - Data Structure and Algorithms II
- CS 238 - UNIX Programming
- CS 411 - Artificial Intelligence
- CS 112 - Discrete Mathematics II
- WS 3X3 - Computer and Network Security Fundamentals - Jr. Status
- WS 4X4 - Systems and Design Engineering - Jr. Status

Wireless Systems Engineering and Math Electives - 3 credit hours

Select one (1) from the following courses:

- WS 2X3 - Introduction to Optical Science and Technology
- WS 4X8 - Internship or Project **(remaining credits above the 3 required)**

Total Credits Required - 121 credit hours

Suggested Sequence of Courses:

	Fall	Spring
Freshman		
	DW101 Strategies for Success (1)	CS 111 Discrete Math I*
	CS 113 Introduction to Programming* (4)	CS 114 Introduction to Software Engineering* (4)
	EN 115 College Writing and Research	MA 202 Calculus II (4)
	MA 201 Calculus I (4)	PH 215 Physics I
	PY 101 Principles of Psychology	PH 215L Physics Laboratory (1)
		ID 101 First Year Seminar
Sophomore		
	EN 208 Public Speaking -OR-	WS 210 Continuous and Discrete Systems*
	EN 215 Professional Writing	MA 205 Differential Equations (4)
	CS 217 Data Structures and Algorithms I*	
	CS 219 Computer Architecture I*	CS 317/L Communications Systems *(4)
	WS 165 Signals and Systems*	_____ _____ 200-level Cultural Studies Core
	EG 207 Instrumentation and Measurement*	
Junior		
	EG 316 Electrical Engineering * (3.5)	CT 230 Introduction to Computer Security*
	CS 361 Computer Software/Operating Systems*	EG 333 Control Systems Analysis* (3.5)
	MA 250 Linear Algebra (4) -OR-	CS 416 Digital Circuits*
	MA 315 Linear Algebra & Intro to Numerical Methods (4)	_____ CS Elective
	WS 3X1/L Middleware & Model Driven Architecture* (4)	_____ 200-level Cultural Studies Core
	WS 306 Appl. Electomagnetics & Radio Engineering*	CS 320 Programming Language Concepts* W
Senior		
	WS 4X1 Linear Circuits and Systems	WS 4X8 Internship or Project (3 - 9)
	WS 4X2 Wireless Technologies and Systems	ID 401 Senior Interdisciplinary Seminar
	_____300-level Cultural Studies Core	300-level Cultural Studies Core 4
	_____ 300-level Cultural Studies Core	

* **Grade of C or higher required in all major courses.**

Please Note: All courses are 3 credits unless designated otherwise

Gaming, Simulation and Robotics

Bachelor of Science Degree

Games are pervasive. Game software today has matured from its simple entertainment origins to inclusion in major software systems, such as simulation, robotics, aviation, medical education and diagnosis, homeland security, management, manufacturing, hospitals, automobiles, data communications, military, entertainment, movies, schools, and many more. Serious game technology is now an integral component of critical healthcare systems, such as surgical education systems, patient management systems, and emergency care response systems. Software is the principal gaming, simulation and robotics technology enabler requiring solid software engineering by working in multi-disciplinary project teams. The principal goal of the DWC Computer Science Division Gaming, Simulation and Robotics program is to educate real world software engineers who can hit-the-ground-running. The demand for DWC graduates provides continuous evidence of reaching this goal.

Software engineering education must be hands-on and project based. The DWC Gaming, Simulation, and Robotics program is designed around the concept of project-based learning. In parallel with the traditional computer science and mathematics study, students start programming the very first day they start class and finish the first year of the program implementing a major team-based software development project. This parallel approach of solid academic study and serious project-based learning continues throughout the four year program culminating in a senior capstone software engineering project or an industry/government internship in the real world.

Employment support. Internships and part-time employment as students often leads to full-time jobs after graduation. It certainly isn't guaranteed, but DWC students generally have no problem obtaining internship and part-time opportunities here in New England. New England is a computer technology hot-spot, especially for software engineering.

Program Educational Objectives

Graduates of the Gaming, Simulation and Robotics Program at Daniel Webster College will:

- Innovate and develop the next generation of software, tools, and technology for gaming, simulation and robotics products and systems
- Join the next generation of software development teams innovating new products and systems for industry, military, and government
- Undertake professional careers in the expanding software engineering field
- Continue their professional, personal, management, and interpersonal skills and engage in lifelong learning, including post graduate education
- Continue to develop into members of their work teams highly regarded by managers and peers

Program Learning Outcomes

Graduates of the Gaming, Simulation and Robotics Program at Daniel Webster College will have:

- An ability to apply knowledge of computing and mathematics appropriate to the discipline
- An ability to analyze a problem, and identify and define the computing requirements appropriate to its solution
- An ability to design, implement, and evaluate a computer-based system, process, component, or program to meet desired needs
- An ability to function effectively on teams to accomplish a common goal
- An understanding of professional, ethical, legal, security and social issues and Responsibilities
- An ability to communicate effectively with a range of audiences
- An ability to analyze the local and global impact of computing on individuals, organizations, and society
- Recognition of the need for and an ability to engage in continuing professional development
- An ability to use current techniques, skills, and tools necessary for computing practice
- An ability to apply mathematical foundations, algorithmic principles, and computer science theory in the modeling and design of computer-based systems in a way that demonstrates comprehension of the tradeoffs involved in design choices
- An ability to apply design and development principles in the construction of software systems of varying complexity
- A real-world software engineering experience through a senior software engineering capstone or internships
- An ability to implement the fundamentals of 3D graphics and algorithms using examples from gaming, simulation and robotics

Degree Requirements

Daniel Webster Success: 1 credit hour

- DW 101 - Strategies for Success

Communications: 6 credit hours

- EN 115 - College Writing and Research
- EN 208 - Public Speaking OR
- EN 215 - Professional Writing
- *Upper-level Writing Intensive course within the major (designated with a [w])*

Mathematics and Natural Science: 16 credit hours

- MA 201 - Calculus I
- MA 202 - Calculus II
- MA 250 - Linear Algebra with Computer Science Applications
- PH 215 - Physics I AND
- PH 215L - Physics I Lab

Human Behavior 6 credit hours

Two of the following:

- EC 101 - Macroeconomics
- PY 101 - Principles of Psychology
- SO 101 - Introduction to Sociology

Cultural and Community Engagement 15 credit hours

- ID 101 - First Year Seminar

Cultural Studies Core 12

- *Courses in cultural studies include at least one 200-level course and at least one 300-level course in Economics (EC), History (HI), Humanities (HU), Political Science (PS), Psychology (PY), Sociology (SO), Social Science (SS), and one 300-level Humanities (HU) course*
- 200-level Humanities (HU) or Social Science
- 300-level Humanities (HU)
- 300-level Social Science course
- ID 400-level Interdisciplinary Senior Seminar

Major Courses - 45 credit hours

Grade of C or higher required.

- CS 111 - Discrete Mathematics I
- CS 112 - Discrete Mathematics II
- CS 113 - Introduction to Programming
- CS 114 - Intro to Software Engineering
- CS 217 - Data Structure and Algorithms I
- CS 218 - Data Structure and Algorithms II
- CS 219 - Computer Architecture I
- CS 238 - UNIX Programming
- CS 312 - Algorithms
- CS 317 - Computer Networks
- CS 320 - Programming Language Concepts[w]
- CS 361 - Computer Software/Operating Systems
- CS 425 - Systems Architecture
- CS 303L – Junior Software Engineering Lab I
- CS 304L – Junior Software Engineering Lab II

Gaming, Simulation & Robotics Core - 18 credit hours
Grade of C or higher required.

- CS 229 - Fundamentals/Game Development
- CS 235 - 3D Game Modeling
- CS 409 - 3-D Game Programming
- CS 427 Computer Graphics
- CS 435 - Adv Computer Graphics/Algorithms

Gaming, Simulation & Robotics Electives – 6 credit hours
Grade of C or higher required.

- CS 411 – Artificial Intelligence
- CS 416 – Digital Circuits
- EG 4xx - Robotics Elective

Capstone - 6 credit hours

- CS 445 - Computer Science Internship -OR-
- CS 413 - Software Engineering Project I AND
- CS 414 - Software Engineering Project II

General Electives - 9 credit hours

Total Credits Required – 128 credit hours

Suggested Sequence of Courses:

Fall	Spring
Freshman	
CS 113 Introduction to Programming* (4)	CS 111 Discrete Mathematics I*
DW 101 Strategies for Success (1)	CS 114 Introduction to Software Engineering* (4)
EN 115 College Writing	ID 101 First Year Seminar
MA 201 Calculus I (4)	EN 208 Public Speaking OR EN 215 Professional Writing
PY 101 Introduction to Psychology	MA 202 Calculus II (4)
EC 101 Macroeconomics	
Sophomore	
CS 112 Discrete Mathematics II	CS 218 Data Structures & Algorithms II*
CS 217 Data Structures and Algorithms I*	CS 235 3-D Modeling
CS 219 Computer Architecture I*	CS 238 UNIX Programming*
_____ 200-level Cultural Studies Core	MA 250 Linear Algebra w/ Apps (4)
CS 229 Fundamental of Game Development	PH 215 Physics AND
	PH 215L Physics Lab
Junior	
CS 312 Algorithms*	CS 317 Computer Networks*
CS 427 Computer Graphics*	CS 320 Programming Language Concepts^{W}*
CS 361 Computer Software/Operating Systems*	CS 435 Advanced Graphics*

_____ 300-level Cultural Studies Core

_____General Elective

CS 303L Junior Software Engineering Lab I

_____ 300-level Cultural Studies Core

_____ General Elective

CS 304L Junior Software Engineering Lab II

Senior

CS 409 3-D Game Programming*

CS 411 Artificial Intelligence*

ID 401 Senior Interdisciplinary Seminar

_____ GSR Elective

CS 413 Software Engineering Project I*

CS 425 System Architecture*

CS 445 Computer Science Internship (6)*

CS 414 Software Engineering Project II*

_____GSR Elective

_____ General Elective

*Grade of C or higher required

Please Note: All courses are 3 credits unless designated otherwise.

Mechanical Engineering

Bachelor of Science Degree

Mechanical engineering is one of the broadest of the engineering disciplines. It is concerned with the design, development, manufacture, and use of mechanical devices and systems, from the small-scale applications of nanotechnology to the large-scale world of aircraft and power plants.

Daniel Webster College is a collaborator in the international CDIO initiative (http://www.cdio.org/), "an innovative educational framework for producing the next generation of engineers [that stresses] engineering fundamentals set in the context of Conceiving, Designing, Implementing, and Operating real-world systems and products."

CDIO states, "We know some interesting facts about how experiences affect learning. Engineering students tend to learn by experiencing the concrete and then applying the experience to the abstract. Hands-on experience is a vital foundation on which to base theory and science." At DWC we embrace this philosophy of engineering education.

The four-year Mechanical Engineering curriculum contains a five-semester design sequence emphasizing hands-on design projects that requires students to work in teams. Students apply the theories they are learning in the classroom to the solution of open-ended problems. Commitment and responsibility to the design team are required and continually emphasized. As a result of this experience students gain both the confidence and competence necessary to tackle open-ended design problems and to excel in a team environment. They will be able to learn quickly and efficiently and to think strategically about the multiple issues involved in a project. We believe these skills are of critical importance for today's engineers

In order to demonstrate their grasp of fundamental concepts, students frequently present their solutions to various problems. In many engineering courses, students will work in small teams and do these presentations bi-weekly.

The design sequence also provides students with systems integration experience that incorporates components such as vision systems, sensors, controls, and the software that ties them together. Examples of potential project work are unmanned flight applications, which could include aerospace, geographic and topographic exploration, and, atmospheric research and security, and the application of advanced technology to the design of robots, automated systems, and medical devices. The College has acquired an ABB six-axis industrial robot and COGNEX vision systems to facilitate this experience.

If desired, students majoring in mechanical engineering have the opportunity to take the following courses as their three technical electives: Aerodynamics, Flight Dynamics I (Performance) and Flight Dynamics II (Stability and Control). In this sequence of courses students develop test plans and perform in-flight experiments using an aircraft quipped with a Calspan Miniature Flight Data Recording System (MFDRS). This highly sophisticated system is used to record twenty-eight different parameters at the sample rate of two hundred times per second. These parameters include the six components of rectilinear and rotational acceleration, aileron, elevator, and rudder positions, calibrated airspeed, static and dynamic pressure, etc. Once collected, the students analyze the data for comparison with theoretical predictions and published aircraft data. This level of in-flight experience is exceptional in undergraduate engineering programs.

Finally, the faculty at DWC is dedicated to student success. We believe that a key contributor to student success is the faculty mentoring of students outside of the classroom. We assure prospective students that if they are willing to work hard, we will do all we can to help them succeed.

Program Educational Objectives:
Graduates of the Mechanical Engineering Program at Daniel Webster College will

- Use the knowledge and problem solving skills developed as mechanical engineering majors to undertake professional careers in Mechanical Engineering or other disciplines;
- Approach engineering decisions with an informed consideration of global and societal contexts and consequences;
- Continue to expand their professional, personal, and interpersonal skills and engage in lifelong learning, including post-graduate education for some graduates;
- Contribute to industry and society through involvement with professional and other service activities;
- Assume increasing responsibility as they advance in their careers;
- Be regarded by their managers and peers as an effective and valued member of their work team.

Program Learning Outcomes:
Graduates of the Mechanical Engineering Program at Daniel Webster College will have

- An ability to apply knowledge of mathematics, science, and engineering;

- An ability to design and conduct experiments, as well as to analyze and interpret data;
- An ability to design a system, component, or process to meet desired needs within realistic constraints such as economic, environmental, social, political, ethical, health and safety, manufacturability, and sustainability;
- An ability to function on multi-disciplinary teams;
- An ability to identify, formulate, and solve engineering problems;
- An understanding of professional and ethical responsibility;
- An ability to communicate effectively;
- The broad education necessary to understand the impact of engineering solutions in a global, economic, environmental, and societal context;
- A recognition of the need for, and the ability to engage in life-long learning;
- A knowledge of contemporary issues;
- An ability to use the techniques, skills, and modern engineering tools needed for engineering practice;
- An ability to apply principles of engineering, basic science, and mathematics (including multivariate calculus and differential equations) to model, analyze, design, and realize physical systems, components or processes;
- An ability to work professionally in both thermal and mechanical systems areas.

Degree Requirements

Daniel Webster Success: 1 credit hour

- DW 101 - Strategies for Success

Communications: 3 credit hours

- EN 115 - College Writing and Research
  Note: Engineering communications are studied, applied, and assessed throughout the five-course design sequence. In addition, the capstone design sequence will provide an upper-level intensive writing experience. All courses in this sequence are co-taught with a humanities faculty member.

Mathematics and Natural Science: 32 credit hours

- CH 101 - Inorganic Chemistry I
- MA 201 - Calculus I
- MA 202 - Calculus II
- MA 203 - Calculus III
- MA 205 - Differential Equations
- MA 315 - Linear Algebra and Introduction to Numerical Methods
- PH 215 - Physics I
- PH 215L - Physics I Lab
- PH 216 - Physics II
- PH 216L - Physics II Laboratory

Human Behavior: 6 credit hours

- EC 101 - Macroeconomics
- PY 101 - Principles of Psychology

Cultural and Community Engagement: 15 credit hours

- ID 101 - First Year Seminar

Cultural Studies Core

Courses in cultural studies include at least one 200-level course and at least one 300-level course in Economics (EC), History (HI), Humanities (HU), Political Science (PS), Psychology (PY), Sociology (SO), Social Science (SS), and one 300-level Humanities (HU) course.

- 200-level Humanities (HU) or Social Science
- 300-level Humanities (HU)
- 300-level Social Science course
- ID 400-level Interdisciplinary Senior Seminar

Major Courses - 77.5 credit hours
Grade of C or higher required.

Mechanical Engineering Core - 68.5 credit hours

- EG 110 - Engineering Design I

- EG 112 - Engineering Design II
- EG 200 - Statics
- EG 201 - Fluid Mechanics
- EG 202 - Strength of Material
- EG 203 - Dynamics
- EG 207 - Instrumentation & Measurements
- EG 208 - Material Science
- EG 209 - Thermodynamics I
- EG 310 - Engineering Design III
- EG 316 - Electrical Engineering
- EG 318 - Thermodynamics II
- EG 333 - Control Systems Analysis
- EG 325 - Intermediate Strength of Materials
- EG 341 - Design of Machine Components
- EG 350 - Vibrations
- EG 420 - Thermal Design
- EG 410 - Heat Transfer
- EG 4XX - Analysis and Experimentation
- EG 460 - Capstone Design I [(W)]
- EG 461 - Capstone Design II [(W)]

Technical Electives - 9 credit hours
(Note: Some of these courses are under development and may not be offered every year)

- EG 308 - Gas Dynamics
- EG 314 - Aerodynamics
- EG 326 – Aircraft Structures
- EG 330 - Propulsion
- EG 409 - Composite Materials
- EG 418 - Flight Dynamics I/Performance
- EG 419 - Flight Dynamics II/Stability/Control
- EG 4XC - Sensor Technology
- EG 424 - Robotics/Automation/Vision I
- EG 425 - Robotics/Automation/Vision II

Total Credits Required - 134.5 credit hours

Footnote

[(W)]Upper-level writing intensive courses fill the general education third year writing requirement and the credits are applied toward major requirements. This course is subject the all minimum grade requirements for major requirements.

Suggested Sequence of Courses:

	Fall	Spring
Freshman		
	CH 101 Inorganic Chemistry (4)	ID 101 First Year Seminar
	DW 101 Strategies for Success (1)	EG 112 Engineering Design II* (3.5)
	EG 110 Engineering Design I* (3.5)	PH 215 Physics I
	EN 115 College Writing and Research	PH 215L Physics I Lab (1)
	MA 201 Calculus I (4)	MA 202 Calculus II (4)
	PY 101 Principles of Psychology	_____ 200-level Cultural Studies Core
Sophomore		

EG 200 Statics* (3.5)

EG 207 Instrumentation & Measurements*

EG 208 Material Science* (3.5)

MA 203 Calculus III (4)

PH 216 Physics II

PH 216L Physics II Laboratory (1)

EG 201 Fluid Mechanics* (3.5)

EG 202 Strength of Materials* (3.5)

EG 203 Dynamics* (3.5)

EG 209 Thermodynamics I*

MA 205 Differential Equations (4)

Junior

EG 316 Electrical Engineering* (3.5)

EG 318 Thermodynamics II*

EG 325 Intermediate Strength of Materials*

MA 315 Linear Algebra & Intro to Numerical Methods (4)

_____ 300-level Cultural Studies Core

EG 310 Engineering Design III* (3.5)

EG 333 Control Systems Analysis* (3.5)

EG 341 Design of Machine Components*

EG 350 Vibrations*

_____ 300-level Cultural Studies Core

Senior

EG 410 Heat Transfer* (3.5)

EG 460 Capstone Design I* W

ID 401 Senior Seminar

EG 3XX Technical Elective*

EG 3XX Technical Elective*

EG 3XX Technical Elective*

EG 4XX Analysis and Experimentation*

EC 101 Macroeconomics

EG 461 Capstone Design II* W

EG 420 Thermal Design*

*Grade of C or higher required.

Please Note: All courses are three credits unless designated otherwise.

Software Development
Bachelor of Science Degree

The Software Development bachelor degree program is designed for students who want to develop an understanding of software quality and the development process. Students will also receive instruction in computer science, mathematics, project and quality management, and software engineering. Concepts explored as part of the curriculum include methods of defining software requirements and software design, construction, testing and maintenance.

Degree Requirements

Communications:

- EN 115 - College Writing and Research
- EN 208 - Public Speaking OR
- EN 215 - Professional Writing AND
- IS 101 - Information Technology/Applications I

Mathematics and Natural Science:

- MA 201 - Calculus I
- MA 202 - Calculus II

_____ Natural or Physical Science

Human Behavior:
Two of the following:

- EC 101 - Macroeconomics
- PY 101 - Principles of Psychology
- SO 101 - Introduction to Sociology

Cultural and Community Engagement:

- 200-level Humanities or Social Science
- 200-level Humanities or Social Science
- 300-level Humanities
- 300-level Social Science
- ID 400-level Interdisciplinary Senior Seminar

Software Development Core - 34 credit hours
Grade of C or higher required

- CS 111 - Discrete Mathematics I
- CS 113 - Introduction to Programming
- CS 114 - Intro to Software Engineering
- CS 217 - Data Structure and Algorithms I
- CS 218 - Data Structure and Algorithms II
- CS 303L - Junior Software Engineering Lab I
- CS 304L - Junior Software Engineering Lab II
- CS 317 - Computer Networks
- CS 361 - Computer Software/Operating Systems
- IS 219 - Computer Architecture/Information Systems
- IS 223 - Database Application I

Software Development Electives - 21 credit hours

21 credit hours of CS, CT, OR IS courses.

At least 6 of the 21 credit hours must be 300 level or higher.

General Electives - 24 credit hours

Total Credits Required - 121 credit hours

School of Arts and Sciences

Dean:	John F. Slater
Professors:	Stephen R. Cernek, Laurie Gordy, Carol Lerch, James P. O'Donnell, Donald Wellman
Associate Professor:	Alexandra Peary**,** Director of Writing, John F. Slater
Assistant Professors:	Kathleen Fitzpatrick**,** Director of Experiential Education, Pre-Law Advisor**,** SS/HU Coordinator
Instructor:	Robert A. Rock**,** Director of the Math/Science Support Center, Math/Science Coordinator
Adjunct Instructors/Lecturers:	Julie Baker, Jan Beebe, Elizabeth Bonin, Robin Clark, Lucille DiCicco, Neil Gallagher, Paul LaBarre, Paula Jones, Linda Marquis, George D. Matson, Jill Rolph, Stephanie Roper, Kassie Rubico, Michelle Ryder, Patricia Trela, Scott Webber, Michael Yellin

Bachelor of Science

- Psychology
- Social Science

Associate in Science

- General Studies

General Studies

Associate in Science Degree

The two-year associate degree in General Studies offers students a flexible program of study that allows them to take basic courses in mathematics, writing, social sciences, humanities, and computer literacy—the major part of the traditional general education foundation required in most four-year colleges and universities. Along with earning credits applicable toward general education requirements, the general studies sequence develops analytical, problem solving, and communication skills, necessary for academic, professional and personal success.

In addition to these basic courses, general studies students, with the assistance of their academic advisors, will choose from a variety of elective courses to help them decide on their career and educational plans. Coursework taken in the General Studies program is used to help fulfill the general education and liberal arts requirements of a baccalaureate degree in most colleges and universities.

Degree Requirements

General Education Core

Communications - 9 credit hours

- EN 115 - College Writing and Research
- EN 208 - Public Speaking
- IS 101 - Information Technology/Applications I

Mathematics - 6 credit hours

- MA 120 - Survey of Mathematics OR
- MA 122 - College Algebra w/Applications
- MA 240 - Probability & Statistics

Human Behavior - 3 credit hours

- EC 101 - Macroeconomics OR
- PY 101 - Principles of Psychology OR
- SO 101 - Introduction to Sociology

Cultural and Community Engagement - 6 credit hours

- 200 level Humanities
- 200 level Social Science

Electives - 36 credit hours

30 credits of general electives plus 6 credits from either Humanities, Social Science and/or Mathematics/Natural Science.

Total Credits Required - 60 credit hours

Psychology

Bachelor of Science Degree

The mission of the Bachelor of Science in Psychology is to help students prepare for employment opportunities in the applied behavioral sciences. The program is based on a scientist practitioner model, and is structured to inculcate the core competencies necessary to allow students to pursue graduate school. Through explicit coursework and integration into certain courses in the curriculum, the program provides experiential learning, including conducting and participating in research and exposure to application of psychology in various settings including the workplace and in organizations that use the applied behavioral sciences.

Degree Requirements

Daniel Webster Success:

- DW 101 - Strategies for Success

Communications:

- EN 115 - College Writing and Research
- *Upper-level Writing Intensive course within the major (designated with a ^{W}) or, if not required within the major, a different writing intensive course outside of the major*

One of the following:

- EN 208 - Public Speaking
- EN 215 - Professional Writing

One of the following:

- 300 or 400-level writing intensive course (EN)
- IS 101 - Information Technology/Applications I

Mathematics and Natural Science:

- MA 120 Survey of Mathematics OR
- MA 122 - College Algebra w/Applications
- MA 240 - Probability & Statistics
- Natural or Physical Lab Science

Human Behavior:

- PY 101 - Principles of Psychology
- SO 101 - Introduction to Sociology

Cultural and Community Engagement:

- ID 101 - First Year Seminar

Cultural Studies Core

Courses in cultural studies include at least one 200-level course and at least one 300-level course in Economics (EC), History (HI), Humanities (HU), Political Science (PS), Psychology (PY), Sociology (SO), Social Science (SS), and one 300-level Humanities (HU) course.

- 200-level Humanities (HU) or Social Science
- 300-level Humanities (HU)
- 300-level Social Science course
- ID 400-level Interdisciplinary Senior Seminar

Major Courses - 39 credit hours

Grade of C or higher required

- PY 202 - Social Psychology
- PY 214 - Developmental Psychology
- PY 2XX - Psychology Career Planning and Development
- PY 322 - Abnormal Psychology
- PY 331 - Personality Psychology
- PY 336 - Learning and Memory
- PY 329 - Sensation and Perception -OR-
- PY 3XX - Motivation and Emotion

- PY 320 - Organizational Behavior
- PY 4XX - Psychological Assessment and Measurement
- PY 4XX - Psychology Internship (6 credits) -OR-
- PY 450 - Psychology Senior Thesis (6 credits)
- PY 410 - Experimental Psychology
- PY 4XX - History and Systems of Psychology

Note

(Note: Additional major courses listed under general foundation: PY101 Principles of Psychology, PY342 Physiological Psychology, and MA240 Probability and Statistics for a total of 9 additional major credits)
General Electives - 39 credit hours

Total Credits Required - 121 credit hours

Suggested Sequence of Courses:

Fall	Spring
Freshman	
DW 101 Strategies for Success (1)	EN 208 Public Speaking
EN 115 College Writing	SO 101 Introduction to Sociology*
PY 101 Principles of Psychology*	EN 102 College Writing and Research
MA 122 College Algebra with applications	_____ General Elective
IS 101 Information Tech/Applications I	_____ General Elective
_____ General Elective	
Sophomore	
PY 202 Social Psychology*	PY 214 Developmental Psychology*
SS 200 200-level Social or Behavioral Science Course	HU 200 200-level Humanities Course
MA 240 Probability and Statistics*	PY 2XX Psychology Career Planning & Development*
_____ General Elective	_____ General Elective
_____ General Elective	_____ General Elective
Junior	
PY 336 Learning and Memory*	PY 322 Abnormal Psychology*
PY 331 Personality Psychology*	PY 342 Physiological Psychology*
PY 3XX Motivation and Emotion*# (or	PY 320 Organizational Behavior
SS 300 300-level Social or Behavioral Science Course	HU 300 300-level Humanities Course
_____ General Elective	_____ General Elective
Senior	
PY 4XX Psychological Assessment and Measurement*	PY 410 Experimental Psychology*
PY 4XX Psychology Internship* (6) - OR-	PY 4XX History and Systems of Psychology*
PY 4XX Psychology Senior Thesis* (6)	ID 400 Senior Interdisciplinary Seminar
_____ General Elective (or PY 3XX Sensation and Perception*#)	_____ General Elective (or PY 3XX Sensation and Perception*#)
_____ General Elective	_____ General Elective

*Major course or major cognate: Grade of “C” or higher required

Students must take either PY 3XX Motivation and Emotion or PY 3XX Sensation and Perception. Students going on to graduate school are strongly encouraged to take both courses. Please Note: All courses are three credits unless designated otherwise.

Social Science

Bachelor of Science Degree

The Social Science major at Daniel Webster College has been designed for students who share a humanistic interest in the contemporary issues and social problems that shape the lives of people in communities throughout America and around the world. The program helps students prepare for employment opportunities in government and non-profit organizations, and it serves as a potential foundation for students planning to pursue advanced degrees in business, law, and education.

A feature of the Social Science major is its combination of a solid foundation in the social sciences with the specialized empirical skills that may help graduates enter a profession after graduation. The major offers the career-related skills needed to enter the workforce in a productive, responsible position while providing the student with the intellectual and communications skills characteristic of the liberal arts that are needed to advance in a career: analytical thinking, creative problem solving, written and oral communication skills, thinking holistically, and learning to learn.

Social Science students receive a multidisciplinary education of theoretical and applied study. Experiential learning, course-based service learning, and internships extend student learning to off-campus settings while serving as practical opportunities for Social Science majors to apply what they learn in the classroom. Students will have a capstone experience in a seminar that will provide them with the means to demonstrate their knowledge, skills and achievement of the learning outcomes for the program.

The Social Science major at Daniel Webster also offers students the flexibility to develop an individualized plan of study that includes a focus on a particular professional education. Students pursuing employment opportunities in business, for example, might elect a concentration in Business Management or Sport Management. Those who desire employment in a working world where computers are an essential tool may want to consider an Information Systems concentration. Other possible concentrations include Psychology, Pre-Law, Aviation Management, Marketing Management, and Information Technology. The elective credits available in the Social Science curriculum encourage students to choose from a variety of courses in several disciplines based on individual career interests and goals, including the pursuit of graduate study.

The Community Service Portfolio
When a student elects the major in Social Science, he or she demonstrates an interest in the contemporary issues and social problems that influence the lives of people throughout the United States and around the world. As a future decision-maker in the world community, whether in business, education, or government, a record of practical community experience will distinguish the Social Science graduate from Daniel Webster College.

The bachelor's degree in Social Science requires the completion of 100 hours of community service. Beginning with enrollment in SS 100, Introduction to the Social Sciences, majors will create and maintain a Community Service Portfolio that will document and provide reflection on their service activities.

Degree Requirements

Daniel Webster Success:

- DW 101 - Strategies for Success

Communication:

- EN 115 - College Writing and Research
  Upper-level Writing Intensive course within the major (designated with a ^{W}) or, if not required within the major, a different writing intensive course outside of the major
- IS 101 - Information Technology/Applications I

One of the following:

- EN 208 - Public Speaking
- EN 215 - Professional Writing

Mathematics and Natural Science:

- MA 120 - Survey of Mathematics -OR-
- MA 122 - College Algebra w/Applications
  Natural or Physical Lab Science

Human Behavior:

- PY 101 - Principles of Psychology

Cultural and Community Engagement:

- ID 101 - First Year Seminar

Cultural Studies Core

Courses in cultural studies include at least one 200-level course and at least one 300-level course in Economics (EC), History (HI), Humanities (HU), Political Science (PS), Psychology (PY), Sociology (SO), Social Science (SS), and one 300-level Humanities (HU) course.

- 200-level Humanities (HU) or Social Science
- 300-level Humanities (HU)
- 300-level Social Science course
- ID 400-level Interdisciplinary Senior Seminar

Major Courses - 45 credit hours

Grade of C or higher required

- SS 101 - Introduction to the Social Sciences

Foundation Courses - 9 credit hours

- EC 101 - Macroeconomics
- PS 101 - Introduction to Political Science
- SO 101 - Introduction to Sociology

Historical Studies - 3 credit hours

Select one of the following:

- HI 201 - America in the 20th Century
- HI 233 - 20th Century Global History

Experiential and Community Learning - 3 credit hours

- SS 260 - Social Science Practicum
  Community Service/Service Learning Portfolio

Computational and Research Skills - 6 credit hours

- MA 240 - Probability & Statistics
- SS 301 - Research Methods for the Social Sciences

Advanced Disciplinary and Interdisciplinary Courses - 18 credit hours

Select six courses at the 300/400 level from at least two of the following disciplines:

History (HI)
Social Science (SS)
Psychology (PY)
Sociology (SO)
Political Science (PS)

Capstone Social Science Course - 3 credit hours

- SS 400 - Senior Seminar in the Social Sciences

General Electives - 36 credit hours

Students may choose electives freely from among all of the College's courses, or they may elect to declare a Concentration. Elective requirements may also be completed with Study Abroad, Washington Semester or Washington Internship programs.

Total Credits Required - 121 credit hours

Collateral Study

The design of the Social Science major permits a considerable degree of student choice in the selection of major courses and in the use of elective credits. Limiting the major core to 45 required credits is intended to encourage students to use their electives freely by taking courses in other fields, completing structured Concentrations, or by taking advantage of off-campus study opportunities that will extend their undergraduate preparation and broaden their social and cultural experiences.

Professional Concentration Options

Six possible concentrations for the Social Science major are described here. Students need to earn a grade of "C" or better in each of the concentration courses. Additional concentration options are under development or may be designed to support student interest.

Management Concentration
Students majoring in Social Science will have the option of selecting a Management concentration to support their prospects for successful entry into the business and management job market upon graduation. The concentration is intended to provide majors who seek careers in business, government, and non-profit organizations with collateral preparation in management.

Students must earn 18 credits (6 courses) to complete the Management concentration.

- AC 201 - Financial Accounting
- BM 101 - Principles of Business Management
- BM 305 - Labor Management Relations
- BM 404 - Ecology and Ethics of Information Technology
- MK 310 - Contemporary Problems in Marketing

And select one of the following courses:

- BM 205 - Human Resource Management
- BM 212 - Operations Analysis and Management
- MK 201 - Principles of Marketing

The Marketing Concentration
Students must earn 18 credits (6 courses) to complete the Marketing concentration.

- BM 101 - Principles of Business Management
- MK 201 - Principles of Marketing
- MK 410 - Marketing Strategy

And select three of the following courses (2 of which must be at the 300 level):

- MK 202 - Advertising
- MK 312 - International Marketing
- MK 315 - Sales Management
- MK 328 - Consumer Behavior

Pre-Law Concentration
Students interested in Pre-Law should follow the basic social science curriculum, plus SS 235, Introduction to the Legal Profession. Their Pre-Law advisor will help to focus on the experiences of strongest interest to the student, such as politics, litigation, contracts, intellectual property, real estate, or finance.

Psychology Concentration
Students majoring in Social Science have the option of selecting a Psychology concentration to support their interest in human behavior. Students will need to take PY101, Principles of Psychology, before they begin the concentration. It is a pre-requisite for all of the courses in the concentration. The Psychology concentration consists of the following 6 courses, for a total of 18 credits:

- PY 410 - Experimental Psychology

And select five of the following six courses:

- PY 202 - Social Psychology
- PY 214 - Developmental Psychology
- PY 322 - Abnormal Psychology
- PY 331 - Personality Psychology
- PY 336 - Learning and Memory
- PY 342 - Physiological Psychology

Sport Management Concentration
Students majoring in Social Science who have an interest in the rapidly growing sport industry can choose a concentration in Sport Management. The interrelated social, political and economic forces that characterize modern sport make this concentration a logical curricular enhancement of the Social Science major.

The concentration provides students with a strong foundation in management and marketing and offers the opportunity to explore advanced work in several sport management areas that are grounded in the social sciences.

Students must earn 18 credits (6 courses) to complete the Sport Management concentration.

- BM 101 - Principles of Business Management
- MK 201 - Principles of Marketing
- SM 101 - Introduction to Sport Management
- SM 225 - Ethics and Sociocultural Issues in Sport

And select two of the following courses:

- SM 203 - Governance and Globalization in Sport
- SM 305 - Legal Issues in Sport Management
- SM 320 - Sport Marketing/Promotion
- SM 336 - Sport Psychology

Additional Information

Other concentrations may be designed by the student in collaboration with their social sciences advisor.

Social Science Minor

Grade of C or higher required:

- SS 301 - Research Methods for the Social Sciences

Three courses from at least two of the following disciplines

(courses must be at the 200-level or higher, with at least one at the 300-level):

History (HI)
Social Science (SS)
Political Science (PS)
Sociology (SO)
Psychology (PY)

In addition to 12 credit hours, a minimum of 20 hours of community service is required. This requirement may be fulfilled by the completion of a wide variety of service learning programs, community service projects, or self-designed independent projects. A portfolio will be maintained, which shall contain documentation of all service projects with journal entries that describe and reflect upon all relevant activities.

Although not required by the minor, students are strongly encouraged to take SS 101 Introduction to the Social Sciences.

Social Science Major Curricula Plans:

Possible Concentrations/Collateral Study
The tracks outlined below suggest how students majoring in Social Science might create a variety of four-year degree programs.

Track A	**credit hours**
General Education Core	43
Social Science Core	42
Electives	36
Total	**121**

Track B	**credit hours**
General Education Core	43
Social Science Core	42
Psychology Concentration	18

Senior Internship	12
Electives	6
Total	**121**
Track C	**credit hours**
General Education Core	43
Social Science Core	42
Management Concentration	18
Senior Internship	12
Electives	6
Total	**121**
Track D	**credit hours**
General Education Core	43
Social Science Core	42
Sports Management Concentration	18
Senior Internship	12
Electives	6
Total	**121**
Track E	**credit hours**
General Education Core	43
Social Science Core	42
Marketing Concentration	18
Senior Internship	12
Electives	6
Total	**121**
Elective/Off-Campus Study Options	
Washington Semester	**9-16 credit hours**
Washington Internship	**12 credit hours**
Study Abroad	**12-15 credit hours**

Suggested Sequence of Courses:

Fall	Spring
Freshman	
DW 101 Strategies for Success (1)	EN 102 College Writing & Research
PY 101 Principles of Psychology	EN 208 Public Speaking
MA 1XX Survey of Mathematics	EC 101 Macroeconomics*
SS 101 Introduction to the Social Sciences*	IS 101 Information Tech/Applications I
PS 101 Introduction to Political Science*	SO 101 Introduction to Sociology*
_____ General Elective	
Sophomore	
EN 215 Professional Writing OR EN 245 Writing for Publication	_____ Psychology Concentration Elective*+

HU 200 200-level Humanities Elective

HI 160 20th Century Global History* -OR-

HI 201 America in the 20th Century*

_____ Psychology Concentration Elective*+

_____ General Elective

SS 260 Social Science Practicum*

SS 200 200-level Social or Behavioral Science Elective

_____ Natural or Physical Science Elective#

_____ Advanced Disciplinary/Interdisciplinary Elective*

Junior

MA 240 Probability and Statistics*

_____ Psychology Concentration Electives*+ (6)

_____ Advanced Disciplinary/Interdisciplinary Electives* (6)

_____ Upper Level Writing Intensive Course

SS 301 Research Methods*

HU 300 300-level Humanities Elective*

_____ Psychology Concentration Elective*+

SS 300 300-level Social or Behavioral Science Elective*

_____ Advanced Disciplinary/Interdisciplinary Elective*

Senior

ID 400 Senior Interdisciplinary Seminar

SS 490 Senior Internship* (12)

PY 410 Experimental Psychology*

SS 400 Senior Seminar in the Social Sciences*

_____ Advanced Disciplinary/Interdisciplinary Electives* (9)

*Grade of C or higher required.

+ Psychology Concentration Electives: PY 202 Social Psychology, PY 214 Developmental Psychology, PY 322 Abnormal Psychology, PY 331 Personality Psychology, PY 336 Learning and Memory, and PY 342 Physiological Psychology.

Students have the option of taking PY 342 Physiological Psychology as their Natural or Physical Science Elective. They would also take the other five psychology concentration electives in addition to PY 410 Experimental Psychology as part of the Psychology Concentration.

Please Note: All courses are three credits unless designated otherwise.

Plans for suggested sequence of courses for other concentrations are available through the student's faculty advisor.

Course Descriptions

AC 201 - Financial Accounting

3 Credits

This course covers the fundamentals of financial accounting. Topics include the principles of double-entry bookkeeping, construction of income statements and balance sheets, analysis of such financial statements, and analysis of cash flows. Students learn how to record transactions and construct from that record the financial statements of a small business. Other topics include present value analysis, financial forecasting, budgeting, and asset management. AC201 is a prerequisite for all other courses in Accounting and Corporate Finance.

AC 203 - Managerial Accounting

3 Credits

Managerial Accounting teaches the use of accounting as an aid to managerial decision-making. Included are analyses of financial statements, problem areas in accountability, price level changes, estimating and controlling costs, capital budgeting, and manufacturing cost analysis. **(Offered Spring semester only)**

Prerequisites: AC201

AE 205 - Aircraft Operations

3 Credits

This course provides a practical introduction to aircraft operational characteristics of importance to aviation managers, support personnel, and air traffic controllers. Topics include: principles of flight; fundamentals of aircraft flight behavior; specific items of aircraft performance such as takeoff/landing performance, climb/descent performance, cruise performance, and turning performance; aircraft operating limitations; aircraft navigation methods and systems and their application. Students will become familiar with the operating characteristics of a representative sample of air carrier, military and general aviation aircraft. (Not open to AFO majors.) (Offered Fall semester only)

AE 268 - Applied Flight Dynamics

3 Credits

The student will master the key elements of aircraft flight behavior based upon a highly faithful cognitive model of the aircraft and its environment and the application of this knowledge to critical flight tasks and conditions. The student will gain proficiency in aircraft performance analysis using total energy methods and aircraft performance optimization, and will apply this knowledge to planning technically challenging flights and to making critical in-flight adjustments in response to operating necessities.

Prerequisites: AF258 and PH205 (may be taken concurrently)

AE 306 - Human Factors/Flight

3 Credits

The student will explore human physiological processes as affected by flight including high altitude flight, and human cognitive and judgment processes typically required of the human "half" of complex human/machine systems found on flight decks, in air traffic control suites, and in other flight operations contexts, to gain understanding of our unique capabilities and limitations, both as physiological organisms and thinking beings. The student will learn to apply these insights to assessing and improving the performance of flight crews, air traffic controllers, and other operations personnel, and to identify and respond to critical physiological and cognitive factors such as hypoxia, disorientation, and the effects of stress, fatigue, anxiety, and alcohol and other drugs. The student will gain an understanding of medical standards and certification of pilots and other flight personnel, and of available resources for responding to medical deficiencies and/or certification difficulties.

Prerequisites: PY101

AE 318 - Advanced Aircraft Systems

3 Credits

The student will gain a thorough understanding of critical aircraft systems and components - theory of operation, functional description, details of component and system operation and interaction, and the application of this knowledge to their proper use and management. The student will explore the impact of more advanced aircraft components and systems on aircraft operational capability and the resulting mission flexibility. In addition, the student will learn how to systematically approach new or unfamiliar components and systems that are likely to be encountered as her or his career progresses.

Prerequisites: Prerequisite or may be taken concurrently: AF258

AE 408 - Flight Safety

3 Credits

This capstone seminar integrates the professional and technical knowledge and methods gained in the flight operations, air traffic control, or aviation management sequences and applies these understandings to the prime objective of achieving aviation system safety. Students will work in multi-disciplinary teams to evaluate and respond to representative case studies drawn from National Transportation Safety Board (NTSB) accident investigations, reports and findings, aviation industry analyses and reports, and analysis and policy statements by government and trade organizations. In addition, students will complete self-assessments of their professional preparation, status of their professional certification, short and mid-term career planning, and long-term career objectives.

Prerequisites: Prerequisite or may be taken concurrently: For AFO Students: AF338; For 0ATC Students: AT410; For AM Students: AM320 or AM 330 or AM360 Professional Pilot Education Course

AF 148 - Extended Fundamentals of Flight

4 Credits

In this course, students will learn to use flight information and environmental information cues to develop and maintain an accurate cognitive model of the flight situation (situation awareness) as a basis for pilot judgment and pilot action. Students will gain understanding of aircraft flight behavior, multi-scale weather dynamics, especially as they impact the flight situation, and develop competence as a pilot in preparation for more advanced study. **This is a mastery course. Grade of B- or higher required for flight (AO/AFO) majors.**

Prerequisites: AF 128, AF 128P, and MA 122

Corequisites: AF 148P, MA 115

AF 148P - Extended Fundamentals of Flight Practicum

2 Credits

The student will practice and gain confidence in VFR cross-country flight as Pilot in Command and will explore more challenging flying tasks and operating conditions through a series of structured flight exercises and flight scenarios, integrating key elements of aircraft flight behavior, multi-scale weather dynamics especially as they impact the flight situation, and pilot performance. The student will demonstrate readiness for more advanced study. This is a FAR Part 141 course.

Prerequisites: AF128, AF128P and FAA Private Pilot Certificate

Corequisites: AF148, MA115

AF 216P - Multiengine Class Rating Practicum

1 Credits

The student will master the fundamental skills of multiengine aircraft control and maneuvering, and planning and conducting multi-engine VFR flight operations. The student will master the knowledge, skill, and judgment necessary to qualify for the addition of an Airplane Multiengine land class rating to an existing Private Pilot Certificate. When the student already has an instrument rating, the student also will be expected to meet instrument requirements. May not be taken after completion of AF 338P.

Prerequisites: AF 148, AF 148P, and AF 258P; Private or Commercial Pilot Certificate (Airplane Single-engine Land)
Prerequisite or may be taken concurrently: AF 318

AF 218P - Global Navigation Systems Operations Practicum

1 Credits

The student will use all modes of navigation including pilotage, dead reckoning and electronic aids to assure position orientation while mastering the use of the Global Positioning System. Proficiency will be demonstrated in the use of the G.P.S. for navigation in both the enroute and terminal phases of flight. The Garmin G.N.S. - 430 will be used for simulation and inflight practice of flight planning, checklists, standard instrument departures, enroute navigation, arrival and approach phases of flight.

Prerequisites: AF258, AF258P

AF 258 - Integrated Flight Operations

4 Credits

The student will master the knowledge of aircraft operations based upon a progressively more robust situational awareness using integrated visual/instrument flight references, and the application of this knowledge for aircraft control and navigation in the air traffic systems under Instrument Flight Rules (IFR) and for planning and conducting IFR flight operations. The student will gain the knowledge necessary to successfully complete the FAA knowledge test for the Instrument rating (Instrument-Airplane). This is a FAR Part 141 course. This is a mastery course. Grade of B- or higher required for flight (AO/AFO) majors.

Prerequisites: AF148 and MT201 (may be taken concurrently)

Corequisites: AF258P

AF 258P - Integrated Flight Operations Practicum

3 Credits

The student will acquire proficiency in aircraft control and navigation using integrated visual/instrument flight references for IFR enroute and terminal operations in the air traffic system, and in planning and conducting IFR cross-country flight operations. In addition, the student will master the knowledge, skill, and judgment necessary to safely conduct VFR operations as PIC and IFR operations under supervision in the Piper PA28 (Arrow) single engine complex aircraft. **This is a FAR Part 141 course.**

Prerequisites: AF148P

Corequisites: AF258 (next available offering and permission of Aviation Division Chair)

AF 328 - Full Mission Operations

4 Credits

The student will master the knowledge of safe, productive, and efficient aircraft operations in the national aerospace system emphasizing safety and utility, and the application of this knowledge for effective pilot judgment under "real world" conditions of challenging operational requirements, adverse weather, and complex ATC environments. The student will gain a thorough understanding of the professional operating context (including the requirements of FAR Part 135), and the development, implementation, and monitoring of flight strategies to meet progressively more challenging mission requirements and constraints. The student will be introduced to the single-pilot fundamentals of cockpit resource management (CRM) using the **Quantum-Pro® Cockpit Management System.** The student will master the knowledge necessary to successfully complete the FAA knowledge test for the FAA Commercial Pilot Certificate. **This is a FAR Part 141 course. This is a mastery course. Grade B- or higher required for flight (AO/AFO) majors.**

Prerequisites: AF 258, AE 268, and AE 318 (AE 268 and AE 318 may be taken concurrently)

Corequisites: AF328P

AF 328P - Full Mission Operations Practicum

3 Credits

The student will master the skills of safe, productive, and efficient aircraft operations in a more authentic operating environment emphasizing safety and utility in professional flying, and will master the knowledge, skills, and judgment necessary to qualify for the FAA Instrument Airplane Rating. The student will practice effective pilot judgment including the development, implementation, and monitoring of flight strategies to meet progressively more challenging mission requirements and constraints through a sequence of structured "Line Oriented Flight Training (LOFT)" missions. The student will practice the single-pilot fundamentals of cockpit resource management (CRM) using the Quantum-Pro® Cockpit Management System, using a combination of single and multi-engine aircraft. This is an FAR Part 141 course. Note: The student will meet all knowledge, skill, and experience requirements for the FAA Instrument rating (Instrument-Airplane) at the midpoint of AF328P and is expected to complete the required practical test for the issuance of the rating at that point. Students who delay in meeting these certification requirements may need to meet additional experience requirements and incur additional costs for completion of the Professional Pilot Education sequence.

Prerequisites: AF258P

Corequisites: AF328 (next available offering and permission of Aviation Division Chair)

AF 338 - Crew/ATC Integration

4 Credits

The student will gain a thorough understanding of CRM methods using the **Quantum-Pro® Cockpit Management System** applied to multi-pilot crews and extended to include the air traffic controller as a "time/task-shared" crew member and critical partner in the successful completion of the mission. In addition, the student will explore professional operations in expanded operational contexts including long-range and international flight operations, and operations in the very dense air traffic environments of major hub airports. **This is a mastery course. Grade of B- or higher required for flight (AO/AFO) majors.**

Prerequisites: AF328 and AE306 (AE306 may be taken concurrently)

Corequisites: AF338P

AF 338P - Crew/ATC Integration Practicum

3 Credits

The student will practice the application of CRM methods using the **Quantum-Pro® Cockpit Management System** to further improve mission performance through multi-pilot crew integration and effective partnership with ATC. The student will practice effective pilot judgment as a member of a multi-pilot crew, through a sequence of structured LOFT missions in a progressively expanding operational context including long-range and international flight operations and operations in the very dense air traffic environments of major hub airports. The student will master the knowledge, skills, and judgment necessary to qualify for the FAA Commercial Pilot Certificate (Airplane Single- and Multi-engine land, Instrument-Airplane). This is an FAR Part 141 course.

Prerequisites: AF328P

Corequisites: AF338 (next available offering)

AF 409 - Flight Instructor (Airplane)

4 Credits

The course explores fundamental theories of instruction and instructional methods. Opportunities are provided for directed practice as an instructor with emphasis on developing a sensitivity to student needs and learning styles. The student instructor will gain the knowledge necessary to successfully complete the FAA knowledge tests for Fundamentals of Instructing and Flight Instructor Airplane. **This is a mastery course. Grade of B- or higher required for flight (AO/AFO) majors.**

Prerequisites: AF 338

Corequisites: AF 409P

AF 409P - Flight Instructor Practicum

1 Credits

The student will practice and apply the theories and methods of flight instruction through a series of exercises in the aircraft. The student flight instructor will learn to demonstrate, analyze and critique maneuvers and to recognize and critique typical student pilot errors. The student will master the knowledge skills and judgment necessary to qualify for the FAA Flight Instructor Certificate (Airplane Single engine).

Prerequisites: AF338P or AF338SEP

Corequisites: AF409

AF 451 - Flight Instructor Internship

1 to 3 Credits

This course provides a structured flight instructor internship under the supervision of the College Aviation Center. Registration is restricted to DWC Aviation Flight Operations students with a 3.0 CGPA, and by permission of the instructor. The course may be repeated for additional credit.

Prerequisites: AF409, Junior status and instructor permission

AM 201 - Aviation Law

3 Credits

This course covers the development of air law including federal and state regulatory functions, rights and liabilities of aviators and operators, rights of third parties on the ground, and passengers in tort and contract cases. It also provides a study of international conventions, agreements, and associations such as the International Civil Aviation Organization.

AM 205 - Aircraft Operating Economics

3 Credits

This course covers the analysis of aircraft operating capabilities, the capital value of aircraft, and the cost of aircraft operation. An emphasis will be placed on identifying the interrelationship between these three factors. Aircraft from the basic general aviation trainers to large commercial transports will be included. Computer applications programs will be used in the analysis and presentation of information. AM205 is a core requirement and a prerequisite for many AM courses.

Prerequisites: AE205 or AF128

AM 215 - General Aviation Operations

3 Credits

This course provides an in-depth study of the general aviation field, including finances, management, operations and regulations. Major concentration will be placed on the management and administration of a fixed-base operation; the duties and responsibilities of the airport manager; and the managerial considerations in the application of the small airplane in business aviation, aerial photography, agricultural

spraying, aircraft sales, financing, and insurance. Guest lecturers are often scheduled. **(May not be offered every semester)**
Prerequisites: IS101 and AM205 (may be taken concurrently)

AM 220 - Airport Operations

3 Credits
This course provides an introduction to airport operating practices. Topics will include the history of airport development, landside and airside operations, airport layout, airport equipment, applicable regulations, and the impact of technological advances in air transportation. The course will also introduce students to airport planning , airport finances, managing growth , airport management, and community relations. The course will cover general aviation, regional, and major airports. Field trips may be required. **(Offered Spring semester only)**
Prerequisites: AE205 or AF128

AM 320 - Air Carrier Operation

3 Credits
This course covers analysis of the economic and administrative factors involved in airline operations. An emphasis is placed on demand analysis, pricing, route structure, fleet planning and financing. A simulation of airline operations will be used to provide practical insights into the problems faced in managing an airline. **(Offered Fall semester only)**
Prerequisites: AM205

AM 330 - Business & Corporate Aviation

3 Credits
This course provides an analysis of the operation of corporate/business flight operations, including administration and operations. Topics include how aviation relates to business and industry; the administrative and fiscal concerns of a flight department; maintenance operations and departmental organization; and aircraft and equipment evaluation. **(Offered Spring semester only)**
Prerequisites: AM205

AM 340 - Airport and Airspace Capacity Management

4Credits
This course provides an analysis of the key elements of airport and airspace capacity. Current techniques for measuring airport and airspace capacity will be examined, including the relationship between delay and capacity, as well as aircraft operating characteristics and airline scheduling practices. The impact of airport development on airspace capacity, including projects such as locating new airports and building new runways at existing airports, will also be explored. The role of federal, state, and local agencies and the private sector will be analyzed in terms of airport/airspace capacity. Computer simulation modeling, such as the FAA's SIMMOD, will be used in analyzing case studies in airspace and airport capacity and delay. Lab included. **(Offered Fall semester only)**
Prerequisites: AE 205 or AF 128; MA 240; and AM 220 or AT 310

AM 360 - Airport Planning and Management

3 Credits
This is an advanced course in the planning, management, and operation of airports, Students will learn to apply fundamental management theory to airports; determine an airport's capacity and assess the potential for delays; evaluate the environmental impact of an airport; identify the basic components of the National Airspace System and its relationship to airports; apply basic financial management and accounting techniques to airport finances; set airport fees, rates, and charges; understand the process required to obtain capital funding for airport improvements; evaluate and use airport master plans, state airport system plans, and airport layout plans; apply basic principles of terminal design and operations; have a working knowledge of Part 139 of the Federal Aviation Regulations; evaluate the security of an airport; and prepare basic airport emergency response procedures. Successful completion of the course will prepare the student for optional accreditation as a Certified Member (C.M.) of the American Association of Airport Executives (AAAE). This is the first step in becoming an Accredited Airport Executive (A.A.E.). The optional accreditation requires a $350 fee, which includes AAAE membership for one year. **(Offered Fall semester only)**
Prerequisites: AM 220

AM 404 - Studies/International Aerospace

3 Credits
This is a research course designed to promote a greater awareness of international aerospace issues and the role of aerospace industries in promoting dialogue between nations. International aerospace law, worldwide air transportation growth and the economic factors which compel multi-national risk-sharing ventures in aerospace industries will be among the topics explored. **(May not be offered every year -**

Spring semester when offered)
Prerequisites: AE 205 or AF 128, AM 201 and AM 205, AM 320 or AM 330 or AM 340

AM 406 - National Internship-Aviation

3 to 12 Credits
Daniel Webster College has internship agreements with a number of aviation industry organizations whose office locations may be located some geographical distance away. The student is afforded the opportunity to participate in the organization's daily activities and to observe and practice principles previously explored in the classroom. The student must be prepared to offset additional travel and living expenses, and a nationally competitive application and selection process may be involved. Normally only seniors are considered and approval of the instructor is required.
Prerequisites: Senior status and instructor permission

AM 407 - Internship in Aviation Management

6, 9 or 12 Credits
The internship program offers advanced students the opportunity to apply the concepts and principles of management developed in prerequisite courses. The course involves full-time participation in an internship cooperatively sponsored by a participating business and Daniel Webster College. Only seniors accepted for the internship program are eligible to register.
Prerequisites: Senior status and instructor permission

AM 410 - Trends/Current Problems Av Management

3 Credits
This is an honors seminar focusing on contemporary issues, problems, and trends in airline, corporate, and general aviation**.** Registration is restricted to senior students with a 3.0 CGPA or by permission of the instructor**. (Offered Spring semester only)**
Prerequisites: An AM elective course

AM 445 - Aviation Policy Seminar

3 Credits
Aviation policies are primarily established in Washington, D.C. through the enactment of legislation and the DOT/FAA's rulemaking authority. This course analyzes the process by which that policy is established and how various organizations and individuals can affect the final legislation or rule. The first part of the course involves classroom and research activity on a selected aviation policy issue. The second portion of the course is a seminar, held the first week in January in Washington, D.C. during which the students interact with the policy makers to gain a greater understanding of the policy making process. There are travel, hotel, and meal expenses associated with participation in the seminar. **(Offered Fall semester only)**
Prerequisites: Junior or Senior status

AM 608 - The Air Transportation System

3 Credits
This course ties together aviation systems theory with an understanding of how aviation sub-industries work together. It address significant current issues and skill sets in aviation such as environmental management, risk management, project management, and capacity management amongst others.

AM 615 - Economics in Air Transportation

3 Credits
This course will help students develop an understanding of economic theory and models that are particularly valuable to managers who deal directly with the air transportation industry. These tools will then be used in a variety of cases and simulations to aid participants students in understanding the full value of air transportation to the users and the impacts on society; the effect of various forms of taxation and user charges; and how variations in the nature and cost of various forms of air transportation affect the structure of the industry.

AM 635 - Aviation Safety and Security

3 Credits
This course will help students develop strategies for the management of security and safety in aviation operations. A foundation will be provided in the basic causes of safety and security problems and strategies that have been effective at dealing with these issues. Case studies will then be used to develop the student's ability to integrate these concepts with those from earlier courses in leadership and organizational behavior.

AM 655 - Global Aviation Management and Law

3 Credits

This is a graduate course designed to promote a great awareness of the international aviation system. In the last five decades, commercial air transport has expanded rapidly and, at the same time, air transport has become increasingly complex and specialized. This requires that aviation managers and the thousands of specialists involved in the aviation industry keep abreast of new developments, techniques and the precise meaning of aviation terminology, and that they should be able to communicate effectively across the different levels of management functions and specialist boundaries. New concepts, services, systems, definitions and expressions are constantly being added to the aviation vocabulary and this trend will continue in the future. International aviation law, issues of international interdependence impacting the aviation industry, worldwide air transportation growth and the economic factors which compel multi-national risk-sharing ventures in aviation related industries are among the topics explored.

AM 695 - Capstone Research Project

3 Credits

Students will act as a consultant to a real business and analyze a problem or opportunity at that business. Students use all that they learned in their prior courses and will produce a consultant's report and recommend an action plan based on at least three of the four areas of Organizational Behavior, Accounting and Finance, Operations Management, and Marketing. Student will use all they learned in the program, their business acumen, and research skills to develop research problems, generate and test hypotheses, and make recommendations based on their findings.

AS 101 - The Air Force Today

1 Credits

AS 101 is a survey course briefly treating chief topics relating to the Air Force and defense. It focuses on the structure and missions of Air Force organizations; officership and professionalism; and includes an introduction to communication skills.

AS 102 - The Air Force Today

1 Credits

Completion of the material described in AS 101.

AS 201 - Development Air Power

1 Credits

This course focuses on factors contributing to the development of air power from its earliest beginnings through two World Wars, the evolution of air power concepts and doctrine, and an assessment of communication skills (speaking and writing).

AS 202 - Development Air Power

1 Credits

Completion of the material described in AS 201.

AS 301 - Air Force Management

3 Credits

This is an integrated management course emphasizing the individual as a leader/manager in a Fortune 500/Air Force setting. The individual motivational and behavioral processes, leadership, communication, and group dynamics are covered to provide a foundation for the development of the professional skills needed by Air Force officers and middle managers. The basic managerial processes involving decision-making, utilization of analytic aids in planning, organizing, and controlling in a changing environment are emphasized as necessary professional concepts. Actual Air Force and corporate case studies are used to enhance the learning and communication processes.

AS 302 - Air Force Management

3 Credits

Continuation of the material described in AS 301.

AS 401 - National Security Forces

3 Credits

AS 401 includes: an examination of the needs for national security; an analysis of the evolution and formulation of the American defense policy and strategy; aerospace doctrine; an examination of the methods for managing conflict; overview of alliances and regional security, arms control, and terrorism. Special topics of interest focus on the military as a profession, officership, the military justice system, and current issues affecting military professionals. Within this structure, continued emphasis is given to the refinement of communication skills.

AS 402 - National Security Forces

3 Credits

Continuation of the material described in AS 401.

AT 110 - Fundamentals of Air Traffic Control

3 Credits

This is an introduction to the federal air traffic control, airspace and airway structures, and fundamental ATC concepts, skills, techniques, and procedures. The course is intended to allow students to explore air traffic control as a professional option and to provide a foundation for further ATC education. ATC simulation exercises will focus on exposing the student to an understanding and appreciation for ATC fundamentals through simple exercises of realistic air traffic scenarios. On-site visits to air traffic facilities may provide the student with an understanding of the air traffic environment, relationships and interaction among air traffic facilities, and pilot/controller relationships. This course is open to primary ATC and Flight Students. The introductory nature of the material in this course makes it an inappropriate selection for advanced flight students seeking elective credits.

AT 210 - Air Traffic Control Tower Operations

4 Credits

This course explores the roles and responsibilities of personnel assigned to airport traffic control towers, including Flight Data, Clearance Delivery, Ground Control, Local Control, Controller-In-Charge, and Tower Supervisor positions. Using both classroom and the control tower simulator, students are taught basic and fundamental visual flight rules (VFR) control over tower requirements, procedures, and purpose. Students will be required to demonstrate knowledge in control tower operations through written examinations in the classroom and practical performance evaluations in the lab. On-site visits to local Federal Aviation Administration (FAA) and contract control towers will help students understand how towers interface with other ATC facilities and the important role control towers play in the National Airspace System (NAS).

Prerequisites: AT 110, MT 201 (MT 201 may be taken concurrently)

AT 310 - Airspace and Air Traffic Systems Management

4 Credits

This is an in-depth exploration of the functions and responsibilities of the ATC specialist in the ATC system. The student will master the fundamentals of airspace and air traffic management, including general control terms and definitions, basic ATC procedures and standards, proper communications phraseology and the use of clearances, and explicit instructions for heading, altitude, and airspeed to maintain air traffic flow while preserving separation standards. Emphasis is on developing and maintaining a faithful cognitive model of the air traffic situation using pictorial and simulated radar presentations. Lab included. **(Offered Fall semester only)**

Prerequisites: AT 210 and MT 201 (may be taken concurrently), Junior Status Required

AT 315 - AT Management/Operating Environment

4 Credits

This course continues the exploration of the functions and responsibilities of the ATC specialist exploring the impacts of the specific operating environment, including terminal (VFR tower and TRACON), enroute, and planned advanced automation environments. The student will practice the application of airspace and air traffic management skills, methods, and procedures to the terminal environment; the functional operating requirements of each environment (including representative airspace, traffic mix, equipment, and scenarios); and effective communication and coordination between positions/facilities and participating flight crews. Sustained emphasis is on maintaining a faithful cognitive model of the air traffic situation. Lab includes observation of "live traffic," and simulated radar presentations and automated functions. Lab included. **(Offered Spring semester only)**

Prerequisites: AT 310

AT 410 - Sector Resource Management

4 Credits

This course is an investigation of the concepts, tools and methods of "Crew Resource Management" as adapted for and applied to air traffic control settings, including: using ATC information to develop and maintain a highly faithful cognitive model of the air traffic situation (situational awareness) as a basis for controller action; developing, implementing and monitoring effective air traffic management strategies; effective resource management; and effective communication and interaction among the controller "team" and between the controller and participating crews. Lab included. **(Offered Fall semester only)**

Prerequisites: AT 315 and AE 306

AT 415 - AT Management/AS Mod/Pol/DM

4 Credits

This course is an investigation of the concepts, tools, and methods of air traffic management, and the application of these tools and methods to understand and resolve real and simulated air traffic and airspace management problems. The course may include the use and application of various management decision tools in the decision-making process, and to understand the imprecise relationship between prescribed policies (decisions) and their results (impacts upon system performance). Lab included. **(Offered Spring semester only)**
Prerequisites: AT 410, AM 340 and BM 319

BL 201 - Business Law

4 Credits

This course provides an introduction to law, nature and sources of law, and legal rights and duties, including the making and enforcing of contracts; elements, operations and discharge of contract sales of personal property; concept and transfer of title; warranties and secured transactions. Emphasis is on legal problems encountered by managers; in the areas of real property, insurance, and sales contracts.
(Offered Fall semester only)

BM 101 - Principles of Business Management

3 Credits

This course surveys fundamental concepts in business and management. Students are introduced to a variety of topics including planning, decision-making, organizational design, human resource management, operations management, financial management, business strategy, international management, and leadership. Simultaneously, students develop essential skills in business communication and professional deportment. BM101 lays the foundation for the remaining courses in the Management Foundation.

BM 205 - Human Resource Management

2 Credits

This course focuses on important human resources (HR) issues face including legal issues, recruiting and interviewing, resume and cover letter creation and analysis, compensation and benefits, office politics, training and development, and union relations. Through a combination of lectures, readings, cases analyses, discussion, and experiential exercises students will learn how to handle a variety of human resources related issues that small to medium companies face every day. Students will need to complete a resume, cover letter, and mock interview with the career center and conduct a professional human resources analysis of an existing company as part of the course requirements.
Prerequisites: BM101

BM 212 - Operations Analysis and Management

3 Credits

This course deals with the operations function of the organization. Topics include: process modeling, process optimization, forecasting, inventory control, queuing theory, and linear programming. Both manufacturing and service operations are addressed. The course makes extensive use of computer tools. **(Offered Spring semester only)**
Prerequisites: MA 240

BM 215 - Principles of Transportation

3 Credits

This course provides an examination of the development, regulation, and administration of all commercial and private transportation; economic information on transportation; contemporary problems of route congestion and pollution; terminal capacity; ground support and freight movement; and new developments in transportation regulation. **(Offered Fall semester only)**

BM 224 - Introduction to Leadership

3 Credits

There is a distinct difference between being a manager and being a leader. Although some individuals seem to be born leaders, for the most part leadership needs to be taught. In this course, students will learn the components of leadership, explore major leadership styles (autocratic, democratic, and laissez-faire), analyze various philosophies and theories of leadership, and examine the lives of known business leaders. Finally, through cases and experimental exercises, students will work on developing their own leadership abilities.
(Offered Spring semester only)

BM 231 - Entrepreneurship & Small Business Management

3 Credits

This course is designed to develop the student's knowledge and understanding of the problems involved in starting and operating a successful small business. Students will acquire a working knowledge of the tools needed to address the most important issues facing today's entrepreneurs/small business managers. The student will also develop the ability to utilize core analytical constructs (such as effective project management, location determination, budgeting, and the various other start-up and small business functions). The course will provide students with a basic understanding of the steps and processes necessary to maximize the probability of success. Lectures, class discussion, field trips, guest speakers, and case studies will be utilized in developing and evaluating strategies leading to the development of an effective business plan. **(Offered Fall semester only)**

Prerequisites: AC 201 and MK 201

BM 243 – Writing for Technology

3 Credits

This course will instruct students in gathering information from existing documentations and from subject matter experts. A subject matter expert (SME) is any expert on the topic the writer is working on. Students will learn how to work with managers at many levels, and in many different fields whose input is required in producing and distributing technical communications. Students will develop strong language skills and understand the highly evolved conventions of modern technical communications. This course is required for MIS and Game Design majors.

Prerequisite: EN 1115

BM 305 - Labor Management Relations

3 Credits

This course provides an examination of the legal, managerial and economic factors relevant to labor management relations and an in-depth investigation into the character and procedures of arbitration, mediation, conciliation and fact finding. Current labor management contracts and implications for labor and management will also be discussed.

Prerequisites: BM205

BM 307 - Management Practicum

3 Credits

This course is designed to provide structure, direction, and guidance for students who seek and accept leadership responsibility for on-campus or off-campus activities in management. Students will develop a learning contract under the supervision of a faculty member in consultation with a site supervisor. Three to six credit hours of academic credit may be earned depending upon the number of contact hours of work with an identified organization and the level of responsibilities assumed by the student as outlined in the learning contract. As part of the learning contract students are expected to include outside readings in management and leadership related to the practicum. The course may be repeated twice (different experiences) with a maximum of three credits assigned to each experience. The total number of credit hours for practica and internships shall not exceed 15 credit hours. The course is open to any sophomore or upper level student with the support of a faculty mentor and may be taken as a General or Management elective.

Prerequisites: Sophomore status and permission of the instructor

BM 310 - Business Policy

3 Credits

Business Policy provides a study of corporate strategy within the internal and external business environment, including company resources and opportunities. Emphasis is on decision-making in the contemporary world as related to elementary game theory, Porter's Five-Force industry analysis, portfolio analysis for m-form corporations, and strategies for international business. The course makes extensive use of case analysis. **(Offered Fall semester only)**

Prerequisites: BM 212, MK 201, and either FI 320 or SM 415

BM 319 - Management Decision Making

3 Credits

This course examines theoretical and practical aspects of decision-making. Using a combination of cases, exercises, and psychological and behavioral instruments, students will learn to understand and manage decision making from various perspectives. There will be an emphasis placed on strategic decisions and crisis decisions in a wide variety of circumstances, including business decisions, personal decisions, and managerial decisions made during several different types of events. Decisions will be analyzed using several models, including rational choice, game theory, organizational and communications structure, context analysis, cognitive mapping, and several psychologically-based theories. **(Offered Fall semester only)**

BM 322 - Executive Leadership

6 Credits

This course is intended as a first course in leadership for the student who has had substantive work experience. In line with the Business and Management Division's learning goals, this course will cover the theoretical foundations of leadership and will develop the student's leadership abilities through active involvement in a wide range of experiences. It examines the individual's development as a leader through content material, assessment instruments, exercises, presentations, role-playing and leadership experiences. At the conclusion of this course, students should be able to demonstrate increased knowledge about self and the practices of leadership, and to assess leadership styles, team function, and the use of influence, ethics and conflict management.

BM 326 - Purchasing & Supply Chain Management

3 Credits

Purchasing and Supply Chain Management is a specialized business course that examines the focus of the efforts involved in purchasing. This course provides current and thorough coverage for this critical area of the supply chain and examines purchasing and supply chain management from the perspective of executives and practitioners worldwide. Students will gain an understanding of the broad role of purchasing in supply chain management and its' relationship to marketing efforts; the potential impact of purchasing on the competitive success and profitability of modern organizations; the key functional activities and processes related to purchasing, including: supplier management and development, negotiations, and E-Procurement; the impact of technology on purchasing especially from the perspective of E-Commerce and E-Procurement in an ever-changing and dynamic environment; the key issues and approaches in relation to the strategic management of purchasing, including supply segmentation and the make / buy decision; and the basic issues related to global purchasing. Students gain contextual insights and knowledge into the strategies, processes, and practices of purchasing, and learn to appreciate the challenges and opportunities for purchasing in the future through the use of the many cases and examples. Students are exposed to unique and up-to-date insights that lead to greater understanding of the purchasing process. **(Offered every other year)**
Prerequisites: Junior status, IS 101, and MK 201

BM 350 - Integrated Business Logistics

3 Credits

Top management in the U.S. and foreign companies clearly recognize that effective logistics is a competitive weapon which can differentiate a product and effectively integrate their processes to maximize the impact of logistics. In this light, the course focuses on the various logistics functions of inventory management, warehousing, order processing and information systems. Students will develop analytical and decision-making skills in these logistical processes, and will investigate strategic issues in logistics, such as network design and global logistics. **(Offered every other year)**
Prerequisites: MA 122

BM 405 - Management Internship

6, 9 or 12 Credits

This course offers students the opportunity to gain experience in business management under the supervision of a professional in the field. It involves full-time participation in an internship cooperatively sponsored by a participating partner and Daniel Webster College. Students will develop a learning contract under the supervision of a faculty member in consultation with a site supervisor. Six to twelve credit hours of academic credit may be earned depending on the number of contact hours of work with an identified organization and the level of responsibilities assumed by the student as outlined in the learning contract. As part of the learning contract, students are expected to include outside readings in management and sport related to the internship. The total number of credit hours for practica and internships shall not exceed 15 credit hours.
Prerequisites: Junior status and permission of the instructor

BM 408 - Business Ethics and Social Responsibility

3 Credits

This senior-level course gives the student a thorough introduction to important ethical issues that arise in the world of business, including the analysis of the interests of all the individuals who hold a stake in the outcome of any business dilemma or decision. The course encourages students to open their minds to the variety of opinions on any given business-ethics issue. The result of this approach will be to help ensure that all stakeholders' perspectives are considered. The course emphasizes the application of traditional ethical theories to modern business decision making through case analysis. Finally, major emphasis will be placed on how and why ethical business behavior varies among countries and cultures. **(Offered Fall semester only)**
Prerequisites: Junior status

BM 410 - Seminar in Business Management

3 Credits

Students will design individual projects linking classroom learning and actual experience in the business environment. The program is based on a student analysis and the presentation of a proposal in consultation with a business organization and the College. **(Offered Spring semester only)**

Prerequisites: BM 310 and permission of the instructor

BM 420 - International Business

3 Credits

This course moves from a focus on domestic issues to a focus on global issues. It examines the topics U.S. companies consider in doing business on foreign soil from licensing arrangement to joint ventures to the establishment of full corporate subsidiaries in foreign countries. By the end of the course students should demonstrate an appreciation and understanding of all the factors influencing global business. **(Offered every other year)**

Prerequisites: Junior status and permission of the instructor

BM 424 - Project Management

3 Credits

This course focuses on a holistic approach to project management. The content deals with planning, scheduling, organizing, and controlling projects—for example, product development, construction, information systems, new businesses, and special events. The course includes major topics of Strategy, Priorities, Organization, Project Tools, and Leadership. Primary class emphasis is on the project management process and tools. The course culminates in a project plan, such as sport tournament, fund raising event, or upgrading a physical security intrusion detection and assessment system. When supportable, project plans could be developed to execute coinciding special event, such as the annual homeland security forum.

Prerequisites: BM 101, MA 240

BM 530 - Leadership and Corporate Ethics

3 Credits

This course introduces theories of leadership, discusses leadership styles, and helps the student develop basic leadership skills, as applied to business environments. A key focus is the self-evaluation of the student's current leadership style and potential and, by interacting with peers and the instructor, to develop an individualized action plan for improving and broadening the student's leadership capability. The course also involves theory and practice in the identification, evaluation and achievement of ethical standards for interacting with co-workers, management of employees, and development and implementation of business strategy.

BM 535 - Communication Management in Sport

3 Credits

The unit will integrate the field of sport and the engagement of interdisciplinary thinking as it relates to all areas of communication. The major objective is to provide the student with an understanding of the sport communication industry at the professional, for profit, and non-profit levels. The unit will cover areas including role of communications in management, news release writing, working with and utilizing the various forms of media, the expanding use of the internet in communications and sports, crisis management, pitching stories, interviews, and ethics. Emphasis will be placed on journalism, development communication, telecommunication, audio-visual communication, mass communication, sports information, public relations, and community relations.

BM 540 – Advanced Managerial Accounting

3 Credits

This course helps you understand the importance of internal accounting data in making sound business decisions from the perspective of the manager and the accountant. You will examine both roles how the accountant prepares reports and the effective manager uses these reports in decision-making, evaluating, planning and product costing as well as strategic implications. It incorporates the use of spreadsheet and/or accounting software. Analysis and evaluation of balance sheets, P & L income statements, cash flow statements and ratios are emphasized. Case methodology will be applied.

BM 543 - Marketing Management

3 Credits

This course focuses on a wide variety of marketing concepts, including building on and managing profitable customer relationships and creating a competitive advantage. In addition to the classical "Four P's" (product, price, positioning, promotion), this course also covers managing marketing information, building strong brands and brand equity, consumer and business buying behavior, segmentation, product

life-cycle strategies, advertising and promotion, and socially responsible marketing around the globe. During the course, students will consult for a real company. Through lectures, case studies, practical exercises, and research, students will have the skills and information needed to make meaningful recommendations that solve critical marketing problems.
Prerequisites: Must demonstrate proficiency in Macroeconomics as determined by, but not limited to, a fundamental Macroeconomics course or DWC's online Survey of Economics course.

BM 545 - Finance for Managers

3 Credits

Terminology, theory, and analytical techniques of corporate financial management are discussed in this course. Specifically, the course will address the valuation principles such as time value of money, investment value and required rates of return, and the valuation of securities. Topics covered under the long-term investment decisions will include capital expenditure decisions, risk, and control in capital budgeting. This course will also include topics of short-term financial management such as working capital policy, short-term financing decisions, contribution accounting, and management of accounts receivable and inventory. Cases discussed in management accounting will be revisited to show how finance managers make decisions.

BM 546 - Sport Law and Risk Management

3 Credits

This unit provides an in-depth examination of areas of law and risk management that are particularly relevant to sport. From a sport law viewpoint, developments in negligence law, contract law and constitutional law as they apply to sport are considered, and recent developments and trends are studied. In the area of risk management, this unit identifies current issues confronting the sport industry, and also provides a framework for developing risk management strategies that will assist sport managers in setting guidelines, policies, plans and procedures - making the sport industry safer and less litigious.
This unit is designed to provide postgraduate students with an opportunity for in-depth study and appreciation of the legal and risk aspects of sport and the more significant current impacts of law and risk management on sport. Emphasis will be placed on legal aspects and risk management as related to sport managers, organizational staff, volunteers, participants, officials and spectators. Furthermore, legal and risk considerations will be explored as related to managing operations including facilities and events, transportation, crowd control, and crisis situations (fires, acts of nature, and terrorism).

BM 550 - Marketing Research and Marketing Strategies

3 Credits

You will develop an understanding of how a successful company uses marketing concepts to deliver value to its customers more efficiently and effectively than its competitors. Topics will deal with tactical issues related to product design, pricing, distribution and communications. Students will complete a formal research project. In this class we incorporate the use of quantitative analysis and statistics to make marketing decisions.

BM 555 - Research Methods

3 Credits

This course will develop student skills in: identifying problems in which research may play an important role in the decision making process: designing an appropriate research project: analyze and critiquing research results; and evaluating the applicability of research findings to a problem. Strategies for accomplishing both primary and secondary research will be addressed, and both quantitative and qualitative approaches will be used. Identifying, evaluating and using sources of aviation industry information will be incorporated throughout the course.

BM 556 - Advanced Business Law

3 Credits

This course is designed for managers to understand fundamental legal issues at the graduate level. The course examines torts, contracts, criminal law, business organizations, employment law, intellectual property, and technology law. Through lectures, videos, cases, and readings, students will be able to analyze and make managerial recommendations in a wide variety of applications.

BM 560 - Forecasting and Demand Analysis

3 Credits

The aim of this course is to introduce the students to a wide variety of forecasting techniques and demand analysis. This course concentrates on the quantitative approaches to forecasting. In particular, it emphasizes three approaches: regression analysis, exponential smoothing, and ARIMA (autoregressive integrated moving average) models. In addition, the course will address Bayesian analysis as a tool in decision-making.

BM 565 - Advanced Consumer Behavior

3 Credits

The study of consumer behavior enables marketers to understand and predict consumer behavior in the marketplace; it is concerned not only with what consumers buy but also with why, when, where, and how they buy it. Consumer research is the methodology used to study consumer behavior; it takes place at every phase of the consumption process: before the purchase, during the purchase, and after the purchase.

Consumer behavior is interdisciplinary; that is, it is based on concepts and theories about people that have been developed by scientists in such diverse disciplines as psychology, sociology, social psychology, cultural anthropology, and economics.
Consumer behavior has become an integral part of strategic market planning. The belief that ethics and social responsibility should also be integral components of every marketing decision is embodied in a revised marketing concept—the societal marketing concept—that calls on marketers to fulfill the needs of their target markets in ways that improve society as a whole.

BM 575 – Applied Techniques/Organizational Behavior

3 Credits

This course surveys the major theories in organizational behavior, including theory of learning organizations, and theories of organizational change, decision-making, and advanced concepts in team development. The course also provides techniques for management activities such as negotiating agreements, turning confrontation into cooperation, and conflict resolution. Students will act as a consultant to a real company and make meaningful recommendations to senior management as the final project for the course.

BM 576 - Human Resource Management in Sport

3 Credits

This unit builds directly on the organizational behavior unit, and takes a look at the increased growth, interest, and complexity in human resource management in sport in recent years. This unit puts significant emphasis on managerial competencies, the strategic importance of human resource management, and the implications of legislative, governance and ethical issues in terms of volunteers, employees and customers of sport organizations. This emphasis will be accomplished by understanding individual differences in abilities, personalities, values and motivations inherent in each group in terms of organizational justice, job design, staffing, leadership, performance appraisal, reward systems, and internal marketing. Each of these areas will be evaluated in terms of the two most important outcomes of human resource management satisfaction and commitment.
This unit is designed to give you an understanding of:

- The unique and common characteristics of the three classifications in human resources.
- The differences among people and how those differences affect behavior in sport organizations.
- The organizational processes in the management of human resources including legislative and governance matters, job design, recruitment and staffing, leadership, performance appraisal, reward systems, and internal marketing.
- The major outcomes that result from human resource practices: satisfaction and commitment.
- The evaluation of personnel including through performance appraisals, including the development of performance appraisal criterion and the implementation of the performance appraisal process.
- The criteria used to develop job descriptions and performance appraisal forms.

Prerequisites: This course will replace BM 560, as it is no longer to be a required course within the Sport MBA core sequence, as BM 560 is no longer required as a core component of the MBA-degree program.

BM 580 - Operations Management

3 Credits

The focus of this course in on how operations can provide a competitive advantage for the firm, and operation strategies connect with marketing and other functional strategies. You will develop a foundation in the concepts of process analysis and improvement, and explore ways that outstanding quality can provide a strategic advantage and improve profitability. The fundamentals of project planning, capacity analysis, and supply chain management are examined, along with information technology's impact on today's business operations. Skills learned in the forecasting and demand analysis course will be an integral part of operations management. As a class project, you will reengineer a process that cuts across functional areas of your company, resulting in a significant improvement. Computer applications include acceptance sampling and reliability, liner programming and transportation analysis, control charts, and scheduling.

BM 605 - Governance and Administration of Sport Facilities Events

3 Credits

This unit will build on the operations management unit and focus on the relationship between sport facility management, sport event management, and project management. The content of the unit is designed to apply project management systems to sport facility and event

management. The units deals with planning, scheduling, organizing, and controlling sport facilities and events, including event development, construction, systems, new business, production layout, and special events. A foundation on how to properly build sports events into successful and financially viable ventures for an level- from the community to the global stage will be covered. Included will be connecting facility and venue management to event management, event operations and logistics, facility and event programming and scheduling, and facility and event marketing. Specific topics will include the development of strategic sport facility and event management plans, preparing and controlling facility and event logistics, negotiations and contracts, securing participants, spectators, and media coverage, risk and crisis management issues, promotions, and funding.
Prerequisites: This is the 9th course in the series of 13 towards earning the MBA in Applied Sport Management. Students should have completed the previous 8 courses (BM 530, BM 540, BM 543, BM 545, BM 560, BM 580, BM 546, and BM

BM 610 - Bus Models and Strategies for E-Business

3 Credits

Students are exposed to cutting-edge proprietary frameworks in e-business. Through a combination of lectures, case studies, and classroom discussion, the future of the internet and its impact on both established "old economy" companies as well as the surviving startups is debated. It also examines industries as diverse as retailing, financial services, computing, professional services, media, and marketing companies and takes a look at emerging technologies such as wireless and broadband and discusses implications for future applications. As a project for this course, students will create a part of an E-Business, either technical component such as the business's web page or managerial component such as a business plan or marketing plan.

BM611 Business Intelligence and Decision Making

3 Credits

This course focuses on using quantitative business information from all areas of the firm to make critical operational decisions. Topics include data analysis using multiple quantitative techniques and applying a decision making framework to make decisions. This case-based course will allow students to make decisions in a wide variety of areas including government, and for-profit, non-profit, and startup enterprises.

BM 612 - Sport Business in the International and Global Economy

3 Credits

This unit will cover sport from an international and global perspective, providing students with a basic understanding of the role of governance structures in professional and amateur sport, as well as taking a look at the business of sport outside of the domestic marketplace. Sport management is part of a continuously evolving international and global business environment, where nations, governments, economic systems, and business cultures interact, compete and sometimes cooperate in the promotion of sport. Although approaches vary, each sport organization seeks to provide income, status, and success for those it represents.

BM 625 - Advanced Project Management

3 Credits

Students will act as consultants to real business (or non-profit organization) and will study a problem or opportunity at that organization. The students will produce a consultant's report, such as a business plan, a marketing plan, an operation analysis, or a project evaluation. This report will include "real" data and analysis and will recommend specific, concrete action plan.

BM 627 - Governance and Administration of Sport Facilities and Events

3 Credits

This unit will build on the operations management unit and focus on the relationship between sport facility management, sport event management, and project management. The content of the unit is designed to apply project management systems to sport facility and event management. The units deals with planning, scheduling, organizing, and controlling sport facilities and events, including event development, construction, systems, new business, production layout, and special events. A foundation on how to properly build sports events into successful and financially viable ventures for any level - from community to the global stage will be covered. Included will be connecting facility and venue management to event management, event operations and logistics, facility and event programming and scheduling, and facility and event marketing. Specific topics will include the development of strategic sport facility and event management plans, preparing and controlling facility and event logistics, negotiations and contracts, securing participants, spectators, and media coverage, risk and crisis management issues promotions, and funding.

BM 650 - Global Management

3 Credits

This course provides an overview of a continuously evolving global business environment in which varying nations, governments, economic systems, and business cultures interact, compete and sometimes cooperate in the promotion of trade. Issues discussed will

include free trade agreements (NAFTA, GATT, and WTO), the varying degrees of capitalism including the evolution from centrally planned economies to private ownership/free enterprise, the emerging economies of developing nations, the influence of the powerful developed economies (US, Europe, Japan) and their corporations, job protection/development, the impact of culture, the danger to the environment, and the ethical questions which impact us all.

BM 655 - Sport Business in the International and Global Economy

3 Credits

This unit will cover sport from an international and global perspective, providing students with a basic understanding of the role of governance structures in professional and amateur sport, as well as taking a look at the business of sport outside of the domestic marketplace. Sport management is part of a continuously evolving international and global business environment, where nations, governments, economic systems, and business cultures interact, compete and sometimes cooperate in the promotion of sport. Although approaches vary, each sport organization seeks to provide income, status, and success for those it represents. With the internationalization and globalization in sport, national identities are becoming blurred as players and sport professionals travel overseas, and as nations move closer to integration. This unit will try opening the students' eyes to a world of business and sport outside of their normal domestic knowledge. Topics to be covered will include but not be limited to governance structures or leagues, national sport programs, and Olympic sport programs; the varying degrees of capitalism in sport including the evolution from communist controlled economies to private ownership/free enterprise; the emerging economies of developing nations; the influence of the powerful developed economies (US, Europe, Japan) and their corporations; the impact of culture and society on sport; and the ethical questions which impact at all. Ultimately the goal is to recognize the managerial implications and challenges of these international and global trends, and to move forward in the field of sport management with a renewed vision and action.

Prerequisites: This is the 10th course in the series of 13 towards earning the MBA in Applied Sport management. Students should have completed the previous 9 courses (BM 530, BM 540, BM 543, BM 545, BM 560, GM 580, BM 546, and BM

BM 680 - Strategic Management

3 Credits

The course focuses on how to build value-creating business strategies and how those strategies must be adapted to change markets and technologies. You will practice your skills - and utilize the knowledge gained from previous courses - by participating on a computer simulation project. Your team will develop and implement a business strategy (applying the concepts learned in accounting, finance, demand analysis and forecasting) in state-of-the-art computer simulation.

BM 695 - Capstone Research Project

3 Credits

Students will act as a consultant to a real business and analyze a problem or opportunity at that business. Students use all that they learned in their prior courses and will produce a consultant's report and recommend an action plan based on at least three of the four areas of Organizational Behavior, Accounting and Finance, Operations Management, and Marketing. Student will use all they learned in the program, their business acumen, and research skills to develop research problems, generate and test hypotheses, and make recommendations based on their findings.

CH 101 - Inorganic Chemistry I

4 Credits

This entry level course provides an examination of atomic structure (electronic configuration, the periodic table, atomic size, ionization potential, electron affinity, and electronegativity), molecular structure (Lewis diagrams, molecular shape, chemical bonds, molecular orbital theory, and polyatomic molecules), reaction stoichiometry, states of matter (kinetic theory of matter, gaseous state, liquid state, and solid state), and solutions (colligative properties, electrolytes and non-electrolytes). Lab required. **(Offered Fall semester only)**

CH 105 - Chemistry and Society

4 Credits

This course teaches fundamental chemical principles within the framework of real world applications. Chemistry is a critical part of our society; our fuels, foods, consumer products, and environmental materials owe their properties to the chemicals they contain. Equally important is the impact of human-beneficial chemistry on the environment. This course will help students become better citizens by providing knowledge of chemistry that is needed to understand many of the complex problems and circumstances that surround them. This knowledge can then be used to make informed decisions about their personal behavior, and to be aware of the consequences of the behavior of others. After introducing the fundamentals of chemistry, this course examines the chemistry involved with natural ecological processes, nutrition, energy production, alternative energy sources, the atmosphere, water resources, nuclear radiation, and the chemistry of "useful" materials (e.g., alloys). Students will work in small groups to help each other learn and apply chemistry as they try to understand each of these topics. Throughout the course, students are exposed to the chemistry involved with important contemporary issues facing society such

as ozone destruction and climate change. There are weekly labs that are designed to provide a hands-on learning approach to the concepts covered in the classroom. These labs will be performed with a partner, and each student will be required to complete a lab report.

CS 111 - Discrete Mathematics I

3 Credits

In this course propositional and predicate calculi are developed formally and then extended to develop a theory of sets. Relation theory, along with the formal specification language Z, is introduced with relations between two distinct sets. Partial functions are defined as constrained relations and total, one-to-one, and onto functions are defined as further constrained partial functions.
Corequisites: MA122 or equivalent.

CS 112 - Discrete Mathematics II

3 Credits

Using the logic introduced in Discrete Mathematics I, this course continues to develop theories in the areas of integers, mathematical induction, partial orders and equivalence relations, Hoare logic, number theory, sequences, and combinatorics.
Prerequisites: CS111

CS 113 - Introduction to Programming

4 Credits

A modern programming language is used to introduce conditional and iterative control structures, subprograms and parameter passing, arrays and records, dynamic memory allocation and linked lists, and recursion. In the required laboratory, students will write programs which exercise these language features.

CS 114 - Intro to Software Engineering

4 Credits

The software life cycle is introduced, shifting emphasis away from programming as the primary activity of the software engineer and towards requirements analysis, specification, documentation, testing, verification, and validation. In the required laboratory, students will develop a software simulation of a game using graphics which is required to run successfully. **(Offered Spring semester only)**
Prerequisites: CS 113

CS 123 - Advanced Lab for Introduction to Programming

1 Credits

This lab course is intended for students with significant programming experience. The same topics that are covered in CS113 are also covered here, but with the emphasis on self study. No tutorials or lectures and only recommended for students who are independent learners and have mastered two or more programming languages.
Prerequisites: Prior programming experience

CS 203L - Sophomore Software Engineering Lab I

2 Credits

This course is the first of a two-semester sequence. Students apply the theoretical principles of software engineering to a software project. The entire class works as a whole on one project, which will be carried through the software life cycle from problem definition to implementation, with the course evaluation based on deliverables. **(Offered Fall semester only)**
Prerequisites: CS 114

CS 204L - Sophomore SE Lab II

2 Credits

This course is a continuation of CS 203L. **(Offered Spring semester only)**
Prerequisites: CS 203L

CS 217 - Data Structure and Algorithms I

3 Credits

Students are individually responsible for the formal specification, design, implementation and proof of correctness of the abstract data type sets, bags, functions, sequences, stacks, queues, and strings. Special emphasis will be given to searching and sorting algorithms. **(Offered Fall semester only)**
Prerequisites: CS 114

CS 218 - Data Structure and Algorithms II

3 Credits

Students are individually responsible for the design, formal specification, implementation, and proof of correctness of the abstract data types, trees and graphs. Special emphasis will be given to graph algorithms. **(Offered Spring semester only)**

Prerequisites: CS 217

CS 219 - Computer Architecture I

3 Credits

Combinational circuits such as decoders, multiplexers, read-only memories, and programmable logic devices and sequential circuits such as registers and counters are analyzed and designed. Principles of digital systems including data transfers, buses, and microprogramming are studied. *(Offered Fall semester only)*

Prerequisites: CS 111, CS 114

CS 229 - Fundamentals/Game Development

3 Credits

Fundamentals of Game Development will introduce students to both game design concepts and game programming concepts. Game design concepts covered include the history of game programming, game psychology, and creating a game design outline. Game programming will include object technology and its components as well as scripting techniques for actions.

Prerequisites: CS114

CS 235 - 3D Game Modeling

3 Credits

Students will be introduced to 3D Modeling techniques. The course will examine the various types of modeling software and focus on developing game elements to be incorporated into a game. The course includes understanding primitives, designing objects in 3 dimensions, adding textures, painting, using Boolean operations for specific techniques, mirroring models and manipulating light

Prerequisite: CS208

CS 238 - UNIX Programming

3 Credits

This course covers Unix/Linux commands and utilities including file manipulation, program execution and control. A brief introduction to Bourne and Korn shell programming is included. Proficiency in applying new skills is reinforced with extensive hands on exercises.

CS 303L - Junior Software Engineering Lab I

2 Credits

This course is the first of a two-semester sequence. Students apply the theoretical principles of software engineering to a major software project approved by the Computer Science Division. Team projects will be carried through the software life cycle from problem definition to implementation, with the course evaluation based on deliverables. *(Offered Fall semester only)*

Prerequisites: CS 218

CS 304L - Junior Software Engineering Lab II

2 Credits

This course is a continuation of CS 303L. *(Offered Spring semester only)*

Prerequisites: CS 303L

CS 312 - Algorithms

3 Credits

Basic algorithmic analysis and strategies are explored along with fundamental computing algorithms. Connections between regular languages and finite automata, context-free languages and pushdown automata, and Turing machines and computation are established. The complexity classes P and NP will also be introduced.

Prerequisites: CS112 and CS218

CS 317 - Computer Networks

3 Credits

This course provides an in-depth overview of the field of data communications and its impact on information systems. Various types of equipment will be examined along with protocols and architectures offered by major vendors. distributed system issues as well as local area network solutions are discussed.

CS 320 - Programming Language Concepts

3 Credits

The history of computing as well as an overview of programming languages will be presented. Students will be introduced to the formal definition of programming languages including specification of syntax and semantics. Scope of declarations, storage allocations, binding time, and recursive procedures will be examined in several different programming languages. Computer ethics will be discussed.

CS 361 - Computer Software/Operating Systems

3 Credits

The major components of an operating system: file systems, CPU scheduling, memory management, virtual memory, disk scheduling, deadlocks, concurrent processes, and security, are studied. Students will implement portions of a real or simulated operating system. *(Offered Fall semester only)*

Prerequisites: CS 218 and CS 219 or IS 219

CS 405 - Introduction to Compiler Design

3 Credits

This course provides an introduction to the design, writing and optimizing of compilers. Topics include lexical analysis, syntactic analysis, error recovery, semantic analysis, optimization and code generation. A semester project is required, which will include the implementation of a subset of a current structured programming language. **(May not be offered every year)**

Prerequisites: CS 218

CS 409 - 3-D Game Programming

3 Credits

The course focuses on the fundamentals of 3-D graphics using examples primarily from computer games. The course is a combination of 3-D graphics theory and hands-on programming using the Direct 3D API. C++ classes are created to implement many 3-D programming techniques.

Prerequisites: CS218 and MA250

CS 411 - Artificial Intelligence

3 Credits

This course provides an introduction to the theories, methods and problems of AI. Expert systems knowledge representation, natural language processing, computer vision and machine learning will be covered. Commercial AI products will be discussed. A term project may be required. *(Offered Spring semester only)*

Prerequisites: CS 218

CS 413 - Software Engineering Project I

3 Credits

This course is the first part of a two semester sequence. Students will apply the theoretical principles of software engineering to a major software project. The project will be carried through the SDLC from problem definition to implementation with the course evaluation based on deliverables. This two course sequence may be in lieu of a computer science internship.

CS 414 - Software Engineering Project II

3 Credits

This course is a continuation of CS 413.

Prerequisites: CS 413

CS 416 - Digital Circuits

3 Credits

After a review of digital principles and logic, modern digital integrated circuit and hybrid circuit families are studied. This includes: gates, mulitvibrators, counters, comparators, Digital-to-Analog and Analog-to-Digital converters, and digital computer interface circuits.

Emphasis is placed on integrating software design and interface design to achieve interactive system design with an external environment.
Prerequisites: CS219

CS 425 - Systems Architecture

3 Credits

An examination of the relationship between hardware and software. The compiler writer's viewpoint as well as the architect's viewpoint are analyzed in various areas, including instruction set design and addressing modes. Advanced topics in operating systems, especially interrupt mechanisms, memory management and processor management are also discussed. Various commonly used architectures will be compared.
Prerequisites: CS361

CS 427 - Computer Graphics

3 Credits

An introduction to the algorithms underlying computer generated graphics will be presented. Topics include fast line, circle, and ellipse algorithms, two- and three dimensional transformations, projections, curve-fitting and interpolation techniques, and color models.
Prerequisites: CS218 and MA250

CS 435 - Adv Computer Graphics/Algorithms

3 Credits

This course will examine theories of advanced graphics techniques used to aid research methods. Applied and theoretical algorithms including plotting of directed and undirected graphs with and without cycles, clustering algorithms, automatic layout techniques, graphics compression, and other research algorithms will be covered. Students will first understand theory and then program implementations of the graphical algorithms and concepts.
Prerequisites: CS427

CS 445 - Computer Science Internship

9 Credits

This course provides students with the opportunity to work with a company in the software engineering field. It allows the student to link academic principles to practical applications and to develop responsibility, and interpersonal and communication skills. Department approval of internship description required.
Prerequisites: CS304L

CT 100 - Fundamentals of Programming

3 Credits

This course will introduce the student to the fundamentals of structured programming techniques. Topics will include basic hardware functions, the history of programming, flowcharting, basic programming design, variables, and data types. A modern programming language will be used in examples and assignments.

CT 150 - Introduction to Databases

3 Credits

This course examines relational databases, with an emphasis on those found in PC networks with client-server applications. A wide range of topics will be covered, including the rationale for using databases, the history of databases, defining and structuring data for efficient access, and using SQL to define and access the databases. In addition, topics such as security, replication, data layout, and backup are also explored.

CT 155 - Introduction to Computer Networks

3 Credits

The focus of this course is on the fundamentals of computer networking, including the reasons to interconnect computers, the problems encountered, and how they are solved. The course teaches major styles of networking, such as wide-area and local-area, but places the major emphasis on local-area networks. Topics considered include hardware and software configurations, general protocol requirements for communication, common network software offerings, and common applications.

CT 186 - .NET Framework Fundamentals

3 Credits

This course will provide an overview of the technical and architectural issues for .NET developers. The course will cover the fundamentals of the .NET framework and its building blocks. Some of the core .NET languages will be covered along with salient .NET features such as

ASP.NET programming and GUI applications development with a discussion of Windows Forms. Data access using ADO.NET will also be covered, as well as debugging in .NET using Visual Studio. .ASP.NET Web Services will be introduced. Deployment of configuration of .NET issues and .NET migration readiness and strategy will also be addressed. Visual Studio.NET will be used in classrooms as the IDE for .NET development.
Prerequisites: CS113 or equivalent.

CT 206 - Introduction to Web Design

3 Credits
This course will introduce students to Web page and Web site design. The course will start with readily available tools (Front Page Express, Netscape Composer), and then look inside at the HTML/XHTML environment. The course will also introduce some of the challenges facing web-based applications in commercial environments including disabled accessibility, trademarks and copyright. Web site life cycle, policies and management will be covered as well. Students will create a personal or organizational web site as a primary project for this class. Tools will be applied to evaluate the compliance of student sites to existing standards and guidelines. PC and Internet Operations is a prerequisite set of skills.

CT 225 - Visual Basic Programming

3 Credits
This course will introduce students to MS Visual Basic and the graphical application development process defined by it. Product operation skills will be emphasized, the technical capabilities of the product will be described and common programming techniques will be explained. Students will develop Windows applications using the Event-Driven Visual Basic Programming Model.

CT 226 - Advanced Visual Basic Programming

3 Credits
Topics introduced in Visual Basic Programming such as DDE (dynamic data exchange), OLE (object linking embedded), and data aware controls will be further explored. In addition, students will learn to take advantage of the Windows API (application programming interface) from Visual Basic through dynamic link libraries (DLL) and custom controls. This course will also discuss the use of third party controls and APIs to enhance the look and feel of their applications.
Prerequisites: CT 225

CT 228 - Programming/Visual Basic.NET

3 Credits
The course will cover the Visual Basic (VB.NET) programming language and its role in the .NET architecture. The .NET platform is a new development framework developed by Microsoft specifically to solve some of the problems encountered when developing Internet applications and services. VB.NET is a redesign of the Visual Basic language designed to take advantage of features offered in the .NET platform. The course will roughly be divided into two parts. The first part covers the VB language and the second will cover how to use some of the .NET features with VB.

CT 230 - Introduction to Computer Security

3 Credits
This course is designed to provide the student with an overview of the major areas of computer security. Topics include physical protection, risk analysis, personal computer security, communications security, web security, firewalls, operating system security, network security, database security, encryption, Trojan horses, worms, viruses, and privacy and legal issues in computer security.
Prerequisites: CT 232

CT 232 - Introduction to UNIX

3 Credits
This course covers the fundamental UNIX utilities, the file structure, the vi editor, the Bourne, C, and Korn shells, programming scripts, system administration, networking and the kernel.
Prerequisites: CT100 or CS113

CT 233 - UNIX Shell Programming

3 Credits
This course views UNIX shells as high-level programming languages as well as command interpreters. Covered in the course will be how to combine UNIX commands with variables and control structures to produce shell scripts. The Bourne, C, and Korn shells introduced in CT 232 are covered in depth.
Prerequisites: CT 232

CT 234 - UNIX System Administration

3 Credits

This course prepares the student to administer a UNIX operating system. Topics include the responsibilities of the super user, how to bring up and shut down a system , add users, back up files, set up new devices, and check the integrity of a file system.

Prerequisites: CT232

CT 236 - Web Design Using Java Server Pages

3 Credits

In this course students will be introduced to the 2.0 version of the JSP specification of Java Server Pages which covers the major revisions to the JSP Standard Tag Library (JSTL) specification. Students will be provided practical advice and detailed coverage of JSP syntax and features and plenty of clear, useful examples of Java Server Pages. Students will be provided with demonstrations of how to embed server-side Java into Web pages, while also covering important topics such as JavaBeans, Enterprise JavaBeans (EJB), and JDBC database access.

CT 246 - Programming in C

3 Credits

C is a general purpose programming language that features economy of expression, modern control flow and data structures, and a rich set of operators. C's unique ability to operate well at both system and application levels will be examined through program design and implementation.

CT 250 - World Wide Web Technology

3 Credits

This course will introduce the students to the World Wide Web through its core technologies and many applications. An examination of the TCP/IP protocol and Internet architecture will provide a technical basis for understanding the Internet and Web. The course will cover, in detail, the Hypertext Markup Language (HTML), the language used for creating Web pages. Specific areas include tables, forms, frames, image maps, and animations. Each student will design and implement a set of Web pages for personal or business use. The course will also cover the JavaScript language and provide techniques for designing effective Web sites.

CT 252 - Advanced Unix Programming

3 Credits

This course covers the system calls of the UNIX operating system including those relating to file I/O, terminal I/O, processes, signals and interprocess communication.

Prerequisites: CT232 and CT246

CT 253 - Java Programming I

3 Credits

This course presents Java as a general purpose object-oriented programming language for the World Wide Web. The student is introduced to object-oriented design and programming techniques. Specific topics include developing classes, using standard Java classes, inheritance, overloading, interfaces, and packages. Students will learn to program in Java and will develop applets and applications. Applets will be used to show how to develop animations, handle user events, and work with URLs.

Prerequisites: CT 246

CT 254 - Java Programming II

3 Credits

This course presents Java as a powerful language that is capable of developing complex applications. The course will start by looking at the facilities in Java that support developing distributed applications including coverage of network programming and connecting with databases. Security capabilities in Java will also be presented. Development of software components using Beans will also be covered. Other advanced topics, such as the use of Java with broadcast technology and LiveConnect will be presented.

Prerequisites: CT253

CT 255 - Web Design: HTML/PHP/MySQL

3 Credits

In this course students will learn how to create HTML Tables, an introduction to Object-Oriented PHP, common PHP script elements, PHP & Security, accessing databases with PHP, and using JOIN Queries in MySQL. PHP: Hypertext Processor has been designed for students to build sophisticated dynamic web sites. PHP recently surpassed Microsoft's ASP (Active Server Pages) as the leading server side scripting language for use on the World Wide Web. PHP is used on over four million Web Servers on the Internet to provide services such

as e-commerce, e-government, inventory management, and much more. Yahoo!, the most visited site in the world, recently announced the adoption of PHP as their new scripting platform. PHP is used to easily interact with the open-source database MySQL. MySQL provides many of the features required of larger, more expensive databases such as Oracle and Microsoft's SQL Server.

CT 264 - Programming Web Servers - ASP.Net

3 Credits

This course will provide you with a step-by-step introduction to ASP.NET using both VB.NET and C# and will include class time labs and homework assignments designed to help you gain a deep understanding of what ASP.NET is all about and how you can harness it to build powerful web applications. Topics covered include: .NET programming language fundamentals; Web Forms; server side controls; data access and data binding; XML support; security; state and session management; designing for scalability; and web services. A course project will implement all the essential elements of the course in a fully functioning ASP.NET application. The project will address all major outlines of the course.

Prerequisites: CT186 and CT267

CT 265 - Programming in C++

3 Credits

A full coverage of the C++ language, focusing on features such as data encapsulation, class inheritance, function overloading, virtual functions, and template functions. In addition to coverage of C++ syntax and usage, attention is given to object oriented programming design techniques.

Prerequisites: CT 246 or CS 113

CT 267 - C# Programming

3 Credits

C# is Microsoft's new programming language that is specifically targeted for developing applications on the Microsoft .NET platform. This course introduces C# as a programming language first. The course then explains how C# can be used to develop Internet applications on the .NET platform. Students learn C# through a set of programming exercises and assignments in a hand-on lab environment.

Prerequisites: CS 113 or equivalent

CT 268 - Introduction to XML in the .Net Framework

3 Credits

XML, the extensible Markup Language, is rapidly becoming the language of choice for data management in the World Wide Web. In this course, XML will be presented as a language that deals with data management and manipulation rather than web page design and development. Syntax of valid and well-defined XML as well as the construction of DTDs (Document Type Definitions) will be explained. The role of XML Namespaces and XML Schemas will be elaborated. After the fundamentals of XML are covered, the second half of the course will throw light on manipulating XML documents using the Document Object Model (DOM) and XSL (Extensible Style sheet Language) both on the client and server. XML support in the .NET framework using ASP.NET to develop XML aware applications will also be discussed. XML support in Microsoft SQL Server will also be covered.

Prerequisites: CT 264

CT 270 - MS/Windows Programming

3 Credits

This course will introduce students to MS/Windows and include information on how to design, implement, and debug an application program for a PC running MS/Windows.

Prerequisites: CT 246 or instructor permission

CT 271 - Advanced MS/Windows Programming

3 Credits

This course covers advanced topics in MS/Windows programming. The first part of the course will include information on how to design, implement and debug PC applications using Microsoft Visual C++ and Foundation Class Libraries. The second part of the course will cover selected programming topics including MDI applications, writing DLLs, debugging techniques, and creating help files.

Prerequisites: CT 270 and CT 265

CT 272 - Using ActiveX Data Objects.NET

3 Credits

This course will introduce students to Microsoft's ADO.NET functionality and allow them to develop applications that use ADO.NET to interface with databases and external data sources. ADO.NET is an integral part of the .NET development framework. This course is

designed so that the student can code in either Visual Basic .NET or Visual C# .NET.
Prerequisites: CT150 and either CT228 or CT267

CT 276 - Advanced Web Design

3 Credits

This course will expand on XHTML and web site basics. The course will address forms processing and graphics for business applications, as well as integration of predefined scripts, applets and other web page services. Diverse graphics formats (GIF, JPG, etc.), animation and the creation and differences between these will be considered. Overview of script and server languages will be provided (JavaScript, VBScript, CGI and ASP). The course will identify methods to address the need for security, privacy, encryption, and web site integrity. Students will continue their development of a web site, incorporating interactive and forms driven interfaces, as well as advanced graphics. Note: this course will not teach script or applet application development and will focus on how to integrate existing modules into a web site**.** See CT 250 and CT 264 for script development information.
Prerequisites: CT 206

CT 280 - Internet Concepts and Applications

3 Credits

An overview is provided of the Internet and the various applications that are used in that environment. The hardware required to connect and the methods of attachment are considered, and common protocols are briefly described, along with the roles of service providers and online services. Also examined is the use of private networks and Internet technology within a corporation for communicating and sharing of data. Major applications, such as Web Browsers, Web Servers, ftp, telnet, and gopher are studied, along with the uses of emerging technology in Internet applications. Other topics include HTML, creating Web pages, 3D Web applications using VRML, and applications based on Java.
Prerequisites: CT 155

CT 283 - Multimedia Web Development

3 Credits

This course examines the Web technologies and applications that involve multimedia, a rapidly developing area of the Web. Despite numerous challenges due to communications bandwidth limitations, external Web sites and intranets are finding innovative uses for multimedia. Technologies such as VRML 2.0, audio and video streaming, multimedia plug-ins, Webcasting, and interactive graphics and animations will all be covered. The feasibility of numerous applications, both current and future, will be examined.
Prerequisites: CT 246, CT 250 and CT 253

CT 350 - Computer Security Seminar

3 Credits

This is a seminar style, capstone course for the Certificate in Computer Security. A modern UNIX based operating system will be studied using the Final Evaluation Report (FER) produced for that system by the National Computer Security Center (NCSC) as the focal point of the study. The goal is to understand the approach taken by the NCSC (a component of the National Security Agency) to evaluate security features of operating systems. Other topics will include the Common Criteria (an ISO standard), and recent and emerging topics in computer security (e.g. new applications for biometric devices). A major technical paper that focuses on an area of recent or emerging computer security issues is a requirement for this course.
Prerequisites: CT 230 and CT 234

CT 353 - Advanced C++ Programming

3 Credits

This course covers a number of advanced C++ programming techniques not covered in an introductory C++ course. The course is especially appropriate for software engineers who have been programming in C++ for a while and now want to use the full power of C++ more effectively. It has an emphasis on Object Oriented Programming. Inheritance, dynamic binding and interfaces are covered in detail, with many code examples to review/reuse. The course also covers parts of the standard library not included in a C or introductory C++ course, with a significant focus on the STL.
Prerequisites: CT 265

CT 370 - PC Network Administration

3 Credits

Concepts of PC network administration are examined in this course. Topics include an overview of LAN hardware and topologies. Students are introduced to examples of equipment needed to interconnect PCs to LANs and how that equipment is configured. This course teaches the installation and configuration of both server and client software. Topics related to application selection, installation, and

configurations are considered. Students also study security topics and concepts, practical aspects, such as adding user IDs and controlling access to network resources, backup, effect of hardware failures, providing availability, and printing.
Prerequisites: CT 155

CT 375 - Programming Client-Server Applications

3 Credits

Students study topics in developing client-server applications. Topics of the course include an introduction to the basic concepts of client-server application design, development, and deployment. Projects include creating server and client programs.
Prerequisites: CT 155 and CT 265

CT 378 - Emerging Internet Issues & Technologies (Special Topics)

3 Credits

This course will utilize guest speakers, current events, and the emerging work of groups, such as the Web Consortium, to review "hot" Internet technologies and issues. Likely subjects for invited guests and discussion include: taxation, privacy, trademarks, recent tools, new protocols, or the impact of telecommunications technology advances. This will provide students with both an exposure to rapidly changing areas of the Internet, and to the resources they can use to maintain awareness of the emerging and changing technologies and Internet Issues. Students completing the Web Design Certificate will continue to develop and deliver a "final project" version of their web site, including an additional component documenting the relationship of issues in the special topics program to their site.
Prerequisites: CT 206, CT276

CT 382 - Cyber Terrorism

3 Credits

Students will understand how Systems and System Infrastructure are attacked via the Internet as well as other methods like Social Engineering as well as how to prepare a defense. They will how these systems are used by terrorist organizations for the purposes of communication (between established members thereof) and the recruitment, indoctrination and education of prospective members (a.k.a. the virtual Jihad concept). The will also understand the difference between cyber terrorism and traditional terrorism; understand the different threats and outcomes from a cyber attack; explore potential motives for cyber terrorism; explore different types of attacks; debate options for managing a cyber attack and mitigating the threat; and explore responsibilities and accountabilities for cyber defense. They will work in an actual lab set up with a heterogeneous network and run a comprehensive set of exercises simulating attacks and defenses.
Prerequisites: IS 101

DW 101 - Strategies for Success

1 Credits

This course assists entering students to prepare for successful transition into college. It examines student and College expectations and responsibilities. It considers: institutional resources (including the Library, the Computer Center, and the Academic Resource Center), time management, the classroom experience, the College Catalog (program planning), career planning, and social health and well being (such as sexuality, alcohol and drugs, and stress management). The course is required for all entering freshmen in the day division.

DW 301 - DWC Student Leadership Experience

1 to 3 Credits

This course is designed to provide structure, direction and guidance for students who accept leadership responsibility for on-campus or off-campus activities. Students will systematically identify their goals and the goals of the project or activity they wish to undertake and provide leadership in reaching those goals. Along with a faculty member, serving as a mentor, the student will develop a learning contract. One to three (1-3) hours of academic credit may be earned depending upon contact hours with the group and responsibilities assumed by the student leader as defined in the plan and contract. To receive three hours of credit the student leader must include outside readings on management and leadership. This course is open to any sophomore or upper level student with support of a faculty mentor and may be taken as a General Elective for up to 3 credits. The course may be repeated (with different experiences) but only three credits will be applicable toward the degree. (e.g., if repeated, six hours may be earned; however, only three will count toward the degree).

EC 101 - Macroeconomics

3 Credits

This course provides an introduction to economics as it relates to the nation. Topics include inflation, recession, Keynes' income-expenditure analysis, unemployment, gross national product and other economic measures, and government monetary policies. Also presented are the history and function of money and the Federal Reserve System.

EC 102 - Microeconomics

3 Credits

This course deals with the economic decisions made by individual actors in the economy (consumers, firms, workers, investors, and governmental agencies) within national and international frameworks. It covers the theories of consumer choice and the consequent market demand for goods and services; production and the consequent market supply of goods and services; the demand for factors of production, including financial capital, physical capital, and labor; government intervention in markets; and international trade. Students will learn to use the various models formulated by economists to explain and predict the outcomes of different economic and political situations.
Prerequisites: MA122 or permission of the instructor

EC689 International Economics

3 Credits

This course discusses economics concepts and business from a global prospective. Emphasis is on recent developments in international economics, intra-industry and foreign trade and global economic issues.

EG 110 - Engineering Design I

3.5 Credits

This course begins a five-semester design sequence who ultimate objective is to give the student concurrent engineering design experience. In the first two thirds of this first course the principles of the engineering design process, engineering graphics, and 3D solid modeling are developed concurrently. An introduction to the application of fundamental engineering concepts involving free-body diagrams, tensile and sheer stress, center of mass, torque and power curves for DC motors, power requirements, and multi-stage gear boxes is also provided. During the last third of this course students learn a variety of other computer skills and continue to work in teams on term projects in which these principles are used to design and produce working prototypes. The Identify-Ideate-Refine-Analyze-Decide-Implement engineering design process is introduced. Each step is studied in sufficient detail to be applied to the solution of open-ended engineering problems. The relationships among societal needs and the constraints imposed on the engineer in addressing these needs are discussed. Thought processes associated with the development of creative and innovative design ideas are studied and applied. Engineering communications are studied and applied. Sketching techniques are developed and utilized to develop the ability to visualize and characterize three-dimensional objects on a two-dimensional medium. Isometric, and orthographic projections are applied to produce graphical representations of engineering structures. Principles of dimensioning, sectioning, auxiliary views, standard parts, and assembly drawings are studied and applied. Solid modeling techniques are used to simultaneously develop the above skills using SolidWorks. Engineering documentation will be generated from the solid model and in addition to the various views listed above will include rendered images, animated assembly files, and surface area, volume, and mass properties. Design projects are undertaken by groups of two to three students. Groups are required to give class presentations, submit project proposals, progress reports, a final technical report, and a working prototype.Students will also be introduced to software tools for use with arrays and matrix algebra, word processing, and spreadsheets, and the use of the Internet for research and the electronic transfer of design data. *(Offered Fall semester only)*

EG 112 - Engineering Design II

3.5 Credits

This is the second course in a five-course sequence. In the first third of this course students will continue to gain experience in the use of solid modeling tools and will be introduced to Microsoft Project which they will use as a project management tool for their design projects. As in the previous design course, teamwork, and communication will be stressed. In addition to continued work on report writing and oral presentation skills, business writing topics will include memos, routine business letters, and business letters presenting unwelcome news. The subjects to be covered for each type will include correct formatting and the rhetorical strategies appropriate to getting the message across to the reader. In the final two-thirds of this course, students are expected to analyze engineering problems, and write, test and debug solutions to those problems using the C programming language. During the course, students will build and debug a simple, microprocessor-based, digital hardware prototyping environment. This hardware will be used throughout the remainder of the course. Each student will keep their assembled prototyped environment for use in future projects (a nominal lab fee will be assessed to cover the cost of parts). Programming topics to be covered include expressions, conditional and iterative control structures, arrays, functions, reacting to external events (reading switches and sensors) and controlling external devices (LCD displays, relays, motors, LEDs, etc.). Emphasis will be on algorithms, problem analysis, and skills which will be required in other courses in the engineering curriculum. As in the first course in this sequence, teams of three to four students will undertake a design project. Teams are required to give presentations, submit project proposals, progress reports, a final technical report, and create a working model of their solution to the assigned design project. Successful completion of the design project will require the team to integrate their mechanical design, manufacturing, project management, programming, and presentation skills. *(Offered Spring semester only)*
Prerequisites: EG 110, (Strongly Suggested: MA 201)

EG 200 - Statics

3.5 Credits

This course explores the definitions and concepts of forces, moments, and couples. Topics include resultants of force systems, equilibrium of 2D and 3D force systems, trusses, frames, machines, cables, friction, centroids, moments of inertia and shear and moment diagrams. *(Offered Fall semester only)*

Prerequisites: PH 215, (Strongly Suggested: MA 203)

EG 201 - Fluid Mechanics

3.5 Credits

This course provides a working knowledge of fluid mechanics and the problem solving ability to set up and apply the appropriate laws in fluid flow analysis. The course begins by introducing the student to eulerian and lagrangian descriptions, the velocity field, and other properties. This is followed by a discussion of surface and body forces, stress at a point, and stress vectors which leads into fluid statics, including pressure distribution and forces on submerged curved and plane surfaces. The student will then learn to derive and apply differential and integral formulations of conservation of mass, momentum, and energy with emphasis on control-volume applications. Dimensional analysis is studied and applied. The latter part of the course focuses on pipe flow with consideration of head loss, use of the Moody diagram, and analysis of pipe networks. Students will perform approximately four laboratory experiments in this course. *(Offered Spring semester only)*

Prerequisites: EG 200 and EG 209 (may be taken concurrently)

EG 202 - Strength of Material

3.5 Credits

The course covers stress and strain, torsion of circular shafts, Mohr's circle, bending and deflection of beams, combined loading, column buckling, and welded and riveted joints. *(Offered Spring semester only)*

Prerequisites: EG 200, (Strongly Suggested: EG 207, EG 208)

EG 203 - Dynamics

3.5 Credits

This course develops the student's ability to solve non-equilibrium problems and to extend the student's study of Engineering Mechanics beyond statics to the mechanics of motion. As was the case in Statics, vector analysis is used as a tool that makes possible the analysis of many advanced problems which could not be solved by scalar methods. The use of simulation software in the analysis of dynamic systems will also be covered. Topics include kinematics of a particle (rectilinear and curvilinear motion) in one, two and three dimensions; kinetics of a particle (impulse and momentum, moment of momentum and work-energy); mass moments of inertia; kinematics and kinetics of rigid bodies in plane motion; and relative velocity and acceleration. *(Offered Spring semester only)*

Prerequisites: EG 200

EG 207 - Instrumentation & Measurements

3 Credits

This course is an introduction to the fundamental concepts, principles, procedures, and computations used by engineers to conceive, design, implement and operate modern instrumentation and measurement systems. Students will gain a sound understanding of the language used to describe modern instrumentation, measurement, and control systems and an appreciation of the various types of systems in common use in industry. Students will learn LabView and use this software to create virtual instruments during laboratory exercises that are integral to the course. Particular emphasis will be given to electrical, mechanical, flow, and thermal measurement systems appropriate to the fields of mechanical and aeronautical engineering. The course will also cover statistical tests to evaluate the quality of measurements, standard methods of characterizing measurement results, and methods for characterizing measurement system response. *(Offered Fall semester only)*

Prerequisites: EG 112, (Strongly Suggested: PH 216)

EG 208 - Material Science

3.5 Credits

This course provides the necessary background of material science and engineering that can be applied to manufacturing processes, strength of materials, machine design, electrical and electronics engineering. Emphasis on heat treatments, material properties and processes, casting and alloying technologies and understanding the relationship between material structure, processing, and properties of materials. Introduction to modern polymers and composites materials, and wear prevention techniques. Modern engineering materials and their mechanical, electrical, and magnetic properties are considered in terms of microstructure. Phase diagrams and corrosion mechanics also are covered. A design project will be conducted. *(Offered Fall semester only)*

Prerequisites: CH 101 (Strongly Suggested: EG 207)

EG 209 - Thermodynamics I

3 Credits

This course provides the student with a working knowledge of thermodynamic concepts and the problem solving ability to set up and apply the appropriate laws in the thermodynamic analysis of engineering systems. Energy, heat, and work are defined and used in the First Law of Thermodynamics. Other thermodynamic properties and equations of state are introduced with emphasis on tabular and graphical forms for simple compressible systems and on the ideal gas. Phases and phase transitions are discussed and energy analysis of both open and closed systems is examined. The Second Law of Thermodynamics and the property entropy are introduced, and their macro and microscopic implications discussed. Emphasis is placed on the consequences of irreversibility and the limitation this places on the behavior of engineering systems. Also covered are transient-flow analysis and vapor power cycles. *(Offered Spring semester only)*

Prerequisites: PH 216 and MA 202

EG 308 - Gas Dynamics

3 Credits

This course comprises a study of one and two dimensional compressible flow. Major topics covered include: Speed of sound & Mach number, Isentropic flow through nozzles & diffusers at subsonic and supersonic Mach numbers, Normal shock wave analysis and applications, Supersonic wind tunnels, One-dimensional flows with friction (Fanno line flow), One-dimensional flows with heat transfer (Rayleigh line flow), and Combination of normal shocks and Rayleigh and Fanno lines. The course also includes an overview of two-dimensional supersonic flows, study of Prandtl-Meyer expansions and oblique shock waves, an introduction to the method of characteristics, and an introduction to experimental methods in compressible flow. *(Offered Fall semester only)*

Prerequisites: EG 201, EG 209, MA 203, MA 205

EG 310 - Engineering Design III

3.5 Credits

This course is the third course in the five-semester design sequence and provides a concurrent engineering design experience. In concurrent engineering design all phases of product development are considered simultaneously. This is an approach that is being used in industry to improve quality and reduce design cycle time. Students will continue to build their design experience from the previous two design courses. Working directly from their solid model data bases they will perform finite element analysis (to determine stresses and deformations), motion and dynamic analysis, manufacturing simulation, CNC code generation for use with lathes and milling machines, assembly modeling and tolerance checking, as well as drafting and documentation.As in the previous two design courses, teamwork, report writing, and oral presentation skills will be stressed. Principles of ethical reasoning will be introduced to develop an understanding of the relationship among societal needs and the constraints imposed on engineers in addressing those needs.The basics of statistics will also be covered including descriptive statistics (constructing frequency tables, histograms, finding mean, standard deviation, and Z scores), inferential statistics including confidence intervals, and linear and quadratic regression. *(Offered Spring semester only)*

Prerequisites: EG 112, EG 202, EG 203

EG 314 - Aerodynamics

3.5 Credits

This course studies the fundamentals of incompressible fluid flow, compressible flow, subsonic and supersonic flow, inviscid flow, laminar and turbulent flow, and potential flow, followed by their theoretical applications on airfoil theory and finite wing theory, including Kutta-Joukowski law, linear thin airfoil theory, and Prandtl's lifting-line theory. The course also introduces fundamental aerodynamic concepts and phenomenon such as wing tip vortex, downwash, induced drag, induced angle, spanwise efficiency factors, friction drag, pressure drag, and aerodynamic center. *(Offered Fall semester only)*

Prerequisites: EG 201, MA 302

EG 316 - Electrical Engineering

3.5 Credits

This course provides an introduction to the essentials of electrical engineering as appropriate for mechanical and aeronautical engineering majors. Topics to be covered include resistive circuits, nodal and mesh analysis using Kirchhoff's laws, superposition, Norton & Thevenin equivalences, PSPICE analysis, capacitance & inductance, 1st and 2nd order transient analysis (RC, RL & RLC circuits), AC steady-steady analysis, power in a steady-steady circuit, and (time permitting) a brief introduction to the Fourier Transform and its applications to electrical circuit analysis. *(Offered Fall semester only)*

Prerequisites: MA 205, PH 216, EG 207

EG 318 - Thermodynamics II

3 Credits

Thermodynamics II is a fundamental engineering course required in the mechanical engineering curriculum. It focuses on the application of the fundamental laws of thermodynamics, learned previously in Thermodynamics I (EG209), to the analysis of energy conversion devices, systems, and processes. The course moves beyond EG209 through the analyses of more realistic power-producing and refrigeration systems, systems in which there are more than one substance present, and reactive systems. Factors that govern energy conversion processes and impact on the efficiency of those processes are studied with particular attention given to environmental and sustainability implications. *(Offered Fall semester only)*

Prerequisites: EG 209

EG 325 - Intermediate Strength of Materials

3 Credits

This course is intended to be a continuation of EG 202 - Strength of Materials. It investigates material failure mechanisms such as yielding under combined loading, brittle fracture, and fatigue. Among the other topics covered by the course is the analysis of thick-walled pressure vessels, stress concentration, safety factors. *(Offered Fall semester only)*

Prerequisites: EG 202, EG 208, MA 203 (may be taken concurrently), MA 315 (may be taken concurrently)

EG 326 - Aircraft Structures

3 Credits

The course provides fundamental concepts of stress, deformation, strain, and displacement of linear elasticity, discusses loading conditions such as torsion, bending, and shear, and introduces various aspects of structures, failure criteria, yielding fracture, safety factor, fatigue, buckling, and aircraft materials and selection. The aircraft structural components and their analysis method, including bars, beams and thin walled structures, are also introduced. *(Offered Fall semester only)*

Prerequisites: EG 325

EG 330 - Propulsion

3 Credits

This course provides the student an opportunity to integrate fundamentals of thermodynamics and fluid mechanics for complex propulsion systems. It includes: Analysis of various common aircraft propulsion systems, Propeller momentum theory and blade element theory, propeller efficiency, Analysis of various types of jet engines: turbojet, turbofan, and turboprop, Ideal jet engine cycles, jet propulsion cycle, component efficiencies, Afterburners, Analysis of solid and liquid propellant rocket engines, thrust equations and performance calculation, exhaust nozzles. This course gives a basic understanding and analysis tools of various propulsion systems used in the aerospace industries. *(Offered Spring semester only)*

Prerequisites: EG 308, CH 101

EG 333 - Control Systems Analysis

3.5 Credits

This course provides the student an opportunity to model, analyze, and design control systems. It includes mathematical modeling of linear systems for time and frequency domain analysis, transfer function and state variable representations for analyzing stability, controllability, and observability; and closed-loop control design techniques by Bode, and root-locus methods. It also involves computer programming and simulation exercises. This course gives a basic understanding and analysis tools of various control systems used in the aeronautical and mechanical industries. *(Offered Spring semester only)*

Prerequisites: MA 315, EG 316, EG 203

EG 341 - Design of Machine Components

3 Credits

Analysis, selection, and design of components such as gears, bearings, springs, and fasteners used in mechanisms and machines.

Prerequisites: MA 203, MA 315, and EG 325

EG 350 - Vibrations

3 Credits

This course investigates the vibration of mechanical systems, including free and forced motion of single-degree-of-freedom systems with and without damping, steady and transient vibration, systems with multiple digress of freedom, and vibration-measuring instrumentation. *(Offered Spring semester only)*

Prerequisites: MA 203, MA 315, EG 203

EG 409 - Composite Materials

3 Credits

The course provides analysis, design and applications of laminated and chopped fiber reinforced composites, as well as micro- and macro-mechanical analysis of elastic constraints, failure and environmental degradation. An integrated lab component is also included to address aspects in manufacturing, design and testing of composite structures**.** (May not be offered every year)

Prerequisites: EG 202, MA 315

EG 410 - Heat Transfer

3.5 Credits

This course provides theory and application of steady and transient heat conduction in solids. The topics include forced convection, mathematical development of thermal boundary layer, natural convection and heat transfer correlation equations. The thermal radiation equations with application to heat exchange between black and gray bodies are developed. Heat exchangers are also covered in this course. *(Offered Fall semester only)*

Prerequisites: EG 201, EG 209, and MA 205

EG 412 - Aircraft Design I

3 Credits

The course involves individual aircraft design projects with problem sets and lectures devoted to various aspects of the design and analysis of a complete air vehicle. Students select a particular type of aircraft to be designed and, in two academic semesters in parallel courses (Capstone Design I and II), define the configuration using methods similar to those used in the aircraft industry for preliminary design work. Together with the vehicle definition and analysis, basic principles of applied aerodynamics, structures, propulsion, flight controls, and system integration, applicable to many types of aerospace problems are discussed. The objective of the course is to present the fundamental elements of these topics, showing how they are applied in a practical design. Design procedures, design process, design steps and design tools are introduced in this course. *(Offered Fall semester only)*

Prerequisites: EG 310, EG 326, EG 419 and EG 460 (EG 419 and EG 460 may be taken concurrently)

EG 418 - Flight Dynamics I/Performance

3 Credits

In this course, the equations of motion for steady state rectilinear flight will be derived, and then its applications for different flight condition are evaluated. The flight conditions in terms of pressure and temperature as functions of altitude and other atmospheric variables are introduced. The student will be enabled to calculate all performance specifications of an aircraft such as maximum speed, maximum endurance, range, ceiling, take-off run, rate of climb, fastest turn, and tightest turn. Both propeller driven and jet aircraft are covered. *(Offered Spring semester only)*

Prerequisites: EG 314

EG 419 - Flight Dynamics II/Stability/Control

4 Credits

The stability and controllability are two prerequisites of a safe flight. This is a basic course in the stability and control of aircraft. The six-degree-of-freedom differential equations of motion are introduced. Then the linearized perturbed state equations of motion are derived. Important topics in this course are: Longitudinal dynamic and static stability, stick fixed and free neutral points and static margin, lateral-directional dynamic and static stability, trim condition, longitudinal-lateral-directional coupling, control and maneuverability, stick fixed and free maneuver points, stability and control derivatives and handling qualities and control response. Introductions to autopilot design and flight simulation are also presented. *(Offered Fall semester only)*

Prerequisites: EG 333, EG 418, MA 203

EG 460 - Capstone Design I

3 Credits

The Capstone Design Courses are a senior-level team project design experience that requires the students to use all of their prior courses to solve a "real-world" engineering problem or to develop a viable product. With the mentoring and instruction of the course instructor(s), these courses conclude the engineering student's academic studies by solving an aeronautical or mechanical engineering problem that does not have an "answer in the back of the book". Rather, the answer is determined from the application of good engineering analysis and judgment borne of coop and classroom experience. The purpose of these courses is to offer senior-level undergraduate students the opportunity to participate in a capstone design experience focusing upon an aeronautical or mechanical system. The courses bring together most of the subjects taken to date and require the students, working in small teams, to demonstrate their creativity as well as their basic knowledge. The courses are often culminated by the public presentation of the final design to a panel of outside judges and sometimes by

entry in a national competition. *(Offered Fall semester only)*
Prerequisites: Completion of junior-level courses in either the AE or ME program; Aircraft Design is a corequisite for AE students.

EG 461 - Capstone Design II

3 Credits

The Capstone Design Courses are a senior-level team project design experience that requires the students to use all of their prior courses to solve a "real-world" engineering problem or to develop a viable product. With the mentoring and instruction of the course instructor(s), these courses conclude the engineering student's academic studies by solving an aeronautical or mechanical engineering problem that does not have an "answer in the back of the book". Rather, the answer is determined from the application of good engineering analysis and judgment borne of coop and classroom experience. The purpose of these courses is to offer senior-level undergraduate students the opportunity to participate in a capstone design experience focusing upon an aeronautical or mechanical system. The courses bring together most of the subjects taken to date and require the students, working in small teams, to demonstrate their creativity as well as their basic knowledge. The courses are often culminated by the public presentation of the final design to a panel of outside judges and sometimes by entry in a national competition. *(Offered Spring semester only)*
Prerequisites: EG 460

EG 420 – Thermal Design

3 Credits

This course provides theory and practical application examples on the optimized design of thermo-fluid systems. The topics include description and characteristics of thermo-fluid components and systems, the thermo-fluid design process, numerical modeling and simulation methods, design strategies through example problems, economic considerations in the design process, design optimization approaches, and mathematical optimization methods. **Prerequisites:** EG410 (Heat Transfer), MA315 (Linear Algebra and Intro to Numerical Methods)

EG 424 – Robotics/Automation Vision I

3 Credits

This is the first course of a two-course sequence that studies the general area of Industrial Robotics, Automation, and Machine Vision and provides a focus on this highly relevant area of modern engineering. In these courses students will be introduced to the mathematical theory underlying multi-degree-of-freedom industrial robot systems as well as the related topics of industrial automation and machine vision systems.

This course will cover topics such as spatial descriptions and transformations, and manipulator kinematics (forward and inverse) including Denavit-Hartenberg notation on multi-degree-of freedom robots from 3 to 6 joints. The lab component of the course will introduce students to the ABB IRB 140 robot and IRC5 robot controller, simple end-of-arm-tooling (EOAT) such as pneumatic grippers and suction cups, and the COGNEX Insight 5400 machine vision system. A series of building-block exercises leading to the team-based final project will require the students to integrate the robot and camera systems to accomplish specific tasks and will demonstrate the students' competence with these systems. The goal will be to create multi-disciplinary teams for the final project (i.e., teams composed of M.E./A.E. as well as C.S./C.S.E./G.S.R. majors).

Significant out-of-class time will need to be spent on lab exercises and the final project. **Prerequisites:** MA 315 or MA 250 and EG 310 or CS 218

EN 100 - Developmental Writing

3 Credits

This course provides developmental instruction in writing. It is designed for student writers without the command of the conventions of standard English (grammar, spelling, punctuation, and usage). Instruction includes frequent writing assignments, discussion of writing and revision strategies, and individual student conferences. The course is graded pass/no credit. Enrollment is by self-placement.

EN 105 - College Writing & Research Lab

1 Credits

This optional lab meets once a week for 50 minutes and is an accelerated version of EN100, Developmental Writing. This course helps students gain command of the conventions of standard English (grammar, punctuation, usage) as well as increase the effectiveness of their writing process through instruction in prewriting and revision techniques. The course is graded pass/no credit. Enrollment is by self-placement. 1 credit Pass/ No Credit
Corequisites: EN 115

EN 115 - College Writing and Research

3 Credits

This course is an introduction to integrated writing and research designed to prepare students for college-level academic writing across the curriculum. Instruction includes frequent writing assignments, discussion of writing and revision strategies, use of research and library sources, and conferences. Writing assignments progress from single to multiple source, culminating in a sustained research project entailing field research, and interview. A student must earn a C plus or higher to pass the course.

EN 208 - Public Speaking

3 Credits

An introductory speech course emphasizing formal public speaking (informative, persuasive, interviews, and group discussion). Course material includes methods of speech writing, techniques of delivery, effective presentation of ideas, and in-class exercises related to these topics. Prepared and impromptu speeches are required.

EN 215 - Professional Writing

3 Credits

This course stresses effective writing in career, management, and community environments, focusing on purpose and style, audience expectations, and creative responses to problem-solving situations. Students will gain experience with letter and report-writing formats, in editing and team-writing skills, and in the use of computers to enhance communication.

Prerequisites: EN115

EN 245 - Writing for Publication

3 Credits

Students write for publication in their discipline. The genre include but are not limited to the following: memoir, historical nonfiction, fiction, poetry, humor, cover letters, memo, professional email and letters, resume, editorials, letters-to-the-editor, journalism and creative nonfiction. Students learn the writing process of professional authors, the mechanics of magazine and newspaper submissions, and public presentations skills. This course can take the place of EN 208 or EN 215, depending on the student's major.

FI 201 - Introduction to Investments

3 Credits

Various investment vehicles, including stocks, bonds, and commodities are introduced and examined with an emphasis on the decision-making process that underlies all investments. *(Offered Spring semester only)*

FI 210 - Personal Finance

3 Credits

This course introduces the principles and practices of personal finance and investment. Topics include investments in real estate, stocks, bonds, money-market instruments, savings accounts, and insurance and retirement plans. Also covered are personal savings, mortgages, consumer credit and other means of financing investments.

Prerequisites: BM 101

FI 320 - Corporate Finance

3 Credits

The role of corporate financial planning and the acquisition and utilization of funds are stressed, along with analytical concepts for evaluating financial decisions. Topics include financial analysis and planning, investment decisions, short- and long-term financing, capital budgets, and merger and acquisition decisions. *(Offered Spring semester only)*

Prerequisites: AC 201, EC 102, and MA 240

GD 115 - Introduction to Computer Drawing

3 Credits

This is an introductory course in observational drawing and composition using electronic media and a variety of subject matter. Emphasis is on clarity of observation and the ability to order and translate 3-dimensional form and space into 2-dimensional drawings.

GD 126 - Game Design I

3 Credits

This course addresses the fundamental ideas behind the design of electronic and non-electronic games. It touches on relevant formal fields like systems theory, cybernetics and game theory. Game Design I also includes basic interactive design, including interface design,

information design and human computer interaction. Perhaps most important for Game Design I is a detailed study of how games function to create experiences, including rule design, play mechanics, game balancing, social game interaction and the integration of visual, audio, tactile and textual elements into the total game experience. More practical aspects of Game Design, such as game design documentation and play testing are also covered.

GD 127 - Game Design II

3 Credits

This course addresses the business and intellectual property rights of people who make games and wish to start a business. It focuses on management techniques, financing and managing expenses and cash flow. It also address the legal issues based on the concept of intellectual property, such as end user agreements and developer/publisher contracts

Prerequisites: GD126

GD 230 – Two Dimensional Graphics

3 Credits

This course will cover the essential techniques needed to create quality game art with Flash and Photoshop using the Adobe CS 4 suite. It will teach students what Flash graphics are, how to create their own, and how to import them into real working game source files. It will also cover the game development process, user interface design, game character sprites, and special effects.

GD 240 - Three Dimensional Graphics

3 credits

This course will give students a basic introduction to 3D design software. Students will create models from primitives, apply textures, colors, skins, and otherwise modify the structures they create. They will create objects that can be exported into game environments and other types of software.

HI 201 - America in the 20th Century

3 Credits

This course surveys the major events, ideas, and people that shaped American life during the twentieth century. Particular consideration will be given to the ways that historic forces influence contemporary political, economic, and social affairs.

Prerequisites: EN 115

HI 203 - American History to 1877

3 Credits

This course surveys the American experience from the Pre-contact period through the Civil War by studying the critical historical forces, events, and people that helped to shape America both as an idea and a nation. Students will consider the role that diverse peoples--their beliefs and their communities--have played in the shaping of the American nation in its most formative years.

Prerequisites: EN 115

HI 212 - American Social History: Colonial Period to Late 19th Century

3 Credits

This course examines the experiences of diverse communities of Americans and their role in such significant issues in the life of the nation as independence, emerging democracy, slavery, technological change, war, reconstruction, and westward settlement. Through these communities, the class will focus on the persistent tensions between everyday life and those larger decisions and events that continually reshape the circumstances of local life from the first colonies through the late 19th century. Meets the SS elective requirement. May be used as a general elective.

Prerequisites: EN115

HI 213 - Technology and Social Change in American History

3 Credits

A survey of the social history of American technology from the pre-colonial era to the 20th century. Students will be encouraged to consider the role that technology has played in the development of American society over time, and to consider how technological systems have influenced American cultural values and social practices. The course will examine select, innovative technologies for the extent to which they have had a transformative effect on American society and culture.

Prerequisites: EN 115

HI 233 - 20th Century Global History

3 Credits

This course provides a survey of world history in the twentieth century, exploring major developments in political, social and economic development as well as religion and culture. This course will include discussion of selected examples from the United States, Europe, Asia, Africa, the Middle East, and Latin America, with emphasis on topics of Western imperialism, nationalism and revolution, and decolonization. **(May not be offered every year)**

Prerequisites: EN 115

HI 305 - Power, Politics and War: Europe 1500-1870

3 Credits

This course examines the development of the modern nation state in Europe with emphasis on the interaction of the political, economic and social forces that shaped the government and policies of such countries as England, France, Russia, Italy, and Germany through the Franco-Prussian War. Some of the major topics covered will include: the reign of Louis XIV, the westernization of Russia, the emergence of England as the most powerful European nation, the French Revolution and the Age of Napoleon, the Democratic Revolutions of the 19th Century, and the unification of Italy and Germany. **(May not be offered every year)**

Prerequisites: HU 200 level-course OR SS 200-level course

HI 309 - Lewis and Clark's America

3 Credits

The Lewis and Clark Expedition of 1804-06 is studied in the context of America's early national period and its influence on the opening of the American West. Using a combination of classroom and experiential learning methods, students will consider the background to the Expedition, the natural challenges to its progress, its encounters with native Americans, leadership challenges faced by Lewis and Clark, and the discovery of new flora and fauna. Also to be considered is the Expedition's influence on the merging fur trade, diplomatic relations with Indian tribes, and trans-Mississippi River frontier settlement. Additional fee for required travel component. **(Offered Summer semester only)**

Prerequisites: SS 200-level course or HU 200-level course

HI 311 - The Modern Middle East

3 Credits

This course will focus on the political, economic, and social development of the Middle East in the post World War II period as countries in this area of the world established themselves as nation states independent of European colonial domination. An overview will be presented of the history of the region from ancient times through World War II, with particular emphasis on the legacy of colonialism. **(May not be offered every year)**

Prerequisites: SS 200-level course or HU 200-level course

HI 316 - America in the Vietnam Era

3 Credits

This course is a focused study of American history in the period 1945-1974, dates that mark the onset of the Cold War and the American military withdrawal from Vietnam some thirty years later. Students will consider the Cold War background to the War and then evaluate the escalating military American presence in Vietnam and social and political turbulence that the conflict unleashed at home.

Prerequisites: SS 200-level course or HU 200-level course

HI 320 - The American Civil War

3 Credits

This course will examine the causes of the war, the political and military leadership, the major battles, the contribution of African-American soldiers, the work of the civilian population and the impact of the war upon the nation. There will be particular emphasis upon the use of primary documents such as diaries, letters, photos and music to better understand the above mentioned issues.

Prerequisites: SS 200-level course or HU 200 level course

HI 325 - Women in American History

3 Credits

This course examines the roles of women in American History from the colonial period to the present. In examining these roles particular emphasis will be placed on the diversity of the experiences of women from the perspectives of race, ethnicity and economics. Also considered in the course will be the societal influences shaping women's roles, the many contributions made by women, the efforts of women to improve their status through political action and social reform, and the achievements of individual women. **(May not be offered**

every year)
Prerequisites: SS 200-level course or HU 200-level course

HS 101 - Introduction Homeland Security Studies

3 Credits

This course introduces the organizations responsible for security in the United States (local, state, and federal levels), the many threats faced by these organizations, and the legislation which empowers the organizations to carry out their individual roles. This course also covers topics such as intelligence, national preparedness, and technology in combating threats to national security. Guided by the instructor and with the assistance of the Public Safety staff, students will conduct a security audit of the College.

HS 120 - Ideology Conflict and Terror

3 Credits

This courses explores in depth psychological belief systems and structures, social forces and personality variables affecting belief systems, organized systems such as religions and cults, ways extreme belief systems provide the animating conditions for conflict and inhumanity, and the psychological consequences. These principles are applied to the study of conversion processes and an exploration of the terrorist mindset and the psychology of the suicide bomber.

HS 230 - Homeland Security Vulnerabilities and Threats

3 Credits

This course examines the ways in which vulnerabilities are identified, risk analysis, and the fundamental principles underlying critical infrastructure protection.
Prerequisites: HS 101, or permission of the instructor

HS 31X Risk Management in Homeland Security

3 Credits

This course encompasses a brief review of the nature of the U.S. Homeland Security Paradigm, stressing the threats and risks thereto, and provides a basis upon which to manage these risks and threats in a logical, comprehensive and intelligent manner. Risk areas examined include public safety, industry, liability protection, and technology integration. Guided by the instructor, and with the assistance of the Public Safety staff, students will conduct a security audit of the College.

HS 490 - Homeland Security Internship

6 Credits

This course provides students with the opportunity to work in a private or public organization with a homeland security mission, service, or product. It allows students to link academic principles to practical applications, develop personal responsibility, and refine interpersonal and communications skills. Program director approval of internship is required.
Prerequisites: BM 101 is highly recommended, or approval of the faculty supervisor. Senior status and permission of instructor.

HU 212 - Film and Culture

3 Credits

This course studies film as a reflection of a society's culture. The thesis of the course is that films reflect the values, beliefs, and attitudes of a specific culture at a certain historical period. Changes in film styles, themes, and narratives reflect changes in the culture that produced them.
Prerequisites: EN 115

HU 215 - Jazz and Modern America

3 Credits

For more than a century jazz has been not only one of the most important cultural developments in America but also deeply involved in important political, intellectual, and social developments. This course focuses on both the development of the art of jazz and its role in modern America history.
Prerequisites: EN115

HU 220 - Globalization and Culture

3 Credits

The course begins by assuming that in the twenty-first century globalization will remain the greatest force for change in cultures worldwide. It examines some of the many definitions of globalization, analyzing the phenomenon as a technological, social, economic, and above all, cultural phenomenon. It considers the role of Western culture in the process of globalization and the reaction of non-western

cultures to the leadership of the West. It asks how American culture is being redefined as a result.
Prerequisites: EN115

HU 222 - World Literature

3 Credits

In this course the student will encounter a variety of genres and themes associated with world literature, especially the world literature of the modern period. Instruction emphasizes effective and creative reading strategies that will enhance student appreciation of literature. All sections of World Literature include instruction in how to read analytically for purposes of appreciation and enriched understanding.
Prerequisites: EN 102

HU 230 - American Literature

3 Credits

This course examines the ways in which vulnerabilities are identified, risk analysis, and the fundamental principles underlying critical infrastructure protection.
Prerequisites: HS 101, or permission of the instructor.

HU 240 - Cultures in Transition

3 Credits

A study of the complex social and cultural forces shaping current debate on liberty and social responsibility, this course examines the different strands that underlie American thought and investigates the effects of contact with other cultures. Through argumentation, research, and class discussion, students learn how ideology and contact shape processes of representation.
Prerequisites: EN115

HU 302 - Ethics for a New Century

3 Credits

An examination of some of the most contentious moral issues facing us today. Advancing technology and changing attitudes are causing people to question what is moral and what is not. How we as a society respond to these matters will affect the way people live for the next fifty to seventy-five years. The topics considered in class include cloning and other reproductive technologies, euthanasia, race and ethnicity, gender equity, sexual orientation, professional ethics, and terrorism.. Through the readings and case studies, we will examine the ideas underlying these troubling matters and consider the validity of the claims on the different sides. The class will emphasize careful thinking and precise writing.
Prerequisites: SS 200-level course or HU 200-level course

HU 308 - Art of the Modern Period

3 Credits

The study of modern art, especially painting, presents an opportunity to examine changes in ways of seeing that hold continuing relevance to contemporary visual culture. This course covers the emergence and development of specifically modern styles of expression in the period from 1862 to the years immediately following the Second World War. It meets third year general education elective requirements in the Humanities area.
Prerequisites: SS200-level course or HU200-level course

HU 311 - Nature and American Culture

3 Credits

This course looks at the ways in which American culture has been shaped by the natural world and the natural world by American culture. It begins with an overview of the history of human-environment relationships, showing how our perception of nature is shaped by culture. Specific topics can include wilderness, natural resources, ecoactivism, the social construction of nature, animal rights, and environmental ethics.
Prerequisites: SS200-level course or HU200-level course

HU 318 - Literature and Anthropology

3 Credits

An introduction to the study of the meaning and social importance of rituals and symbols. At the intersection of literature and anthropology, the student encounters both the rituals of everyday life and the stories that people tell about who they are and what they believe. Cultural anthropology investigates the narrative, symbolic, and ritual structures that shape the human meaning of our experience.
Prerequisites: SS 200-level course or HU 200-level course

HU 319 - Classical Literature

3 Credits

This course covers a wide selection of classical literature. Students will encounter a variety of genres — epic, lyric, and tragic, for example, as well as examples of history and philosophy. Participants face a double challenge: understanding the cultural expression of the Greco-Roman world and evaluating its relevance to their own experience.

Prerequisites: SS 200-level course or HU 200-level course

HU 322 - Social & Political Philosophy

3 Credits

Emphasizing primary sources, this course studies different social and political philosophies from the past and the present, as well as their relationship to specific historical and contemporary contexts.

Prerequisites: SS200-level course or HU200-level course

HU 340 - Studies in Modern Culture

3 Credits

An examination of the ways that the work of imagination (art, literature, and film) reflects social change and interrogates cultural norms. Through research, critical inquiry, and class discussion, students identify characteristics of culture in the modern period, investigate relations between media and ideology, and evaluate the role of personal expression in modern culture.

Prerequisites: SS 200-level course or HU 200-level course

HU 345 - Poetry Workshop

3 Credits

This writing course introduces students to the reading and writing of poetry. Students will be exposed to a variety of modern and contemporary poets in order to read as writers and develop their writing. Poetics including imagery, rhythm, diction, figurative language, voice, narration, and rhetorical purpose will be studied. Part of the course will be conducted as workshop. This course fulfills the upper-level Writing Intensive General Education requirement.

Prerequisites: EN 155, HU or SS 200-level courses

HU 346 - Overcoming Writer's Block

3 Credits

Students will learn strategies to reduce writer's block and increase fluency through various techniques including meditation and mindfulness practice. Through readings of published author accounts as well as theoretical texts about writing, students will learn to identify the psychological and social aspects of writing. Problems such as procrastination, stress, and failure associated with writing will be discussed in order to improve academic, personal, and workplace writing. This course fulfills the upper-level Writing Intensive General Education requirement.

Prerequisites: EN 115, HU or SS 200-level courses.

HU 347 - Creative Nonfiction

3 Credits

This writing course introduces students to the literary nonfiction genre known as creative nonfiction. This genre includes but is not limited to personal essays, humor, memoir, segmented essays, travel writing, nature writing, the lyric essay, and literary journalism. This course is part literature course (students will be exposed to a wide range of contemporary creative nonfiction authors) and part creative writing course (students will write several types of creative nonfiction). Part of the course will be conducted as a writer's workshop. This course fulfills the junior level writing requirement.

Prerequisites: EN 115, HU or SS 200-level courses.

HU 404 - Humanities & Culture of Work

6 Credits

This course will examine collective myths that Western civilization has constructed to legitimize the social institutions of business and management. Students will study the effects of culture, language, states of mind, and tradition on the power of an organization. Through classroom discussions, readings, and research, students will explore the relationship between their own work environment and contemporary management and work issues.

ID 101 - First Year Seminar

3 Credits

An introduction to cultural and community engagement, this course is required of all first-year students and is designed to help students make a successful intellectual transition to college. Students explore Topics of current interest from a multidisciplinary perspective. All Sections include experiential learning or service learning. Collaborative learning develops abilities inthe areas of leadership, teamwork and critical inquiry. Topics include a variety of reading, research, and project opportunities.

Prerequisites: EN115

ID 401 - Senior Seminar

3 Credits

In this capstone course of the Interdisciplinary Studies Core, students undertake an interdisciplinary inquiry into a contemporary cultural issue. Independent projects draw upon knowledge from across the disciplines and require that students demonstrate advanced levels of ability in critical inquiry and argumentation. Through discussion and oral presentations, students share the results of their inquiry with seminar participants.

Prerequisites: SS300-level course and HU300-level course

ID 403 - Censorship & Self-Expression

3 Credits

This seminar examines the relationship between self-expression and censorship, especially the power of social norms to regulate how individuals behave and express themselves. The course includes a survey component that addresses three topics: 1) the history of censorship from the middle ages to the present day; 2) a review of legislation that inscribes individual and human rights; 3) the development of constitutive processes of censorship that influence normative expression and behavior. This last topic is particularly relevant to understanding topics related to gender bias, competing ideologies, and issues of state security. In individual research projects students will find that the effects of censorship often "trench" upon individual lives, these effects being justified in the name of a moral code and external threat to collective welfare. *A version of this course, with an emphasis on both market censorship and the relation of constitutive processes of censorship to consumption, has been co-taught with faculty from the Management Division.

ID 405 - Crime and Punishment

3 Credits

This seminar examines the social, historical, and cultural representations of crime and punishment as well as how such representations influence people's perceptions about criminals, crime, victims, and punishment. Students will analyze ideas about crime and punishment from a variety of social science and humanistic perspectives. *A version of this course, with an emphasis on corporate crime or computer crime, can be co-taught with faculty from the Computer Sciences Division.

Prerequisites: SS 300-level course and HU 300-level course

ID 406 - Searching for Yellowstone

3 Credits

This course focuses on interdisciplinary study of the principal environmental issues that influence the management of Yellowstone National Park. Students will consider how historic and cultural forces combine with shifting political and economic factors to shape the debate on the most critical problems facing Yellowstone Park today. Traditional and/or virtual classroom instruction will be used to prepare students for a week-long experimental learning program based in Yellowstone and the surrounding region.

Prerequisites: SS 300-level course and HU 300-level course

ID 407 - Women in Science

3 Credits

In the capstone of the DWC Interdisciplinary Studies Core, students undertake an interdisciplinary inquiry into a contemporary cultural issue. This course will explore the history of women in relation to the theory and practice of science and technology. The course begins with a discussion of technology and how women's roles have changed with respect to technology through the centuries. The course will be split in two sections. The first half will be an historical look at the roles of women in science and technology. The second half will concentrate on the scientific work of women during the 20th and 21st centuries. Broad themes will include the social, educational, and cultural factors that affected women over the centuries. Research has shown that women throughout history made significant contributions to science and technology despite barriers limiting their access to education and professionalization. Many of their stories have only begun to reemerge and are becoming part of the historical roots of science and technology.

Prerequisites: Senior status - completion of Cultural and Community Engagement general education requirements.

ID 408 - History & Culture of the American Southwest

3 Credits

This seminar studies the regional forces that have shaped the history and culture of the American Southwest by engaging in a focused study of the development of modern New Mexico. Traditional and/or virtual classroom instruction will prepare students for an extended experiential learning travel program that will include a study tour of sites that interpret and reveal the region's Native American, Hispanic, and Anglo-American heritage.

Prerequisites: SS300-level course and HU300-level course

IS 101 - Information Technology/Applications I

3 Credits

This course introduces students to the computer environment of today. A variety of topics will be covered, including the history of computers, current issues of information technology, information technology ethics, presentation software, and spreadsheets.

IS 112 - Introduction to Information Systems

3 Credits

Students are introduced to the role of information systems within an organization. The course focuses on identifying information systems as more than just computer systems, the impact of IS on an organization's enterprise and global strategies, and the roles of IS personnel. The Information Systems Life Cycle is introduced in this course.

Prerequisites: IS 101

IS 201 - Information Technology/Applications II

3 Credits

This course is intended for students who have mastered the fundamentals of computer use, advanced skills in word processing and presentation software, and intermediate skills in spreadsheets and web page development. The course is intended as advanced placement for new students, but may also be used as a general elective for students who have completed IS101. It is a project based course which will include instruction in advanced spreadsheet and web page development, the use of project management software, and database development. It will also cover information technology topics such as the history of computers, information technology ethics, current trends in information technology which will form the basis for some history of computers, information technology ethics, current trends in information technology which will form the basis for some of the projects included in the course and will utilize previously learned software skills.

Prerequisites: IS101 or permission of instructor

IS 219 - Computer Architecture/Information Systems

3 Credits

The major components of a computer system: the CPU, the control unit, internal and external memory, and input/output are studied as well as the principles of digital systems including data transfer, buses, and microprogramming.

Prerequisites: CT 100

IS 222 - Computer Assisted Software Engineering (CASE)

3 Credits

Students will utilize the specific set of tools discussed in class to step through the phases of the Information Systems Life Cycle using a case study. This course will build upon the prerequisite Introduction to Information Systems. Students will work as teams to produce the required deliverables for each phase of the Life Cycle. The primary focus is to provide a structured and practical approach to the use of the tools that will be further utilized in more advanced courses and the business world. *(Offered Spring semester only)*

Prerequisites: IS 112

IS 223 - Database Application I

4 Credits

This course will give the student an overview of application development using Data Base Management Systems. Conceptual database design, data modeling and data normalization will be studied. SQL (structure query language) will be presented and utilized throughout the course.

Prerequisites: CT 100 and CT 150

IS 224 - Database Application II

4 Credits

This is a continuation of CS 223 and emphasizes implementation of a data base design.

Prerequisites: CS 223

IS 275 - Principles of E-Commerce

3 Credits

This course introduces electronic commerce (E-commerce in terms of applications, business considerations, and enabling technologies. The Internet is significantly changing the way companies operate internally, with customers, and with business partners. It has allowed businesses to overcome the barriers of geographic boundaries to market, produce, and deliver products and services electronically. The course will examine approaches, applications, and issues in E-commerce. Students will learn what is required to establish different types of E-Commerce sites, including consumer-business, business-business, and Intranet sites. Several case studies will be presented to illustrate approaches and issues. This course will also introduce students to enabling technologies, such as application servers, XML, and databases. Students will develop a project plan for an E-Commerce site.

Prerequisites: IS 101, BM 101

IS 308 - Information Technology Ethics

3 Credits

This course is an introduction to the major issues surrounding the use of computers in our society with a special focus on fields related to computer science and information technology management. The course will cover an analysis of major trends in emerging computer technology and their potential effect on work, leisure, government, and human relations. Students will examine the assumptions which underlie our culture's relation to technology and the relation between their own values and the values implicit in our uses of technology and information.

Prerequisites: EN 115

IS 324 - Information Systems Application Life Cycle

3 Credits

Students will continue to examine the Systems Development Life Cycle (SDLC) phases. The course will cover the General Systems Design phase to include the design of databases, controls, and networks. Students will then examine the Detailed Systems Design Phase which consists of: Computer Architectures, an in-depth look at developing computer software using the Software Development Life Cycle (SWDLC) methodology.

Prerequisites: IS 112

IS 423 - Systems Project I

3 Credits

Working with a local business, students will design an information system that meets the customer's requirements in terms of speed, transactions, and flexibility.

Prerequisites: IS 324

IS 424 - Systems Project II

3 Credits

This is a continuation of IS 423.

Prerequisites: IS 423

IS 445 - Internship/Information Systems

6 Credits

This course provides students with the opportunity to work with a company in the information systems field. It allows the student to link academic principles to practical applications and to develop responsibility, interpersonal and communication skills. Department approval of internship description required.

Prerequisites: IS224 and IS324

IS 450 - The Enterprise Experience

9 Credits

During this experience which will take place at a host company, students will be exposed to all primary facets of the enterprise. Students will spend time and work in operations, accounting/finance, marketing, information systems, engineering, and human resources. The

student will spend extended time in the department that most represents their chosen major. A Memo of Understanding (MOU) will be developed, that will be mutually agreed to between the host site, Daniel Webster College, and the student. The student will also complete the appropriate internship forms developed by the college and meet the requirements of the course as established by the faculty supervisor . Students will be able to link academic principles to practical applications and to develop responsibility, interpersonal and communication skills. Director approval of enterprise experience description required.
Prerequisites: Junior or Senior status

IT 222 - Database for Managers

3 Credits

This course explains Database Management Systems (DBMS) concepts. Students use logical modeling techniques to document the database design such as Entity Relationship Diagrams. Physical design concepts include: transaction processing (TP & OLTP), Client/Server database systems, Internet/Web-based database systems, and Object Oriented Database Management Systems (ODBMS). Topics such as Database Maintenance, permissions and Security further broaden the study of Database Management Systems (DBMS). Each student will design and implement a relational database application to automate an existing manual business process. Database development tools, such as Microsoft Access, and SQL are applied.

IT 283 - E-Commerce for Managers

3 Credits

This course introduces electronic commerce (E-commerce) in terms of applications, business considerations, and enabling technologies. The Internet is significantly changing the way companies operate internally, with customers, and with business partners. It has allowed businesses to overcome the barriers of geographic boundaries to market, produce, and deliver products and services electronically. The course will examine approaches, applications, and issues in E-commerce. Students will learn what is required to establish different types of E-Commerce sites, including consumer-business, business-business, and Intranet sites. Several case studies will be presented to illustrate approaches and issues. This course will also introduce students to enabling technologies, such as application servers, XML, and databases. Students will develop a project plan for an E-Commerce site.
Prerequisites: Student must have Internet experience.

IT 325 - Project Management for Managers

3 Credits

Project Management for Managers introduces project management skills and techniques. It teaches the principles and techniques necessary to plan, execute, and manage complex projects and ensure they align with strategic corporate objectives. Topics include workflow analysis, quality control, and performance evaluation. Students will gain knowledge using industry accepted project management software.

IT 326 - System Application Life Cycle for Managers

3 Credits

This course concentrates on the effective management and application of computer-based systems so that organizations gain optimal return from their investment in information technology. To this objective the life cycle (SLC) allows one to identify and manage the computer-based information system by components.

IT 423 - Capstone Research Project

3 Credits

This capstone project is designed to call upon the technical and theoretical knowledge that students have gained over the last 18 months. Students will work as a team either to design a business plan for a mock company or as consultants to analyze and solve a business problem for a local company. The students will present the findings and conclusion of their research project.

IT 430 - Telecommunications Technology for Managers

3 Credits

Telecommunications networks are vital for the exchange of information within today's enterprise. This course focuses on telecommunications concepts which serve as the backbone for image, voice and data networks. Topics cover both history and contemporary technologies that comprise the telecommunications industry. Students will cover topics such as the configurations of network topologies, the use of Internet for data transmission and the implementation of wireless networks. Students also learn the important role information security plays in management of today's networks.

LG 110 - Language & Area Study I

3 Credits

This course introduces students to the basics of a foreign language, cultural studies relevant to that language, and basic

analysis skills utilizing the DIME (Diplomatic, Information, Military, and Economic) and the PMESII (Political, Military, Economic, Social, Infrastructure, and Information) models to facilitate an understanding of the culture studied as well as to give the student an understanding of intelligence analysis. When available, learning technology currently is employed to enhance and expedite the students' language learning process.

MA 98 - Introduction to Algebra

3 Credits

The purpose of this course is to provide a suitable mathematical foundation needed as background and preparation for subsequent college mathematics courses. Topics covered include basics of Arithmetic and Geometry, signed numbers and algebraic expressions, equations and inequalities, polynomials, factoring, algebraic fractions, graphing linear equations and inequalities, exponents and radicals. This is a self paced, independent and interactive study course. An online education program is used as the main instructional mode to promote student learning and also to assess the mathematics covered in the course. A Grade of C or better is required to pass the course. The credits earned from this course are not counted toward meeting degree requirements. Enrollment is by placement.

MA 115 - College Trigonometry

2 Credits

This is the second course of the sequence MA122 - MA115. The purpose of the course is to provide fundamental trigonometric concepts and skills needed for students majoring in technical areas such as aviation, engineering and computer science. The topics covered include angles and their measurements, trigonometric functions and applications, vectors, the laws of sines and cosines and applications, graphs of trigonometric functions, trigonometric identities and equations, and inverse trigonometric functions.

Prerequisites: MA122 or by placement

MA 116 - College Math for Business and Economics I

3 Credits

This course is designed to take into consideration the foreseeable math needs of business. The purpose of the course is to provide a strong algebraic background and effective methods to solve mathematical problems found in business, economics and social science. The topics covered include first/second degree equations and inequalities in one variable, linear equations in two variables and their graphs. However, the primary focus of the course is three basic functions (linear, quadratic and exponential) and their applications in business area, which include cost/revenue/profit functions, demand/supply functions, break-even analysis, equilibrium price, compound interest, exponential growth and decay, modeling, and estimation.

Prerequisites: MA 098 or by placement

MA 120 - Survey of Mathematics

3 Credits

Students will employ a wide range of problem solving strategies in this course. Topics include, but are not limited to, set theory, logic and truth tables, probability, Venn diagrams. Upon completion, students should be able to understand a variety of mathematical applications, think logically, and be able to work collaboratively and independently. This class is designed for students who are not required to take MA 216, MA 152, or MA 201.

Prerequisites: MA 098 or math placement

MA 122 - College Algebra w/Applications

3 Credits

The purpose of this course is to provide students with a proficiency in algebraic skills necessary for success in future course work, while at the same time providing students with an opportunity to apply these skills in their chosen professional field. The course will also consider the history of mathematics, encouraging students to think about mathematics as the language of science, and more generally as a language of problem solving. The course provides a common experience for all students in the following topics: the exponent laws including rational exponents, manipulation of polynomial expressions, solving linear and quadratic equations, functions, graphing, systems of equations, and exponential and logarithmic functions. In addition to these topics, there will be separate lab sessions for each of the divisions on campus. In these labs, students will learn how to apply algebraic problem solving techniques to their chosen field of study.

Prerequisites: MA098 or by placement

MA 152 - Introduction to Calculus

3 Credits

This is the last course of the math sequence MA122- MA115 - MA152, designed especially for the students majoring in aviation. The course covers topics in analytic geometry calculus. The differential and integral calculus includes limits, rates of change, derivatives,

antiderivatives, indefinite and definite integrals, and the applications of these topics, such as tangents and normals, Newton's method, motion problems, related rates problems, curve sketching, maxima and minima, and areas.
Prerequisites: MA122 and MA115 or by placement

MA 201 - Calculus I

4 Credits

This is the first course in a three-semester calculus sequence. The purpose of the course is to provide a solid background necessary for many engineering courses. Our goal is to acquire a good understanding of the concepts in Calculus I and to apply the appropriate techniques in their various applications. This course starts with a review of algebra, trigonometry, and functions and graphs. The main part of this course is the calculus of functions of one variable. The topics covered include limits, rates of change, derivatives and their applications such as tangent/normal lines, related rates, local linear approximations, curve sketching, maxima and minima, rectilinear motions and Newton's method, indefinite and definite integrals and their applications, such as displacement and distance, and area.
Prerequisites: MA122 and MA115 or by placement

MA 202 - Calculus II

4 Credits

This is the second course in a three-semester calculus sequence. The purpose of the course is to provide a solid background necessary for many engineering courses. Our main goal is to acquire a good understanding of the concepts in Calculus II and to apply the appropriate techniques in their various applications. Continuing the discussion on integral calculus started in Calculus I, the course starts with the applications of definite integrals: areas, volumes and arc lengths, etc. Then, the course extends the differentiation and integration to transcendental functions (exponential ,logarithmic and inverse trigonometric functions). Other topics covered include various techniques for integral evaluations, an introduction to differential equations, improper integrals, sequences and infinite series, and applications. *(Offered Spring semester only)*
Prerequisites: MA 201

MA 203 - Calculus III

4 Credits

This is the last course in a three-semester calculus sequence. The purpose of the course is to provide a solid background necessary for many engineering courses. Our main goal is to acquire a good understanding of the concepts in multi-variable Calculus and to apply the appropriate techniques in their various applications. The main part of this course is the calculus of the multi-variable functions. Different coordinate systems, the vectors and vector fields are introduced first, as tools for studying multi-variable functions. Then, partial derivatives and multiple integrals and their applications, both in analyzing multi-variable functions and in solving real-world problems, are discussed. *(Offered Fall semester only)*
Prerequisites: MA 202

MA 205 - Differential Equations

4 Credits

This course culminates the calculus sequence. In the course, the students learn to derive and solve differential equations that result from the applications of laws governing various physical phenomena in areas such as fluid mechanics, heat transfer, mechanics and electricity. Students will utilize virtually all their training in algebra, trigonometry, analytic geometry and calculus. Topics covered include first-order differential equations and their applications, higher-order linear differential equations, especially second-order differential equations and their applications, series solutions of linear differential equations, approximate methods for solving first-order equations, and the Laplace Transform. *(Offered Spring semester only)*
Prerequisites: MA 202

MA 216 - College Math for Business & Economics II

3 Credits

This is an applied business calculus course that examines a variety of real-world situations and the relationship among important variables in management and economics, such as production level, cost, price, revenue, profit, etc. The topics covered include limits, rates of change, derivatives and integrals of basic functions including exponential and logarithmic functions, and their applications (optimizations) in business and economics. This course, in conjunction with MA122 (or MA116), is designed to continue the development of a solid mathematical foundation that allows students to understand, in more depth, the quantitative aspects of problems in the areas of business, economics and finance.
Prerequisites: MA 122 or MA 116

MA 240 - Probability & Statistics

3 Credits

This course provides an introduction to elementary probability and statistics. The course begins with descriptive statistics: organizing, summarizing, and illustrating data using tables, graphs and measurements, such as mean and standard deviation. Then it continues with a study of the basic rules of probability and probability distributions, with special attention to binomial (discrete) and normal (continuous) probability distributions. The third part of this course turns to inferential statistics, covering the basics of hypothesis testing. The various statistical tests such as z-test, t-test, Chi-square test and ANOVA (F-test) are studied. The useful simple linear regression and correlation are introduced as the last part of this course.

Prerequisites: MA122 or MA116

MA 250 - Linear Algebra with Computer Science Applications

4 Credits

This course is designed around a pure mathematics course in linear algebra while providing applications to the study of computer science, particularly in the area of computer graphics. Pure mathematics topics will include the study of simultaneous linear equations, matrix equations, row-reduced echelon form, inverse matrices and determinants, dimension, inner product, and linear transformations. In addition to these mathematical topics, applications of linear algebra to computer graphics will be discussed. Possible areas of discussion include projective geometry, rotations in the plane, and the discrete Fourier transform. The application section represents one credit hour of the course and will include several programming projects. *(Offered Spring semester only)*

Prerequisites: MA 201, CS 112, and CS 114

Corequisites: MA 202

MA 315 - Linear Algebra and Introduction to Numerical Methods

4 Credits

Linear algebra is concerned with the study of linear systems of algebraic equations. Equations of this type arise often in engineering problems and therefore an understanding of their properties and techniques for their solution is essential engineering knowledge. Topics include determinants and matrices, Gauss elimination, matrix inversion, and eigenvalue problems. The goal of numerical methods is to provide computational approaches to the solution of mathematical problems. Since the mathematical problems encountered in engineering tend to be complex and therefore not amenable to analytical solutions, numerical methods often provide the only means of obtaining solutions. Topics include root finding, curve fitting, numerical integration, numerical solution of differential equations, and numerical solutions to linear systems of equations. *(Offered Fall semester only)*

Prerequisites: MA 205

MK 201 - Principles of Marketing

3 Credits

This course is designed to develop the student's knowledge and understanding of "the marketing concept" and the tasks that are involved with performance of the marketing function in both for-profit and not-for-profit organizations in a global economy. The student will also develop the ability to utilize core analytical constructs (such as market segmentation studies, brand-positioning analysis, and demand analysis) in order to identify distinct needs, attitudes, and behavioral patterns among customers and prospects. The results of such analyses will provide input to student experiences in formulating marketing strategies and tactics, including pricing decisions, the creation of advertising programs, distribution management decisions, and product branding. Students will explore the evolving e-commerce opportunities by the World Wide Web. Additionally, students will develop a personal critique of the effects of marketing on society. Learning and assessment strategies include in-class examinations, student papers and projects, experimental learning opportunities, and small-group work assignments.

MK 202 - Advertising

3 Credits

The course extends and deepens the student's understanding of the various consumer behavior constructs presented in Principles of Marketing, and engages the student in the detailed specification of behavioral models for selected products. Based on such modeling, the student will then develop advertising and promotional strategies, to include mock-ups of specific advertisements, recommended media plans for those advertisements, and research plans for determining the effectiveness of the marketing communications efforts. Additionally, the student will critically assess the roles and effects of advertising in market-oriented economies. Development of the student's analytical and creative skills will be assessed through individual examination, a student portfolio of advertisements and advertising plan documents, experimental learning opportunities, in-class presentations, critical papers, and small-group work as part of an advertising agency, Federal Trade Commission, or other organizational simulation. *(Offered Spring semester only)*

Prerequisites: MK 201

MK 301 - Marketing Practicum

3 to 6 Credits

This course is designed to provide structure, direction, and guidance for students who seek and accept leadership responsibility for on-campus or off-campus activities in marketing management. Students will develop a learning contract under the supervision of a faculty member in consultation with a site supervisor. Three to six credit hours of academic credit may be earned depending upon the number of contact hours of work with an identified organization and the level of responsibilities assumed by the student as outlined in the learning contract. As part of the learning contract students are expected to include outside readings in marketing, management, and leadership related to the practicum. The course may be repeated twice (different experiences) with a maximum of three credits assigned to each experience. The total number of credit hours for practica and internships shall not exceed 15 credit hours. The course is open to any sophomore or upper level student with the support of a faculty mentor and may be taken as a Marketing, General, or Management elective.
Prerequisites: Sophomore status and permission of the instructor

MK 308 - Consumer and Business Buying Behavior

3 Credits

This course will extend and deepen the student's understanding of the basic psychological principles of human motivation, personality, and perception, as well as how those factors explain individual purchasing and consumption behavior. Students will engage in in-depth analysis of the marketing strategies of selected for-profit and not-for-profit firms in order to assess the intended and actual behavioral outcomes associated with those strategies. They will further analyze numerous factors that influence consumer behavior, including family, peers, and ethnicity. Case studies, research of published material, and field research will supplement assigned readings and in-class discussion. Learning will be assessed through examinations, project reports, in-class presentations, and the creation of a computer based behavioral model to help managers assess marketing inputs in a given industry.

MK 312 - International Marketing

3 Credits

This course examines the implementation of policy and strategy for the marketing of goods abroad. It examines opportunities and decision-making within the constraints of the cultural, economic, political and legal environments of the international market. Lectures, case studies and experimental learning are used as teaching methodologies.
Prerequisites: MK201

MK 315 - Sales Management

3 Credits

Using a variety of management and marketing strategies, the student will gain practical experience in the design of the sales organization and sales territories, sales forecasting, the determination of staffing needs and selection criteria for the sales force, the establishment of sales objectives and quotas, and compensation models. The course will adequately reflect the Total Customer Service philosophy that increasingly pervades the sales function, whereby "sales" is responsible for both the flow of communication and products to the customer. Students will make simulated hiring and other sales management decisions, including the amount of authority for decision-making that will be delegated to the sales person. Case studies, experimental learning, role-playing, and exercises with computer-based sales training tools (including simulations) will be utilized, and the student will write a personal critique of the effects of selling on society. Additional assessment of learning will be accomplished through examinations and papers.
Prerequisites: MK 201

MK 319 - Advertising/Marketing Communications

3 Credits

The course extends and deepens the student's understanding of the various consumer behavior constructs presented in Marketing in a Global Economy, and engages the student in the detailed specification of behavioral models for selected products. Based on such modeling, the student will then develop advertising and promotional strategies, to include mock-ups of specific advertisements, recommended media plans for those advertisements, and research plans for determining the effectiveness of the marketing communications efforts. Additionally, the student will critically assess the roles and effects of advertising in market oriented economies. Development of the student's analytical and creative skills will be assessed through individual examination, a student portfolio of advertisements and advertising plan documents, in-class presentations, critical papers, and small group work as part of an advertising agency, Federal Trade Commission, or other organizational simulation.

MK 322 - Strategic Retail Management

3 Credits

This course is designed to help students understand retailing and retail management. This will be accomplished by using retail strategies and a strategic approach to retailing. The student will understand and employ the concepts of strategic retail management; determine the

factors and skills associated with situation analysis; apply those skills necessary for targeting customers and gathering information; comprehend and utilize the concepts associated with choosing a store location; understand and apply the concepts related to managing a retail business; identify and utilize the concepts related to merchandise management and pricing; recognize and utilize the various ways of communicating with the customer; and know how to integrate and control all aspects of the retail strategy. This will help the student become a good retail planner and decision maker, while helping them focus on change and adaptation to change. In addition, the students will gain experience in the application of the concepts learning in this class through service-learning opportunities. **(Offered every other year)**
Prerequisites: MK 201

MK 328 - Consumer Behavior

3 Credits
This course will extend and deepen the student's understanding of the basic psychological principles of human motivation, personality, and perception, as well as how those factors explain individual purchasing and consumption behavior. Students will engage in in-depth analyses of the marketing strategies of selected for-profit and not-for-profit firms in order to assess the intended and actual behavioral outcomes associated with those strategies. They will further analyze numerous factors that influence consumer behavior, including family, peers, and ethnicity. Case studies, research of published material, and field research will supplement assigned readings and in-class discussion. Learning will be assessed through examinations, project reports, in-class presentations, experimental learning opportunities, and the creation of a computer based behavioral model to help managers assess marketing inputs in a given industry. **(Offered Fall semester only)**
Prerequisites: MK 201

MK 359 - Market Research

3 Credits
This course will extend and deepen the student's ability to conduct market segmentation, positioning, and demand analysis initially developed in the Principles of Marketing course, and will develop basic capabilities in advertising research, competitive analysis, and strategic outcomes assessment. The student will learn how to set up and conduct focus-group research, survey research, experimental studies, and the identification, retrieval, and analysis of secondary data. The student will develop skills in the written and verbal presentation of research results. The students will develop critical assessment skills of the scientific methodology applied in marketing research and learn to search for signs of fraud in such research. Learning and learning assessment will be fostered through research reports, in class presentations, experimental learning opportunities, and critical papers.
Prerequisites: MK 201 and MA 240 (Offered Spring semester only)

MK 406 - Marketing Internship

6, 9 or 12 Credits
This course offers students the opportunity to gain experience in marketing management under the supervision of a professional in the field. It involves full-time participation in an internship cooperatively sponsored by a participating partner and Daniel Webster College. Students will develop a learning contract under the supervision of a faculty member in consultation with a site supervisor. Six to twelve credit hours of academic credit may be earned depending on the number of contact hours of work with an identified organization and the level of responsibilities assumed by the student as outlined in the learning contract. As part of the learning contract, students are expected to include outside readings in management and sport related to the internship. The total number of credit hours for practica and internships shall not exceed 15 credit hours.
Prerequisites: Junior status and permission of the instructor.

MK 410 - Marketing Strategy

3 Credits
Marketing Strategy is the capstone marketing course for Business Management B.S. degree students concentrating in marketing. The course provides analysis and presentations based on classic and current marketing problems and opportunities. Group work, peer evaluation and guest speakers are used. Emphasis is placed on tactical and strategic solutions using data bases, experimental learning, census information, and text book offerings with selected use of current periodicals and library resources. *(Offered Fall semester only)*
Prerequisites: MK 201 and Junior status

MK 412 - Market Information and Research

3 Credits
This course will extend and deepen the student's ability to conduct market segmentation, positioning, and demand analysis initially developed in the Marketing in a Global Economy course, and will develop basic capabilities in adverting research, competitive analysis, and strategic outcomes assessment. The student will learn how to set up and conduct focus-group research, survey research, experimental

studies, and the identification, retrieval, and analysis of secondary data. The student will develop skills in the written and verbal presentation of research results. The students will develop critical assessment skills of the scientific methodology applied in marketing research and learn to search for signs of fraud in such research. Learning and learning assessment will be fostered through research reports, in class presentations, and critical papers.

MK 426 - International Marketing Management

3 Credits

This course examines the implementation of policy and strategy for the marketing of goods abroad. It examines opportunities and decision-making within the constraints of the cultural, economic, political and legal environments of the international market. Lectures, case studies and reports are used as teaching methodologies.

MT 201 - Meteorology

3 Credits

Meteorology provides a theoretical and practical investigation of climate and weather with practical applications for aviation. Students will gain an understanding of the structure and energy of the atmosphere; clouds and precipitation; air-mass circulation and fronts; weather observation, analysis and forecasting; critical weather phenomena and severe storms; and applications of their understanding to aviation operations.

Prerequisites: Prerequisite or taken concurrently: AF128 or AE205

OH 101 - Introduction to Homeland Security

3 Credits

This course introduces the organizations responsible for security in the United States (local, state, and federal levels), the many threats faced by these organizations, and the legislation which empowers the organizations to carry out their individual roles. This course also covers topics such as intelligence, national preparedness, and technology in combating threats to national security. Guided by the instructor and with the assistance of the Public Safety staff, students will conduct a security audit of the College.

OH 110 - Language & Area Study I

3 Credits

This course introduces students to the basics of a foreign language, cultural studies relevant to that language, and basic analysis skills utilizing the DIME (Diplomatic, Information, Military, and Economic) and the PMESII (Political, Military, Economic, Social, Infrastructure, and Information) models to facilitate an understanding of the culture studied as well as to give the student an understanding of intelligence analysis. When available, learning technology currently is employed to enhance and expedite the students' language learning process.

OH 120 - Ideology Conflict and Terror

3 Credits

This courses explores in depth psychological belief systems and structures, social forces and personality variables affecting belief systems, organized systems such as religions and cults, ways extreme belief systems provide the animating conditions for conflict and inhumanity, and the psychological consequences. These principles are applied to the study of conversion processes and an exploration of the terrorist mindset and the psychology of the suicide bomber.

OH 202 - American Government

3 Credits

This course will examine the development of the unique qualities of the American political system as it faces the challenges of the 21st century. Particular emphasis will be placed on how the American government maintains order and protects its citizens against domestic and foreign threats while honoring its commitment to the principles of civil liberties stated in the Constitution.

Prerequisites: EN 115

OH 210 - Sociology of Disasters

3 Credits

The focus of this course will be on human behavior in both natural and human-made disasters e.g. hurricanes, tornadoes, earthquakes, floods, and chemical spills, nuclear power plant accidents, riots, etc. Students will become familiar with a broad range of topics including, but not limited to, the different stages of disaster response, how organizations and communities plan for and respond to disasters, myths regarding disasters, different governmental responses, and theoretical models explaining the dynamics of disaster response. Case studies of a number of disasters will be used to illustrate the material discussed.

Prerequisites: EN 115 and SO 101 (may be taken concurrently), or permission of the instructor

OH 230 - Homeland Security Vulnerabilities and Threats

3 Credits

This course examines the ways in which vulnerabilities are identified, risk analysis, and the fundamental principles underlying critical infrastructure protection.

Prerequisites: OH 101, Introduction to Homeland Security, or permission of the instructor

OH 382 - Cyber Terrorism

3 Credits

Students will understand how Systems and System Infrastructure are attacked via the Internet as well as other methods like Social Engineering as well as how to prepare a defense. They will see how these systems are used by terrorist organizations for the purposes of communication (between established members thereof) and the recruitment, indoctrination and education of prospective members (a.k.a. the virtual Jihad concept). The will also understand the difference between cyber terrorism and traditional terrorism; understand the different threats and outcomes from a cyber attack; explore potential motives for cyber terrorism; explore different types of attacks; debate options for managing a cyber attack and mitigating the threat; and explore responsibilities and accountabilities for cyber defense. They will work in an actual lab set up with a heterogeneous network and runs a comprehensive set of exercises simulating attacks and defenses.

Prerequisites: IS 101

OH 423 - Capstone Research Project

3 Credits

This capstone project is designed to call upon the technical and theoretical knowledge that students have gained over the last 18 months. Students will work as a team either to design a business plan for a mock company or as consultants to analyze and solve a business problem for a local company. The students will present the findings and conclusion of their research project.

OH 424 - Project Management

3 Credits

This course focuses on a holistic approach to project management. The content deals with planning, scheduling, organizing, and controlling projects—for example, product development, construction, information systems, new businesses, and special events. The course includes major topics of Strategy, Priorities, Organization, Project Tools, and Leadership. Primary class emphasis is on the project management process and tools. The course culminates in a project plan, such as A sport tournament, fund raising event, or upgrading a physical security intrusion detection and assessment system. When supportable, project plans could be developed to execute coinciding special event, such as the annual homeland security forum.

Prerequisites: BM 101, MA 240

OM 201 - Intro to the Writing and Research

1 Credits

The purpose of this introductory module is to provide students with a basis to promote improved writing skills, establish guidelines for writing well documented papers, and stress the combined use of mechanics and content. This also enables students to see the value of the editing process and develops professionalism in writing and research.

OM 210 - Group & Organizational Behavior

3 Credits

This module is a study of group development and team functioning. Teams are ubiquitous in organizations today. Every manager must know what it means to be a team member and leader. Emphasis is on team processes, decision-making and conflict resolution. A foundation in virtual teams is also included.

OM 216 - Organizational Concepts

3 Credits

Students examine the formal and informal functions of organizations and analyze an agency or organization based on a systems model. Students will also analyze and solve organizational problems using a step-by-step method. This analysis will be applied to students' work-related independent study projects.

OM 3XX Organizational Communication (Formerly OM 218)

3 Credits

The course examines the role of communication in organizations. Students learn the major theories of organizational communication and

apply them to discussions and analyses of real-world situations. The impact of technology, organizational culture, ethics, personality, and diversity are examined. Critiques of organizational communication systems and structures are also presented.

OM 320 - Methods of Research and Analysis

3 Credits

This course is an introduction into research and its tools with specific emphasis on helping the student complete the Research Project and understand managerial decision-making. Content will include statistical methods, database research and evaluating a problem or opportunity suitable for the Research Project.

OM 334 - Accounting for Managers

3 Credits

Demonstrating an overview of financial tools available to the manager in decision making, this module includes a study of income statements, balance sheets, cash flow budgets, changes in financial position and ratio analysis. Emphasis is on reading and understanding accounting documents rather than upon their preparation.

OM 336 - Managerial Economics

3 Credits

By presenting practical applications of economic principles to the managerial decision-making process, this module focuses on the principles of economics as they need to be understood and utilized by managers and supervisors in all fields. The internationalization of our economy and possible actions affecting the economics in all organizations will be included.

OM 340 - Human Resource Management

3 Credits

Students explore the roles and responsibilities of an HRD (Human Resource Development) unit through an analysis of policies and practices of recruitment, selection, training, development and compensation of employees. Special attention is given to Equal Opportunity and Office of Safety and Health Administration legislation through a series of case studies and simulations.

OM 430 - Ethical Issues in Management and Technology

4 Credits

This module explores ethical and legal problems in organizations as they arise from the nature of modern business structures and practices and the impact of technologies on human life, accountability in government, ethical and legal respect for human rights, and individual responsibility for ethical life choices. Ethical theories, personal values, and legal demands are examined through readings and analysis of situations arising in business organizations. A strong emphasis is placed upon ethical reasoning.

OM 441 - Finance for Managers

3 Credits

This module covers topics from the field of finance, which is critical to every business organization. The overall focus of the course is on the managerial understanding of finance as reflected in financial statements, their relationship to each other, and how data in financial statements is used in evaluation, planning, and control in an organization. Financial management skills can help managers ensure that their organizations will be able to provide services and goods efficiently and effectively. This module will introduce the language of finance as well as the quantitative techniques that give analytical rigor to the field.

OM 442 - Strategic Planning

3 Credits

This course introduces students to various management planning models and techniques and applies these to business cases. It stresses the concepts of strategic planning and strategic management.

OM 445 - Management in a Global Economy

3 Credits

The design of this module is constructed around a group project whose goal is to develop a strategy for bringing a product to an overseas market. In so doing, you will research and familiarize yourself with many key areas of concern for persons doing business in a global environment: geographic and demographic analysis; research of foreign markets; organizational development issues involving staff, management structure, and plant location, among others; intercultural communication and negotiation; ethical issues in a cross-cultural setting; risk factor analysis; and various legal and financial factors of international trade.

OP680 Project Cost and Budget Management

3 Credits

The focus of this course is on cost accounting and budgeting processes. It also includes elements that address planning, analysis, behavior and control of these processes.

OP685 Advanced Operational Decision Making

3 Credits

Students in this course will use quantitative techniques to improve operational decisions. Topics may include reliability analysis, decision analysis, game theory, regression analysis, network models, and simulation techniques. The course will make extensive use of computer templates.

OP689 Business Process Analysis and Design

3 Credits

This course builds on topics introduced in BM580 – Operations Management. Students will apply a systems approach to the analysis and design of both manufacturing and service processes. Topics may include lean production, service blueprinting, statistical process control, queuing models, six sigma quality management, and Goldratt's theory of constraints. The course will employ both computer templates and case analysis.

PH 205 - General Physics I

3 Credits

This is an algebra/trigonometry based course that covers introductory topics of physical science. The course stresses conceptual understanding, problem solving, and further development of the student's skills for analysis and synthesis. The course assumes the students has acquired a mathematical background compatible with standard college-level courses in algebra and trigonometry, as well as basic elements of calculus. This course focuses on Newtonian mechanics and conservation principles. Topics include vector addition, 1-D and 2-D kinematics, Newton's laws of motion and gravitation, friction, work and mechanical energy, momentum and impulse, rotational kinematics and dynamics, and an introductory study fluid motion.

Prerequisites: MA 152

Corequisites: PH 205L, PH 205R

PH 205L - General Physics I Lab

1 Credits

This course covers introductory methods and techniques of laboratory experimentation regarding topics covered in General Physics I (PH205). Students learn about procedures for measuring physical quantities, and methods for collecting and analyzing experimental data. The purpose of the lab experiments is to gain practical understanding of fundamental concepts of Physics and draw conclusions resulting from the experimental procedures and results, as they relate to the physical principles discussed in the lecture course PH205. The students are required to complete 12 experiments in the area of mechanics. The themes of these experiments are chosen in consultation with the instructor of the lecture course, PH205.

Corequisites: PH205

PH 206 - General Physics II

3 Credits

This course is a continuation of PH205. Students are expected to remember mathematical tools and physical principles developed in the previous class. This course investigates the consequences of make-up of the atom to explain common physical phenomenon witnessed in everyday experience. Topics include thermal energy, temperature, and calorimetry; electrical charges, Coulomb's Law, electrical fields, electrical current, Ohm's Law, and DC circuits; magnetic forces, magnetic fields, and electromagnetic induction; electromagnetic radiation, reflection, refraction, and optical imaging; and introductory atomic physics.

Prerequisites: PH205

Corequisites: PH206L, PH206R

PH 206L - General Physics II Lab

1 Credits

This course covers introductory methods and techniques of laboratory experimentation in topics covered in General Physics II (PH206). Students learn about procedures for measuring physical quantities, and methods for collecting and analyzing experimental data. The purpose of the lab experiments is to gain practical understanding of fundamental concepts of Physics and draw conclusions resulting from the experimental procedures and results as they relate to the physical principles discussed in the lecture course, PH206. The students are required to complete 12 experiments in areas such as Thermophysics, Sound and Waves, Electricity, Magnetism, Optics, or Atomic and

Nuclear Physics. The themes of these experiments are chosen in consultation with the instructor of the lecture course, PH206.
Prerequisites: PH205L
Corequisites: PH206

PH 215 - Physics I

3 Credits

This is a calculus-based course that covers introductory topics of physical science and strongly emphasizes problem solving and the use and further development of mathematical and scientific critical thinking. This course assumes that the student possesses a mathematical background compatible with introductory college calculus for majors in science and engineering. The course covers units of measurement, vector quantities, notation and operation, kinematics and dynamics in one and two dimensions; Newton's Laws of motion and gravitation, work, energy, power, impulse, momentum, simple harmonic motion, and angular harmonic motion. This course is recommended for engineering and science majors. *(Offered Spring semester only)*
Prerequisites: Prerequisite or may be taken concurrently: MA 201
Corequisites: PH 215L , PH 215R

PH 215L - Physics I Lab

1 Credits

This course covers introductory methods and techniques of laboratory experimentation in topics covered in Physics I (PH215). Students learn about procedures for measuring physical quantities, and methods for collecting and analyzing experimental data. The purpose of the lab experiments is to gain practical understanding of fundamental concepts of Physics and draw conclusions resulting from the experimental procedures and results as they relate to the physical principles discussed in the lecture course, PH215. The students are required to complete 12 experiments in the area of mechanics. The themes of these experiments are chosen in consultation with the instructor of the lecture course, PH 215. *(Offered Spring semester only)*
Prerequisites: Prerequisite or may be taken concurrently: PH 215

PH 216 - Physics II

3 Credits

This course covers introductory methods and techniques of laboratory experimentation in topics covered in Physics II (PH216). Students learn about procedures for measuring physical quantities and methods for collecting and analyzing experimental data. The purpose of the lab experiments is to gain practical understanding of fundamental concepts of Physics, and draw conclusions resulting from the experimental procedures and results, as they are related to the physical principles discussed in the lecture course PH216. The students are required to complete 12 experiments in areas such as Thermophysics, Sound and Waves, Electricity, Magnetism, Optics, or Atomic and Nuclear Physics. The themes of these experiments are chosen in consultation with the instructor of the lecture course PH216.
Prerequisites: Prerequisite or may be taken concurrently: PH 216L

PH 216L - Physics II Laboratory

1 Credits

This course covers introductory methods and techniques of laboratory experimentation in topics covered in Physics II (PH 216). Students learn about procedures for measuring physical quantities and methods for collecting and analyzing experimental data. The purpose of the lab experiments is to gain practical understanding of fundamental concepts of Physics, and draw conclusions resulting from the experimental procedures and results, as they are related to the physical principles discussed in the lecture course PH 216. The students are required to complete 12 experiments in areas such as Thermophysics, Sound and Waves, Electricity, Magnetism, Optics, or Atomic and Nuclear Physics. The themes of these experiments are chosen in consultation with the instructor of the lecture course PH 216. **(Offered Fall semester only)**
Prerequisites: Prerequisite or may be taken concurrently: PH 216

PS 101 - Introduction to Political Science

3 Credits

This course is an introduction to the structure and processes of government and political theory with particular emphasis on both how power is exercised and controlled by governmental structures and the influence of governmental structures on the local, national, and international level. Topics covered include: constitutional law, international law, and the United Nations.

PS 202 - American Government

3 Credits

This course will examine the development of the unique qualities of the American political system as it faces the challenges of the 21st century. Particular emphasis will be placed on how the American government maintains order and protects its citizens against domestic

and foreign threats while honoring its commitment to the principles of civil liberties stated in the Constitution.
Prerequisites: EN 115 or EN 102

PY 101 - Principles of Psychology

3 Credits

An introduction to the scientific study of behavior and the physiological and cognitive processes that underlie it. Topics include major theoretical orientations, research methods with an emphasis on the experimental and correlational methods, introduction to statistics, biological bases of behavior, sensation and perception, variations in consciousness, learning, memory and thought, intelligence, psychological assessment, motivation and emotion, human development, theories of personality, psychological disorders, psychotherapy, and social psychology.

PY 202 - Social Psychology

3 Credits

The study of human behavior in its social context, with particular attention to the psychological functions in interpersonal relations along with the focus on attitudes, communications, prejudice and ethnic relations, leadership, and group membership. **(Offered Fall semester only)**
Prerequisites: PY 101

PY 214 - Developmental Psychology

3 Credits

A scientific study of processes of changes and constancy throughout the life-span. This includes an examination of the biological, cognitive, and socioemotional processes of life-span development. A scientific exploration of the biological, cognitive, and socioemotional processes of life-span development. Meets the SS elective requirement. May be used as a general elective. **(Offered Spring semester only)**
Prerequisites: PY 101, EN 115

PY 310 - Behavior Modification

3 Credits

Provides an introduction to principles and procedures of behavior modification. The aim of the course is to develop the student's understanding of the principles of behavior in a manner that will facilitate their application to everyday life. Students will integrate material to develop a comprehensive behavior change program. **(May not be offered every year)**
Prerequisites: PY 101

PY 320 - Organizational Behavior

3 Credits

The study of individual and group behavior within organizations, applying concepts drawn from the behavioral sciences and the field of management. The course examines individual, group, and organizational processes, their nature and their effect on organizational behavior and uses experiential learning, such as case studies, presentations, and group participation. Does not meet the SS elective requirement. May be used as a general elective. *(Offered Spring semester only)*
Prerequisites: PY 101 and Junior status

PY 322 - Abnormal Psychology

3 Credits

An introduction to the scientific study of abnormal behavior and the physiological and cognitive processes that underlie it. The course, taking an interdisciplinary approach, will examine the interactive influence of biological, psychological, and socio-cultural factors in the development, course, and modification of abnormal behavior. Meets the SS elective requirement. May be used as a general elective. *(Offered Spring semester only)*
Prerequisites: PY 101

PY 329 Sensation and Perception

3 Credits

Sensation and Perception surveys the relationships among the various sensory modalities and behavior. The emphasis is on the interaction among such variables as basic sensory neurophysiology, environmental factors, personal experiences, and the ultimate process of perception. Topics include measurement of sensations, development of visual-motor coordination, speech perception, picture perception, illusions, 3-dimensional space, and causes and consequences of perceptual abnormalities and the influence of these issues on behavior and judgment.

PY 331 - Personality Psychology

3 Credits

A scientific examination of the major components and domains of personality leading to an understanding of individual differences and the whole of the personality. Course will also examine theories of personality, assessment of personality and personality disorders.
(Offered Fall semester only)
Prerequisites: PY 101

PY 336 - Learning and Memory

3 Credits

Scientific examination, using classical and contemporary studies from both animal and human research, of the psychological and neurophysiological theories of learning and memory primarily from a cognitive-behavioral-biological perspective. Lab component. (
Offered Fall semester only)
Prerequisites: PY 101 and IS 101 (or equivalent computer literacy)

PY 340 Case Studies in Espionage

3 Credits

In this course, students will conduct independent research to investigate the psychological factors involved in espionage cases including ideology, personality, motivation, obedience, conformity, persuasion, gender, sex, interpersonal relationships, self management, stress management and substance abuse. Students will also gain an understanding of the history and process of espionage.

PY 342 - Physiological Psychology

3 Credits

The scientific study of the physiology of affect, behavior, and cognition. In order to gain an understanding of the relationship between biology and psychology and the physiological events associated with our feelings, actions, and thoughts, major topics of study will include the nervous system, endocrine system, hormones, brain chemistry, biology of emotions, psychopharmacology, sensation and perception, heredity, physiology of sleep and dreaming, biological rhythms, biology of learning and memory, and brain disorders. Lab component. May be used as a three-credit Natural or Physical Science Elective. *(Offered Spring semester only)*
Prerequisites: PY 101

PY 347 – Experimental Methods in Psychology

3 Credits

Experimental Methods combines instruction on theory and practical application of the principles of experimental design, hypothesis testing, and statistical inference, including correlational and quasi-experimental techniques. Students will learn and apply basic skills of literature review, experimental design, research methodology, and research reporting. This course will also include a weekly lab that will facilitate the development of research ideas and execution.

PY 410 - Experimental Psychology

3 Credits

This senior-level course will focus on developing a thorough understanding of all aspects of the experimental method, including how to plan single-variable, multiple variable, and convergining-series experiments. Students will apply what is learned in the course by designing, executing, interpreting, reporting, and presenting the research results of a simple psychological experiment to the members of the college community in a student-organized mini-conference--poster session style. There will also be an emphasis on the ethics of science, including a thorough understanding of the American Psychological Association's (APA's) code of ethics, APA's documentation style, literature searches, how to design research that is not experimental, and the use of statistics. The course will also require the reading of primary sources representing the classical psychological research studies from various sub-specialties of psychology. Computer lab component.
(Offered Fall semester only)
Prerequisites: PY 101, MA 240, and Senior status

PY 450 Senior Thesis in Psychology

The Senior Thesis will provide the student with the opportunity to explore a topic of his/her own choosing in depth, honing skills learned in many previous classes and learning new skills as well. This course will consist of a laboratory or field research project conducted under faculty supervision. It requires a written research proposal, research, data analysis, a final written report, final oral presentation, poster presentation as well as smaller assignments leading up to the final written report.

ROTC L - ROTC Leadership Lab

All students must enroll in the Leadership Lab to be eligible for a commission in the United States Air Force. The lab must be taken each semester.

SC 101 - Conceptual Physics

3 Credits

This one semester course will cover the underlying history and philosophy of how science is performed. We will examine a number of different topics over the course of the semester including: Newton's laws of motion, linear motion, momentum, energy, gravitation, projectile motion, atomic nature of matter, fluids, heat and temperature, electrical circuits, light, and modern atomic theory. The course meets for lecture two hours a week and lab for two hours a week. SC101 may not be taken for credit by students majoring in Computer Science or Engineering.

Prerequisites: MA 122

SC 102 - Environmental Science and Policies

3 Credits

This course is an interdisciplinary study of the natural world and the impact of human activities on our global environment. This course examines key environmental issues by combining ideas from natural science disciplines such as biology, chemistry, physics, and geology, with ideas from social science disciplines such as economics, politics, and ethics. Important global environmental change topics such as global warming, sea level rise and natural resource depletion will be covered. Important regional-scale environmental issues such as water and air quality will also be discussed. Throughout the course, the student will be exposed to many state and federal environmental regulations, as well as international agreements, that are designed to govern the environmental impact of humans. Course meets for lecture two hours per week and lab for two hours per week. May not be used to fulfill science requirements for students majoring in Aviation. (May not be offered every year - Spring semester when offered)

SM 101 - Introduction to Sport Management

3 Credits

This course introduces students to general principles and practices in the sport industry. Students gain a general understanding and appreciation of career options that they will be prepared for as they complete the sport management major. **(Offered Fall semester only)**

SM 203 - Governance and Globalization in Sport

3 Credits

This course will cover sport from a global perspective, providing students with a basic understanding of the role of governance structures in professional and amateur sport, as well as taking a look at the business of sport by focusing on the organizational structure of the sport industry, the commercialization of sport, sport marketing, franchising, television and other media rights, and the rise of the global super athletes and teams. The primary aim is to familiarize students with a basic understanding of organizational structures used in the management and governance of sport from a global viewpoint. Special attention will be given to governing bodies in sport and business, including their organizational structure, authority and functioning, requirements for membership, sanction and appeal processes, and influences by outside organizations such as governmental bodies, sports commissions, and business and industry. **(Offered Fall semester only)**

Prerequisites: SM 101 or permission of the instructor

SM 207 - Athletics Administration and Coaching

3 Credits

Both the managerial and coaching skills required by sport/athletic administrators and head coaches at all levels are addressed within this course. Their primary functions are examined, along with the legal requirements and the ethical responsibilities necessary for individuals in such positions. This course is both academic and highly practical in nature. *(Offered every other Spring semester)*

SM 208 - Information and Communication Technology in Sports

3 Credits

Students will be involved in examining and analyzing current technological applications utilized within the sports industry. The course will provide the opportunity to develop skills in both database software and web-based technologies and apply them to meet the demands for the delivery of goods and services to various sports organizations, their customers and fans. *(Offered Spring semester only)*

Prerequisites: IS 101

SM 209 - Sport Facility and Venue Management

3 Credits

This course is designed to help students understand the business of sport facility and event management. The first half of the course will focus on general facility management and administration considerations, systematically moving through planning and design, organizational and operational concerns, personnel planning, financial management, program development and scheduling, risk management, and marketing. Also covered will be the management of specific facility areas, including maintenance, crowd control and security, box office management, and concessions. The second half of the course will focus on how to properly build sports events into successful and financially viable ventures for any level-from the community to the global stage. Included will be connecting facility and venue management to event management, event operations and maintenance, event programming and scheduling, and event marketing. *(Offered Spring semester only)*

SM 212 - Health and Wellness

3 Credits

This course is designed to help students understand the basic concepts of health and wellness. Health and Wellness is designed for college students to understand the need and assume the responsibility for maintaining a healthful lifestyle. Physical fitness, the ability to carry out daily tasks with vigor and alertness, is one component of positive lifestyle management. The other aspects are health and wellness. Wellness includes activities, behaviors, and attitudes that improve the quality of life and contribute to longevity. Health is the balancing of the seven components of wellness; it is not merely the absence of disease or infirmity. The course content includes: effects of physical activity on the body; concepts of stress management; development of a balanced nutritional program; and growth towards a positive self-image. The course also addresses health problems such as the negative influence of sexually transmitted diseases, and the effects of substance abuse on health and wellness. **This course is open to students in all majors.** *(Offered Fall semester only)*

SM 225 - Ethics and Sociocultural Issues in Sport

3 Credits

This course will provide the students with a basic understanding of the theories and principles related to sociocultural issues, ethics, and morality in the sport industry. Students will be exposed to the current issues and trends that are prevalent in the sport industry; in-depth knowledge of all sides of the issue are presented as a means of preparing these individuals to deal with these issues, no matter the capacity they may find in the future. Topics may include: legal issues; amateur v professional athletes, including issues related to college athletics and the NCAA; violence; youth participation in sport; technology and the media; issues related to gender, race, and/or sexual orientation; globalization and the sport industry; and recent research in the industry. *(Offered Spring semester only)*

Prerequisites: SM 101 or instructor permission

SM 231 - Sport Tourism

3 Credits

This course is designed to help students understand the business of sport tourism and how it relates to the general sport industry. The first half of the course will focus on general sport tourism issues such as definitions, the concept as a legitimate and distinctly separate discipline, organizational and operational concerns, personnel planning, program development, and major sport tourism destinations. Also covered will be the management of specific sport tourism elements, such as cruises, outdoor adventure and the generally accepted notion of sport tourism i.e. participation and/or attendance at sporting events. The second half of the course will focus on how to successfully market sport tourism destinations, risk management issues of delivery and provision of opportunities to satisfy this burgeoning part of the overall sport industry and the future issues facing this discipline. *(Offered every other Spring)*

SM 305 - Legal Issues in Sport Management

3 Credits

This course examines the legal issues prominent in the world of sport. Detailed case studies and role-playing exercises are used to aid in understanding of topics, including negligence, defamation and libel, antitrust laws, collective bargaining, and criminal and civil law. *(Offered Spring semester only)*

Prerequisites: SM 101

SM 310 - Sport Management Practicum

3 to 6 Credits

This course is designed to provide structure, direction, and guidance for students who seek and accept leadership responsibility for on-campus or off-campus activities in sport management. Students will develop a learning contract under the supervision of a faculty member in consultation with a site supervisor. Three to six credit hours of academic credit may be earned depending upon the number of contact hours of work with an identified organization and the level of responsibilities assumed by the student as outlined in the learning contract. As part of the learning contract students are expected to include outside readings in management and sport related to the practicum. The

course may be repeated twice (different experiences) with a maximum of three credits assigned to each experience. The total number of credit hours for practica and internships shall not exceed 15 credit hours. The course is open to any sophomore or upper level student with the support of a faculty mentor and may be taken as either a General or Sport Management elective.
Prerequisites: Sophomore status and permission of the instructor.

SM 318 - Recreational Sport Management

3 Credits

This course is designed to help students explore and examine the philosophy, science and communications in recreational sports through an assessment of entry-level concepts of management and their application to the recreational sport setting. From foundational concepts of identity and program development, to an understanding of program delivery services (fitness, instructional sport, informal sport, intramural sport, extramural sport, club sport), to an appreciation of administrative support services and professionalism, the student will gain a comprehensive education in the administration of recreational sports programming, considering campus recreation services, public parks and recreation programs, and private recreation organizations. **(Offered every other Spring semester).**
Prerequisites: SM 209

SM 320 - Sport Marketing/Promotion

3 Credits

This course will cover the basic theories and principles of sport marketing and communications from sport and recreational facilities to professional and amateur sports. This course will also reveal how to study and understand the market, develop a marketing strategy, clarify a sport organization's needs and goals, and implement marketing plans through sponsorship, licensing, pricing, promotions, advertising, broadcasting and sales. Case studies that translate several professionals' experiences into learning scenarios will be utilized. In addition, observations of future trends in the field will be discussed. (**Offered Fall semester only).**
Prerequisites: Either MK 201 and SM 101, or permission of the instructor

SM 323 - Sport Retail Management and Entrepreneurship

3 Credits

This course is designed to help students understand retailing and retail management. This will be accomplished by using retail strategies and a strategic approach to retailing. This will help the student become a good retail planner and decision maker, while helping them focus on change and adaptation to change. This course will prepare the student to be able to understand and employ the concepts of strategic retail management; determine the factors and skills associated with situation analysis; apply those skills necessary for targeting customers and gathering information; comprehend and utilize the concepts associated with choosing a store location; understand and apply the concepts related to managing a retail business; identify and utilize the concepts related to merchandise management and pricing; recognize and utilize the various ways of communicating with the customer; and know how to integrate and control all aspects of the retail strategy. **(Offered every other Spring semester).**
Prerequisites: SM 320

SM 329 - Sport Promotions and Ticket Sales Management

3 Credits

This course focuses on how to achieve promotional and ticket sales objectives through direct inducements that offer an extra value or incentive for a sport product or service to ultimate consumers, sales for or distributors. Through lectures, case studies, and practical exercises, the student will learn how to incorporate sales promotion activities into an integrated communications plan, how to plan an event, create pricing, location and distribution strategies, and how to cost effectively promote them. Promotions and sponsorship development will be studied from the points of view of both event planner and corporate sponsor. Ticket sales management will be covered from the points of view of both in-house and outsourcing. **(Offered every other Spring semester)**
Prerequisites: SM 320

SM 336 - Sport Psychology

3 Credits

This course will examine the application of psychological principles and research to sports. This examination will include the psychological effects of engaging in sports as well as psychological factors which interact with sports performances. Emphasis will be placed on practical applications to sports settings. **(Offered every other Fall semester).**
Prerequisites: PY 101

SM 340 - Sports Information

3 Credits

The key position in college sport communication is the Sports Information Director. This person, alone or with a staff of

assistants, coordinates all media relations, public relations, and many other forms of public outreach, for athletic programs. In this class students will form their own teams in order to understand and simulate the various tasks performed by a Sports Information office. The class will focus heavily on writing tasks, such as press releases, media guides, and game programs, but will also address many of the other issues that pass through sports information offices in colleges across the country.
Prerequisites: SM 101, EN 115

SM 415 - Economics and Finance in Sport

3 Credits

This course will provide students with an understanding of financial and economic theories and principles utilized in the sport industry. Topics will include the preparation of financial plans, strategic budgeting, capital and operating budgets, sources of revenue, economic theories, supply and demand concepts in the sport industry; economic impact, and other financial and economic theories pertinent to sport industry professionals. **(Offered Spring semester only)**
Prerequisites: AC 201, EC 101, EC 102 and MA 240

SM 440 - Seminar in Management and Leadership of Sport

3 Credits

This course will provide students with an understanding of the management and leadership components of organizations and individuals, as present in the sport industry. Topics will include: human resource management, organizational culture, design, and structure, major leadership styles, including an analysis of various philosophies and theories of leadership and the lives of known sport leaders; job design and satisfaction; and role theory. Through cases and experimental exercise, students will work on developing their own leadership abilities, to be utilized in their future as sport professionals. **(Offered Fall semester only)**
Prerequisites: Junior status, SM 305 and SM 320

SM 450 - Internship in Sport Management

6, 9 or 12 Credits

This course offers students the opportunity to gain experience in the management of a sport facility, product, or service under the supervision of a professional in the field. It involves full-time participation in an internship cooperatively sponsored by a participating partner and Daniel Webster College. Students will develop a learning contract under the supervision of a faculty member in consultation with a site supervisor. Six to twelve credit hours of academic credit may be earned depending on the number of contact hours of work with an identified organization and the level of responsibilities assumed by the student as outlined in the learning contract. As part of the learning contract, students are expected in include outside readings in management and sport related to the internship. The total number of credit hours for practica and internships shall not exceed 15 credit hours.
Prerequisites: Junior status and permission of instructor

SO 101 - Introduction to Sociology

3 Credits

This introductory course provides a survey of population, social living, classes and castes, mobility in America, minorities, community trends, labor and economic order, political order, religious influence, marriage and family, government policy, and individual life.
(Offered Spring semester only)

SO 208 - Social Problems

3 Credits

This course examines social problems in terms of cultural beliefs and the structure of social relationships in society using current social scientific research. The course emphasizes how culture and power shape the types of social problems that exist in a society, the types of responses to social problems, and the consequences of such problems for individuals.
Prerequisites: EN 115

SO 210 - Sociology of Disasters

3 Credits

The focus of this course will be on human behavior in both natural and human-made Disasters e.g. hurricanes, tornadoes, earthquakes, floods, and chemical spills, nuclear power plant accidents, riots, etc. Students will become familiar with a broad range of topics including, but not limited to, the different stages of disaster response, how organizations and communities plan for an respond to disasters, myths regarding disasters, different governmental responses, and theoretical models explaining the dynamics of disaster response. Case studies of a number of disasters will be used to illustrate the material discussed.
Prerequisites: EN 115 and SO 101 (may be taken concurrently), or permission of the instructor

SO 215 - Sociology of Families

3 Credits

This course examines the institution of families in the terms of cultural beliefs and the structure of social relationships in society. The course emphasizes the influence of social, economic, and historical factors on intimate relationships, family related behaviors, and the diversity of family forms.

Prerequisites: EN 115

SO 317 - Sociology of Gender

3 Credits

This course emphasizes how gender influences cultural expectations and the opportunities and experience of groups in social institutions. The course examines how attitudes, values, identities and behavior associated with gender are shaped by the particular social, cultural, and historical context in which they occur.

Prerequisites: SS 200-level course or HU 200-level course

SO 321 - Social Deviance

3 Credits

This course examines sociological theories and substantive issues in the creation, involvement, and control of deviance in a society. The course will explore who or what defines how individuals, groups, and cultures are deviant and the consequences of such definitions on social interactions and social structures.

Prerequisites: SS 200-level course or HU 200-level course

SO 325 - Race and Ethnic Relations

3 Credits

This course examines how race and ethnicity influence cultural expectations and the opportunities and experience of groups in social institutions. The course emphasizes sociological explanations of racial and ethnic group relations focusing primarily within a contemporary US context.

Prerequisites: SS 200-level course or HU 200-level course

SO 331 - Social Inequality

3 Credits

This course examines how the structure of societal institutions and cultural beliefs affect the unequal distribution of wealth, power, and prestige in social life. Students will analyze recent research and theoretical explanations on the causes and consequences of social stratification.

Prerequisites: SS 200-level course or HU 200-level course

SO 337 - Sociology of Work

3 Credits

This course examines how cultural beliefs, opportunities in social institutions, and the structure of workplaces impact workers and other social institutions. Students will analyze recent research and theoretical explanations on the consequences of broader historical and social forces for the culture and structure of work.

Prerequisites: SS200-level course or HU200-level course

SS 101 - Introduction to the Social Sciences

3 Credits

A general introduction to how the social sciences increase our understanding of the dynamic systems that shape social experience in the modern world. Students will consider how the disciplines of history, political science, economics, sociology and psychology are employed to create practical bodies of knowledge that are employed by governments, corporations, and non-profit organizations to address problems of national and global concern.

SS 235 - Introduction to the Legal Profession

3 Credits

This course is designed to help students prepare for entrance into law school and enhance their knowledge of the legal profession. The course provides students with an overview of some of the key aspects of the law such as contracts, types of law, and the structure of the court system. Guest speakers will be invited to address the class on various issues related to getting into law school, selecting a specialty in the law, and the different work done by lawyers in each specialty. Students will have the opportunity to ask questions and dialogue with each guest speaker.

Prerequisites: EN 115

SS 240 - American Social History

3 Credits

Investigating the historical causes and consequences of social change, students use primary documents and discuss recent scholarship in the social and behavioral sciences. Course materials focus on peoples and groups whose lives and cultures reflect the diversity of social experience in America from the eve of contact and exploration through the nineteenth century.

Prerequisites: EN 115

SS 260 - Social Science Practicum

3 Credits

This course provides social sciences majors with an off-campus learning experience in a workplace setting in which they can apply knowledge and skills studied in the classroom. Students in the practicum will spend six hours a week in a community site whose work relates to the student's course of study in the social sciences. Students will develop a learning contract under the supervision of a faculty member and the site supervisor.

Prerequisites: Sophomore standing and permission of instructor

SS 301 - Research Methods for the Social Sciences

3 Credits

This course examines quantitative, qualitative, and comparative methods used in the social sciences. The course will cover data collection, data analysis, ethical issues of research, and policy implications for research.

Prerequisites: MA 240

SS 304 - Contemporary Environmental Issues

3 Credits

Students in this course will consider the role of the social sciences in understanding and resolving contemporary environmental problems caused by the impact of human social systems. The issues approach used in the course will examine the way that social cultural and economic interests compete to control the political process that formulates and implements measures intended to correct human-caused environmental degradation. An experiential learning project is required in this course.

Prerequisites: SS200-level course or HU200-level course

SS 340 - American Cultural History

3 Credits

Through the study of industrialization, capitalism, urbanization, immigration, technology, and suburbanization, students gain knowledge of the forces that have shaped American life in the twentieth century. Course materials include various forms of cultural production that reflect the social, political, and economic changes that define the modern American experience.

Prerequisites: SS200-level course or HU200-level course

SS 404 - Contemporary Problems in Social Science

6 Credits

This course integrates, in a social studies context, the allied disciplines of history, political science (public policy), economics, psychology and human relations within a management/employee setting. Students will discuss and weigh the difference between opinion, fact, ideological creed and pronouncements, and will demonstrate their knowledge through class debates, written reports, and group research projects.

SS 490 - Internship in the Social Science

6 to 12 Credits

This course offers students the opportunity to apply concepts, principles and research methods that they are learning in their social science courses to work in a related agency, company, or nonprofit. Students will develop a learning contract under the supervision of a faculty

member in consultation with a site supervisor. Six to twelve academic credits may be earned depending upon the number of contact hours of work with an identified organization and the level of responsibilities assumed by the student as outlined in the learning contract. As part of the learning contract, students are expected to include outside readings in social science areas related to their internship.
Prerequisites: 9 hours of upper level work in Social Science classes

WS 165 - Signals and Systems

3 Credits

This course is a basic introduction to analysis techniques and tools for signal processing systems. Topics to be covered include analysis techniques, signal representation (including Fourier and Laplace transforms); system definitions and properties (such as linearity, causality, time invariance, and stability); use of convolution, transfer functions and frequency response to determine system response; applications to wireless communications.
Prerequisites: MA 202

WS 210 - Continuous and Discrete Systems

3 Credits

This course is a basic introduction to systems, stability, and sampling and will cover the following topics: continuous and discrete-time system theory; block diagrams, feedback, and stability theory; system analysis with Bode diagrams; discrete-time stability, difference equations, Z-transforms, transfer functions, Fourier transforms, and frequency response; sampling of continuous systems and an introduction to digital filtering.
Prerequisites: WS 165

WS 306 - Electromagnetic and Radio Systems

3 Credits

This course is an introduction to communication systems and antenna equipment, and will cover the following topics: wireless application circuit design for gain and filter control at radio frequencies to interface the baseband processing systems and the antennas of communication systems; design of radio transmitter and receiver circuits using scattering-parameter methods; circuits (include oscillators, radio frequency amplifiers and matching networks, mixers and detectors); antenna fundamentals, analysis and design principles, and a survey of antenna types including: arrays, wire antennas, broadband antennas, and aperture antennas; behavior of radiated electromagnetic waves in atmosphere, space, urban and indoor environments; path, frequency and antenna selection for practical communication systems; propagation prediction.
Prerequisites: WS 210

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How to Get to Daniel Webster College

Getting Here by Car

Boston and the South Shore:
Take Interstate 93 north to Route 128. Take Route 128 south to the Everett Turnpike (Route 3) north. Once in New Hampshire look for Exit 6. (See below.)

West of Boston:
Take the Massachusetts Turnpike (1-90) east to Interstate 495. Take Interstate 495 north to the Everett Turnpike (Route 3) north. Once in New Hampshire look for Exit 6. (See below.)

Southern Connecticut and New York City:
Take Interstate 95 north to Interstate 91 north to Interstate 84 east to Massachusetts Turnpike (I-90 east), then follow to Interstate 290 east. Turn north on Interstate 495 and north again on the Everett Turnpike (Route 3). Once in New Hampshire look for Exit 6. (See below.)

North of Daniel Webster:
Take Interstate 93 south to 293 to the Everett Turnpike (Route 3) south to Exit 6. (See below.)

Exit 6:
Take Broad Street east to Blue Hill Avenue, 1/8 mile from exit; turn left. As it crosses the Everett Turnpike (Route 3), Blue Hill Avenue becomes Pine Hill Road. Continue on Pine Hill Road to the entrance at University Drive.

Getting Here by Bus:
Nashua is served by Vermont Transit.

Getting Here by Air:
Visitors may arrive at Logan International Airport in Boston, MA, or the Manchester Airport at nearby Manchester, NH. In addition, Daniel Webster College is located adjacent to Boire Field, Nashua, NH (ASH, 42º46’54” North, 71º30’55” West, Rwy 14-32: 5,500 Ft x 100 Ft, paved and lighted).

Daniel Webster College is located one mile from Exits 6 and 7W off the Everett Turnpike (Route 3) in Nashua, NH. The College is 45 minutes north of Boston, MA, 20 minutes south of Manchester, NH, two hours from Hartford, CT and Springfield, MA, and approximately four hours from New York City. Complete directions will be mailed upon request.

Equal Opportunity

Daniel Webster College admits students of any race, color, creed, gender, handicap, and national or ethnic origin to all the rights, privileges, programs and activities generally accorded or made available to students at the school. The College does not discriminate on the basis of race, color, creed, gender, handicap, or national or ethnic origin in administration of its educational policies, admissions policies, scholarship and loan programs, and athletic and other school administrative programs. The College provides limited special services and facilities for handicapped students.

This catalog provides the most up-to-date information at the time it was sent to press. Changes in programs and personnel after this time will be reflected in the next catalog printing. Our website is updated regularly. Daniel Webster College reserves the right to change academic regulations, fees, and calendars without notice.

Catalog Addendum
Daniel Webster College
2010-2011 Catalog, Volume 2
January 6, 2011

The Aviation Operations Associate in Science and the Aviation Flight Operations Bachelor of Science degree programs are active programs. However, effective March 12, 2010, the College stopped accepting new student enrollments into the programs. The program information follows:

Aviation Operations
Associate in Science Degree

The Aviation Operations program leads to the Associate in Science degree and combines general academic preparation with basic business skills, and aviation operations courses. It is designed to prepare students for employment in the aviation industry in administrative, customer service, or operations positions, including collateral duties as a pilot consistent with their pilot experience and credentials, and for enrollment in an appropriate bachelor's degree program.
Students may elect either of two options for completing the major course requirements of the program:

- **The General Operations** (GO) option which includes required study of the fundamentals of aeronautics and aviation management, and elective aviation courses.
- **The Flight Operations** (FO) option which includes the fundamentals of flight sequence and aviation law.

Degree Requirements

Daniel Webster Success:
- DW 101 - Strategies for Success

Communications:
- EN 115 - College Writing and Research
- IS 101 - Information Technology/Applications I

One of the following:
- EN 208 - Public Speaking
- EN 215 - Professional Writing

designated Communications elective

Mathematics and Natural Science:
- MA 115 - College Trigonometry
- MA 122 - College Algebra w/Applications
- MA 152 - Introduction to Calculus

Human Behavior:
- PY 101 - Principles of Psychology

Cultural and Community Engagement:
- ID 101 - First Year Seminar

Cultural Studies Core:
Humanities or Social Science which have the following course prefixes: Economics (EC), History (HI), Political Science (PS), Psychology (PY), Sociology (SO), Social Science (SS).
- 200-level Humanities course
- 200-level Social Science course

Major Courses - 21-22 credit hours
Grade of C or higher required
Business Foundation - 6 credit hours
- AC 201 - Financial Accounting
- BM 101 - Principles of Business Management

General Operations (GO) Options - 16 credit hours
- AE 205 - Aircraft Operations
- AM 201 - Aviation Law
- AM 205 - Aircraft Operating Economics
- Aviation Electives (6)

Flight Operations (FO) Options - 16 credit hours

- AF 128 - Fundamentals of Flight
- AF 128P - Fund of Flight Practicum
- AF 148 - Extended Fundamentals of Flight
- AF 148P - Extended Fundamentals of Flight Practicum
- AM 201 - Aviation Law

General Electives - 8-9 credit hours
Total Credits Required - 60 credit hours
Suggested Sequence of Courses:

AE 205 Aircraft Operations* (GO) OR
AF 128 Fundamentals of Flight** (4) (FO) AND
AF 128P Fundamentals of Flight Practicum (2)
DW 101 Strategies for Success (1)
EN 115 College Writing and Research
IS 101 Information Technology/Applications I
MA 122 College Algebra

AM 201 Aviation Law*
BM 101 Principles of Business Management*
ID 101 First Year Seminar
MA 115 College Trigonometry (2)
PY 101 Principles of Psychology (GO)
_____ General Elective

AC 201 Financial Accounting *
AM 205 Aircraft Operations Economics* (GO) OR
PY 101 Principles of Psychology (FO)
MA 152 Introduction to Calculus
_____ Cultural Studies Core
_____ General Elective

_____ Aviation Elective* (6) (GO) AND
_____ Aviation Elective* (GO) OR
AF 148 Extended Fundamentals of Flight** (4) (FO)
AF 148P Extended Fundamentals of Flight Practicum (2) (FO)
_____ Professional Communication
_____ Cultural Studies

* Major Course: Grade of C or higher required.
** Mastery Course: Grade of B- or higher required.
Please Note: All courses are three credits unless designated otherwise.
AF 128 may be used as a substitute for AE 205. Credit will not be awarded for AE 205 if credit has already been awarded for AF 128.

Aviation Flight Operations

Bachelor of Science Degree

The Aviation Flight Operations program leads to the Bachelor of Science degree and combines general academic preparation and professional pilot education with flexibility for additional study in aviation management, air traffic management, business management, or other fields. It is designed to prepare students for employment as professional pilots and for leadership roles in a variety of flight operations settings, or for enrollment in an appropriate masters degree program.

The Daniel Webster College Professional Pilot Education Course is a key component of the Aviation Flight Operations program. The course consists of a sequence of required flight practica, correlated with associated classroom courses. Each course is based upon mastery of critical flying skills, aeronautical knowledge, and the development and seasoning of pilot judgment through progressively more challenging "Line-Oriented Flight Training (LOFT)" tasks and missions, conducted in a mix of uniquely capable instructional aircraft and flight simulators. Students should be aware of the student pilot weight limitation required to complete the DWC flight curriculum requirements.

Students who enter the college with prior flight experience–i.e., they have received both ground and flight instruction which is equivalent to the private pilot requirements listed in the DWC curriculum–may be evaluated for advanced placement through the transition courses AF 129, and AF 129P.

During each registration period, students sign up for the flight practicum list and are scheduled by priority, subject to the limits of aircraft and instructor resources. Students are highly encouraged to utilize the summer sessions to support flight practicum progress.

Daniel Webster College holds Federal Aviation Administration (FAA) Air Agency Certificate #LT8S306Q as an approved pilot school, and operates its flight instructional courses under Part 141 and Part 61 of the Federal Aviation Regulations. Students completing these courses qualify to earn pilot certificates and ratings issued by the FAA, as noted.

Degree Requirements

Daniel Webster Success:

- DW 101 - Strategies for Success

Communications:

- EN 115 - College Writing and Research
- *Upper-level Writing Intensive course within the major (designated with a ^{W}) or, if not required within the major, a different writing intensive course outside of the major*
- IS 101 - Information Technology/Applications I

One of the following:

- EN 208 - Public Speaking
- EN 215 - Professional Writing

designated Communications elective

Mathematics and Natural Science:

- MA 115 - College Trigonometry
- MA 122 - College Algebra w/Applications
- MA 152 - Introduction to Calculus
- PH 205 - General Physics I
- PH 205L - General Physics I Lab
- PH 206 - General Physics II
- PH 206L - General Physics II Lab

Natural or Physical Lab Science or science as required by major program

Human Behavior:

- EC 101 - Macroeconomics
- PY 101 - Principles of Psychology

Cultural and Community Engagement:

- ID 101 - First Year Seminar

Cultural Studies Core:

Courses in cultural studies include at least one 200-level course and at least one 300-level course in Economics (EC), History (HI), Humanities (HU), Political Science (PS), Psychology (PY), Sociology (SO), Social Science (SS), and one 300-level Humanities (HU) course.

- 200-level Humanities (HU) or Social Science
- 300-level Humanities (HU)
- 300-level Social Science course
- ID 400-level Interdisciplinary Senior Seminar

Major Courses - 55 credit hours
Aeronautics - 15 credit hours

- AE 268 - Applied Flight Dynamics
- AE 306 - Human Factors/Flight [W]
- AE 318 - Advanced Aircraft Systems
- AE 408 - Flight Safety
- MT 201 - Meteorology

Aviation Management - 6 credit hours

- AM 201 - Aviation Law
- AM 205 - Aircraft Operating Economics

Professional Pilot Education - 34 credit hours

- AF 128 - Fundamentals of Flight
- AF 128P - Fund of Flight Practicum
- AF 148 - Extended Fundamentals of Flight
- AF 148P - Extended Fundamentals of Flight Practicum
- AF 258 - Integrated Flight Operations
- AF 258P - Integrated Flight Ops Practicum
- AF 328 - Full Mission Operations
- AF 328P - Full Mission Operations Practicum
- AF 338 - Crew/ATC Integration
- AF 338P - Crew/ATC Integration Practicum

General Electives - 16 credit hours

Total Credits Required - 120 credit hours

Footnote

[(1)] Upper-level writing intensive requirement: The courses designated may be used to satisfy both the upper-level writing intensive requirement and the designated major course requirement, increasing the unrestricted general elective credit.

Suggested Course Sequence:

AF 128 - Fundamentals of Flight
AF 128P - Fund of Flight Practicum
DW 101 - Strategies for Success
EN 115 - College Writing and Research
IS 101 - Information Technology/Applications I
MA 122 - College Algebra w/Applications

EC 101 - Macroeconomics
ID 101 - First Year Seminar
MA 115 - College Trigonometry
MT 201 - Meteorology
PY 101 - Principles of Psychology

AF 148 Extended Fundamentals of Flight** (4)
AF148P Extended Fundamentals of Flight Practicum (2)
AM 201 Aviation Law*
_____ Professional Communication
_____ Cultural Studies Core

AF 258 Integrated Flight Operations** (4)
AF 258P Integrated Flight Operations Practicum
_____ Cultural Studies
PH 205 General Physics I AND
PH 205L General Physics I Lab (1)

MA 152 Introduction to Calculus

AE 268 Applied Flight Dynamics*

AE 318 Advanced Aircraft Systems*

AF 328 Full Mission Operations** (4)

AF 328P Full Mission Operations Practicum

_____ Cultural Studies Core

AE 306 Human Factors of Flight* [W]

AM 205 Aircraft Operating Economics*

PH 206 General Physics II AND

PH 206L General Physics II Lab (1)

_____ General Elective

AF 338 Credit/ATC Integration ** (4) [W]

AF 338P Crew/ATC Integration Practicum

_____ 400-level Interdisciplinary (ID) Seminar

_____ General Elective

_____ General Elective (1)

AE 408 Flight Safety*

_____ General Elective

_____ General Elective

_____ General Elective

* Major Course: Grade of C or higher required
** Mastery Course: Grade of B- or higher required
[W] Upper-level writing intensive requirement. The course designated may be used to satisfy both the upper-level writing intensive requirement and the designated major course requirement.
Please Note: All courses are three credits unless designated otherwise.

AF 128 - Fundamentals of Flight
4 Credits
The student will master the fundamental knowledge of flying, and the application of this knowledge to flight operations in the local flying area and to planning and conducting VFR cross-country flights. The student will be introduced to effective pilot judgment as Pilot in Command (PIC) including the recognition and assessment of significant information and effective decision-making. The student will gain the knowledge necessary to successfully complete the FAA knowledge test for Private Pilot (airplane single-engine land). This is a FAR Part 141 course. This is a mastery course. Grade of B- or higher required for flight (AO/AFO) majors. This is a mastery course. Grade of B- or higher required for flight (AO/AFO)majors.
Corequisites: AF128P

AF 128P - Fund of Flight Practicum
2 Credits
The student will master the knowledge and skills necessary to qualify for the Private Pilot Certificate. The student will demonstrate effective judgment as Pilot in Command, including the recognition and assessment of significant information and decision-making for all flight operations appropriate to the Private Pilot Certificate. This is a FAR Part 141 course.
Corequisites: AF128

AF 129 - Fund of Flight/Transition
0 Credits
This course provides a systematic assessment of prior ground and flight instructional experience for a successful transition to the College's instructional methods, policies, and procedures. It is required for students who seek academic credit for prior ground and flight experience and advanced placement in the College's Professional Pilot Education Course. The student will confirm the knowledge necessary to successfully complete the FAA knowledge test for Private Pilot (Airplane Single-engine Land). Successful completion results in transfer credit for AF128 Fundamentals of Flight. **(Normally offered Fall semester only). This is a mastery course. Grade of B- or higher required for flight (AO/AFO) majors.**
Prerequisites: Prior Ground and flight instructional experience equivalent to FAA Private Pilot Certificate (Airplane Single-engine Land).
Corequisites: AF129P

AF 129P - Extended Fund Flight/Trans Practicum
0 Credits
This course provides a flight transition for students who enter the College with prior ground and flight instructional experience for a successful transition to the College's instructional methods, policies, and procedures. It is required for students who seek academic credit for prior ground and flight experience and advanced placement in the College's Professional Pilot Education Course. The

student will practice and gain confidence in VFR cross-country flight at Pilot in Command and will confirm the knowledge, skill, and judgment necessary to successfully earn the FAA Private Pilot Certificate (Airplane Single-engine Land). Successful completion results in transfer credit for AF128P Fundamentals of Flight Practicum. **(Normally offered Fall semester only)**
Prerequisites: Prior ground and flight instructional experience equivalent to FAA Private Pilot Certificate (Airplane Single-engine Land).
Corequisites: AF129

Additional program course descriptions can be found in the course descriptions section of the catalog.

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