COURSE CATALOG 2012-2013_

EFFECTIVE SUMMER QUARTER 2012

DAKOTAH
CLASS OF 2011

NEUMONT UNIVERSITY

ENCODING THE NEXT_

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Neumont University is accredited by the Accrediting Council for Independent Colleges and Schools. For complete information concerning accreditation, please refer to the Accreditation Section of this catalog.

Neumont University
10701 SOUTH RIVER FRONT PARKWAY, SUITE 300
SOUTH JORDAN, UTAH 84095
801-302-2800
www.neumont.edu

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2012-2013 ACADEMIC CALENDAR_

2012 SUMMER QUARTER

July 9 ..... First Day of Class
July 9-August 13 ..... Sprint 1
July 11 ..... Add/Drop Deadline Sprint 1
July 24 ..... Pioneer Day (no class)
August 14-September 18 ..... Sprint 2
August 16 ..... Course Adjustment Deadline Sprint 2
September 3 ..... Labor Day (no class)
September 18 ..... Last Day of Class

2012 FALL QUARTER

October 8 ..... First Day of Class
October 8-November 9 ..... Sprint 1
October 10 ..... Add/Drop Deadline Sprint 1
November 12-December 18 ..... Sprint 2
November 14 ..... Course Adjustment Deadline Sprint 2
November 22-23 ..... Thanksgiving Break (no class)
December 18 ..... Last Day of Class

2013 WINTER QUARTER

January 7 ..... First Day of Class
January 7-February 11 ..... Sprint 1
January 9 ..... Add/Drop Deadline Sprint 1
January 21 ..... Civil Rights Holiday (no class)
February 12-March 19 ..... Sprint 2
February 14 ..... Course Adjustment Deadline Sprint 2
February 18 ..... President's Day (no class)
March 19 ..... Last Day of Class

2013 SPRING QUARTER

April 8 ..... First Day of Class
April 8-May 10 ..... Sprint 1
April 10 ..... Add/Drop Deadline Sprint 1
May 13-June 18 ..... Sprint 2
May 15 ..... Course Adjustment Deadline Sprint 2
May 27 ..... Memorial Day (no class)
June 17 ..... Last Day of Class

2013 SUMMER QUARTER

July 8 ..... First Day of Class
July 8-August 12 ..... Sprint 1
July 10 ..... Add/Drop Deadline Sprint 1
July 24 ..... Pioneer Day (no class)
August 13-September 17 ..... Sprint 2
August 15 ..... Course Adjustment Deadline Sprint 2
September 2 ..... Labor Day (no class)
September 17 ..... Last Day of Class

2013 FALL QUARTER

October 7 ..... First Day of Class
October 7-November 8 ..... Sprint 1
October 9 ..... Add/Drop Deadline Sprint 1
November 11-December 17 ..... Sprint 2
November 13 ..... Course Adjustment Deadline Sprint 2
November 28-29 ..... Thanksgiving Break (no class)
December 17 ..... Last Day of Class

For an electronic version visit
www.neumont.edu/academiccalendar

_PRESIDENT'S MESSAGE

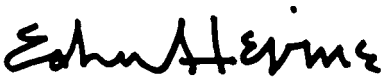
Welcome to Neumont University. Technology is advancing the way the world works, recreates, communicates, and learns. The Neumont mission is to provide a professional education that is rich in ideas, current in industry practices, and deep in technological insight from the input of industry-leading partners. Your time in our programs will feel like a whirlwind of learning, growth, and team-work. As you explore the courses and services available at Neumont, you will discover what makes Neumont a superior option for your digitally-oriented education. It is my hope that you will take advantage of the remarkable learning opportunities Neumont provides, building knowledge, memories, and friendships that last a lifetime.

As you review this *Catalog* you might notice that, although our program concentrates on the digital sciences at the Bachelors and Masters degree level, we also provide an essential foundation of General Education courses. Neumont prepares graduates with the courses required to fulfill your degree requirements through the foundation of a relevant, well-rounded education. Our General Education offerings support and enhance your learning interests. Through project courses and industry-partnered Enterprise Projects, you will have many opportunities to explore advanced technologies, work with industry experts, refine your skills, and build a portfolio of real project experiences.

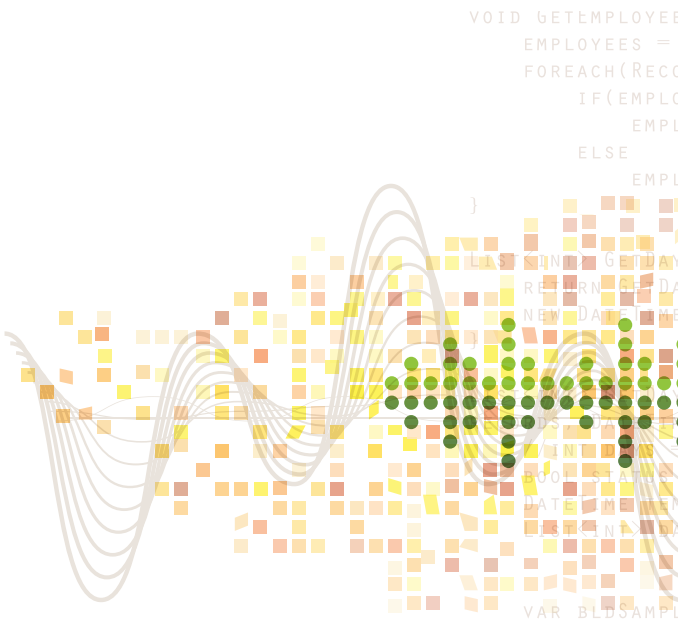
A degree from Neumont University is a seal of approval from leading companies—proof that you have developed the ability to create, theorize, and adapt quickly in a teamwork environment. It is these skills that enable Neumont graduates to maintain a competitive edge throughout the course of their career, resulting in impressive starting salaries at exciting companies. Leading employers say that our distinguished faculty have designed a program that delivers more useful knowledge than most four-year programs – in a fraction of the time. Explore the courses in this *Catalog* and you will see how Neumont will help you to become a tech-ready, team-ready, and project-ready technology innovator.

I look forward to seeing you on campus.

Best wishes,



Edward H. Levine
President, Neumont University



CAMPUS ADMINISTRATION AND FULL TIME FACULTY_

UNIVERSITY ADMINISTRATION

Edward Levine, *President*
Thomas Bickart, *Chief Financial Officer*
Aaron Reed, *VP Academic Operations*
Isabella Porter, *VP Marketing*
Samuel Puich, *Provost*
Erin McCormack, *Dean of Students*
Dave Conger, *Director of Information Technology*
L. Jemé Deviny, *Director of Financial Services*
Karick Heaton, *Director of Admissions*
Stacy Cahoon Hughes, *Director of External Affairs*
Charlotte Westphal, *Director of University Relations*
Laura Parson, *Program Manager, Career Services*
Larry Crandall, *Registrar*

Clark, Tim	*B.S. Computer Science* *Neumont University*
Halladay, Steven	*B.A. Communications,* *Brigham Young University* *M.S. Computer Science,* *Brigham Young University*
Johnson, Russell	*B.S. Business Information Systems* *Utah State University* *M.S. Business Information Systems* *Utah State University* *PhD. Student* *Computer Information Systems* *Nova Southeastern University*
Kane, John	*B.A. Mathematics,* *Carroll College* *M.S. Mathematics,* *Montana State University* *M.B.A.,* *Neumont University*
King, Jamie	*B.S. Computer Science,* *Utah Valley State College*
Carlos Lee	*A.S. Computer Science* *Brigham Young University, Hawaii* *B.S. Business Management* *Brigham Young University, Hawaii* *M.B.A.* *Brigham Young University*
Parker, Kristen	*B.A. English Teaching* *University of Utah* *M.A. American Studies* *University of Utah*
Pay, Gerald	*B.S. Microbiology,* *Brigham Young University*
Reed, Aaron	*B.S. Computer Science,* *Weber State University* *M.B.A.,* *Neumont University*
Walkenhorst, Jake	*B.S. Computer Science,* *Brigham Young University*
Warren, Matt	*B.S. Information Systems & Technologies* *Weber State University* *M.B.A.,* *Weber State University*
Watts, Natalie	*B.S. Mathematics,* *University of Utah* *M.S. Technology Education,* *Brigham Young University*

The mission of Neumont University is to provide a professional education that is rich in ideas, current in industry practices, and deep in technological insight from the input of industry-leading partners.

We are committed to: a collaborative learning process, a quality learning environment, contributing broadly to students' lives, and bringing value to the enterprises with which we partner.

Our graduates will be known for their technology expertise and business acumen, their capacity to innovate, and their motivation to succeed.

_ABOUT NEUMONT UNIVERSITY

STUDENT LEARNING GOALS

- Provide students the opportunity to develop the necessary technical, business, knowledge, collaboration skills and experience to enter the workplace as productive, competent professionals in their field.
- Provide a learning environment where students are immersed in daily application of relevant principles and practices.
- Foster strong relationships with leading companies and professionals in the computer science field to situate student learning in the context of authentic problems faced by the technology industry.
- Create opportunities for students to develop effective collaboration and interpersonal communication skills that transfer to building successful relationships and teams in the workplace.
- Improve student learning by innovating and applying the best practices in the areas of project-based learning, problem-based learning, competency-based assessment, and teaching effectiveness during all stages of learning.
- Encourage creativity and individual expression by providing rich project experiences that mirror the target employment environment.
- Build a bridge between students and employers by engaging in community and global projects.
- Assess the development and progress of instruction to improve the student learning experience.

STUDENT AFFAIRS GOALS

- Help students adapt to an intensive, accelerated, project-based learning environment that is significantly different from a traditional educational environment. Reward those students who demonstrate self-discipline, motivation, and academic achievement.
- Create a student life environment that fosters leadership development, accountability, professional work standards, and ethical decision-making.
- Provide a living environment conducive to academic success, at a reasonable price, with activities conducive to the personal and social growth of residents.
- Enable individual success through academic and non-academic advising, referrals to community resources, student life programming, and educational accommodations for students with documented disabilities.
- Care for the holistic needs of students.
- Help students make appropriate class registration choices to further their academic development.

HISTORY, LEGAL CONTROL, AND GOVERNANCE

Neumont University is operated by Neumont University, LLC. Neumont University, LLC is a wholly owned subsidiary of Neumont Holdings, LLC, a Delaware limited liability company whose principal offices are located at 10701 South River Front Parkway, South Jordan, Utah 84095. Neumont Holdings, LLC Officers include Edward H. Levine, President. Neumont University introduced its Computer Science program at its Utah campus in January 2004.

ACCREDITATION

The University is accredited by the Accrediting Council for Independent Colleges and Schools (ACICS) to award Bachelor of Science degrees in Computer Science, Software and Game Development, Web Design and Development, and Business Technology Operations Management and Master of Science in Computer Science.

The Accrediting Council for Independent Colleges and Schools is listed as a nationally recognized accrediting agency by the United States Department of Education and is recognized by the Council for Higher Education Accreditation. The Accrediting Council for Independent Colleges and Schools (ACICS) is located at 750 First Street, NE Suite 980, Washington, D.C. 20002; (202) 336-6780.

DEFINITIONS OF ACADEMIC CREDIT AND CREDIT HOUR

Neumont University is a degree-granting postsecondary institution nationally accredited by the Accrediting Council of Independent Colleges and Schools (ACICS) located in South Jordan, Utah. Neumont University bases its definition of academic credit and the quarter credit hour on standards provided by ACICS and approved by the U.S. Department of Education.

The number of credit hours assigned to a Neumont University course is determined by the types and lengths of activities that occur within that course: classroom lecture and direct instruction activities, outside reading and other assignments, laboratory or project hours, in some cases, practicum or externship hours at an actual industry partner site. Ten hours of classroom lecture or direct instruction activities accompanied by 20 hours of homework are the equivalent of one credit hour. Twenty hours of laboratory or project work equals one credit hour, and thirty hours of practicum experience are the equivalent of a credit hour.

As examples of this credit-hour formula, a four credit-hour course at Neumont University normally contains 32+ hours of classroom lecture and direct instruction, approximately 64 hours of outside study work, and 16 hours of laboratory or project work; a three credit-hour course normally contains 24+ hours of classroom lecture and direct instruction, approximately 48 hours of study work and 12 hours of laboratory or project work. The majority of courses at Neumont University contain 48 (4 credit hours) or 36 (3 credit hours) contact hours between the instructor and students. An externship or practicum course is typically a six and a half credit-hour course requiring 2+ hours of lecture and direct instruction plus 190 hours of student work with an approved Neumont University Enterprise partner.

LICENSURE AND APPROVALS

Neumont University is registered under the Utah Postsecondary Proprietary School Act (Title 13, Chapter 34, Utah Code). Registration under the Utah Postsecondary Proprietary School Act does not mean that the state of Utah supervises, recommends, or accredits the institution. Questions about the registration of this institution should be directed to: Utah Division of Consumer Protection, Heber Wells Building, Second Floor, 160 East 300 South, SM Box 146704, Salt Lake City, Utah 84114-6704. (801) 530-6601.

CAMPUS LOCATION

Neumont University *(Campus and Corporate office)*
10701 South River Front Parkway, Suite 300
South Jordan, UT 84095
(801) 302-2800
Fax (801) 302-2811
www.neumont.edu

STUDENT COMPLAINTS AND GRIEVANCES

Generally, complaints should be directed to the Office of Student Affairs. If the Office of Student Affairs is not able to address the student's complaint, the student may seek additional assistance from the following:

Academic concerns: Office of University Relations
Operational issues or concerns: President

If a student feels that the University has not adequately addressed a complaint or concern, the student may consider contacting the Accrediting Council at 750 First Street, N.E., Suite 980, Washington, DC 20002-4241, (202) 336-6780.

Students may also contact the Utah State Commission on Postsecondary Education at the Heber Wells Building, Second Floor, 160 East 300 South, SM Box 136704, Salt Lake City, UT 84114-6704, (801) 530-6601.

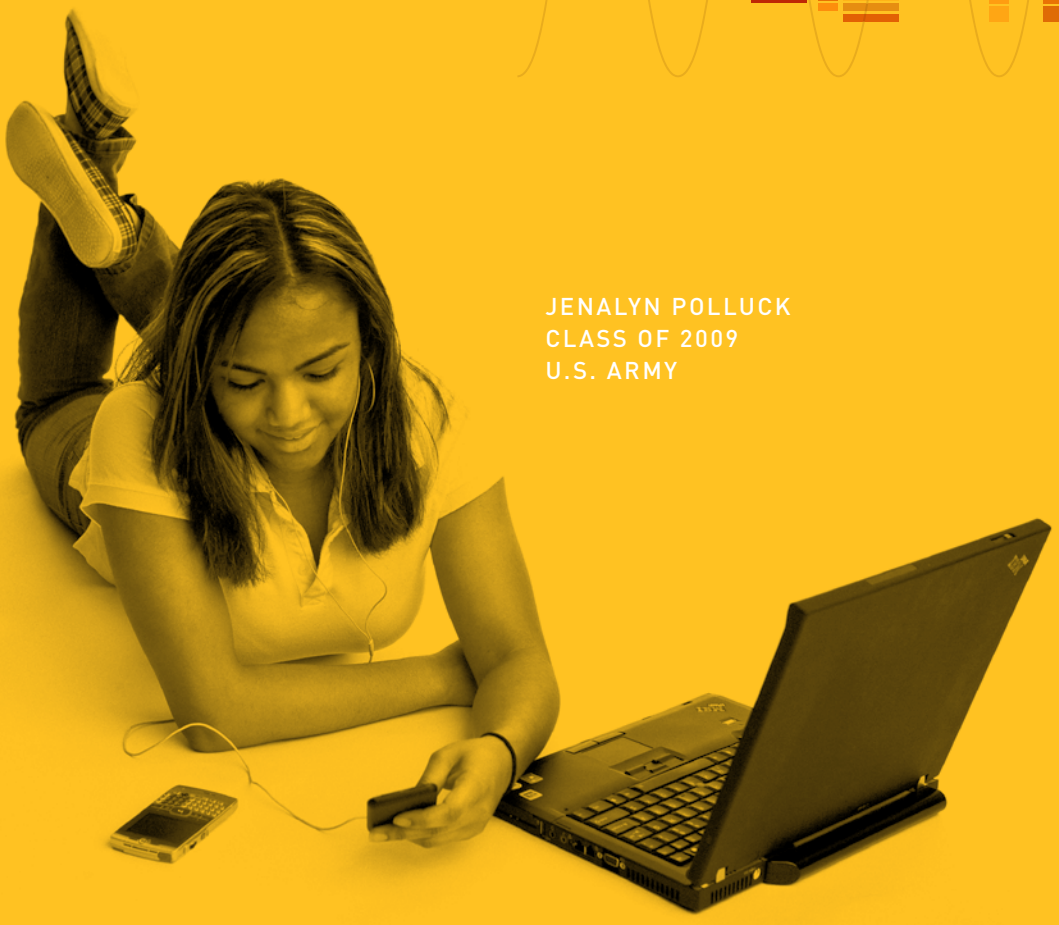
Students will NOT be subject to unfair actions as a result of initiating a complaint.

STATEMENT OF NON-DISCRIMINATION

Neumont University does not discriminate on the basis of race, color, national origin, sex, religion, age, marital status, veteran status, or disability, in the administration of its educational and admissions policies, scholarship and loan programs, or other university administered programs.

Neumont University complies with Title VI of the Civil Rights Act of 1964, the Age Discrimination in Employment Act of 1967, Title IX of the Education Amendments of 1972, Section 504 of the Rehabilitation Act of 1973, the Age Discrimination Act of 1975, and the Americans with Disabilities Act of 1990. The Americans with Disabilities Act of 1990, as amended, protects qualified applicants, students, and employees with disabilities from discrimination in hiring, promotion, discharge, pay, job training, fringe benefits, classification, referral, and other aspects of employment on the basis of disability. The law also requires that covered entities provide qualified applicants, students, and employees with disabilities with reasonable accommodations that do not impose undue hardship.

_UNDERGRADUATE PROGRAMS



JENALYN POLLUCK
CLASS OF 2009
U.S. ARMY

ADMISSIONS_

To apply for undergraduate admittance to Neumont University a potential student should submit the following documents for review by the Acceptance Committee:

- Application for Admission
- Proof of high school graduation or its equivalent or proof of undergraduate degree from an accredited institution
- Evidence of academic performance, such as standardized test scores and/or transcripts

Upon submission of all documents, the applicant's file is scheduled for review by the Neumont University Acceptance Committee. Applicants are evaluated for their academic potential, technical knowledge, and level of motivation.

Students may apply for admittance during all published acceptance periods. Applicants are informed of their acceptance status after all information has been received and reviewed. The offer of admission is valid for the term requested on the application. Upon written request, students may defer their enrollment at the University for one quarter beyond the quarter of acceptance. The written request should be received by the Admissions Office no later than thirty days prior to the start of the quarter for which the student was admitted.

INTERNATIONAL APPLICANTS

Neumont University is authorized under federal law to enroll non-immigrant students. An international application for admission is considered complete and ready for review when the documents and records have been received. Documents include a completed application signed, dated, and accompanied by a non-refundable international student application fee of $125. This fee must be drawn from a U.S. bank account, be an international money order, or be paid by credit card.

In order to satisfy the general admissions requirements listed above, foreign educational documents, including proof of high school graduation or its equivalent, if the institution attended was not a U.S. institution the transcript must be evaluated by a credential evaluation service that is a member of NACES at the applicant's own expense. For a complete list of NACES credential evaluation services visit www.naces.org.

Applicants will need to authorize the credential evaluation company to send the evaluated documents directly to Neumont University after evaluation. Review the International Student Admissions section of our website for a list of authorized evaluation companies.

Proven English language proficiency is required if English is not the applicant's first language. The preferable method of proving English proficiency is official test results of the TOEFL (Test of English as a Foreign Language). Applicants with TOEFL scores of 550+ (213+ computer-based score, 79+ internet-based score) will be considered for admission. In addition to or in place of the TOEFL exam, the University, at its discretion, may require students to complete a telephone interview in English.

Official ACT or SAT test results are recommended.

Once these documents are complete, the application will be submitted for review. Accepted applicants will then need to provide the following:

- An official bank statement from the bank (not just a receipt) showing sufficient funds to cover expenses for a calendar year of attendance at Neumont University. Please contact the Admissions Office for the current dollar amount., and
- F-1 students are required to provide proof of additional funds for each F-2 dependent., and
- If the applicant has a sponsor, the sponsor will need to complete the affidavit of support. Scholarship money can be applied toward the certifying amount.

All international students who are currently studying in the United States on an F-1 student visa and who are transferring from another U.S. institution are required to submit a Transfer Eligibility Form prior to the issuing of the new I-20. All international student scholarships are contingent on meeting I-9 eligibility requirements and lawful F-1 status. Admitted, eligible students will be issued an I-20 form from Neumont University.

TRANSFER STUDENTS

Neumont University may award transfer credit from an institution accredited by an agency recognized by the U.S. Department of Education for courses that meet our evaluation criteria. Courses taken at a foreign institution are accepted on the basis of the report of a credential evaluation service.

Credit is accepted only for courses in which a grade of 'C' or higher was earned. The number of credits awarded for a course will not exceed the number of credits offered for the related Neumont University course.

REQUIRED DEGREE COURSES

For credit by examination of course equivalency for a Neumont University required degree course, students must pass a Neumont University competency test for that specific course. Contact the Office of the Registrar for a current list of available competency tests.

TRANSFERABLE COURSES

For transfer credit for a required course, the transferring course must be comparable to the Neumont University course for content and general outcome requirements. The Office of the Registrar will review the transcripts and course description in the original institution's catalog or class syllabus for the time period the course was taken. Neumont University may accept transfer credits to meet course requirements as long as the course is in a subject area offered at Neumont.

For information regarding the maximum number of transfer credits that Neumont University will award, see the Neumont University *Student Handbook*.

ADVANCED PLACEMENT ACCEPTANCE POLICY

Neumont University may award credit for Advanced Placement (AP) examinations. For detailed information please see the *Student Handbook*.

MILITARY CREDIT

Programs at Neumont University are approved for veterans training. Neumont University evaluates military experience for university credit, based upon the Army / ACE Registry Transcript System (AARTS) and the Sailor / Marine / ACE Registry Transcript (SMART) systems.

AARTS transcripts are available to regular Army enlisted soldiers and veterans, as well as active duty Army National Guard personnel and reservists. SMART transcripts supply similar information for active duty Sailors and Marines, enlisted officers, reserve component personnel, and separated or retired Sailors and Marines.

Only courses, training, or military experience that fulfill Neumont University General Education requirement categories will be evaluated from official AARTS or SMART transcripts. Neumont University follows the American Council on Education recommendations for military transfer credits.

CONCURRENT ENROLLMENT

Neumont University accepts limited concurrent college-level General Education credits. Students may transfer up to nine concurrent enrollment (CE) General Education credits from other accredited institutions, prior to graduating from Neumont University.

Students wishing to participate in the CE program must declare their intention to do so prior to their withdrawal from Neumont. Students who are dismissed from Neumont will not have the opportunity to participate in the CE program. Failure to notify the Registrar at or prior to the time of withdrawal may void the CE option.

Students typically have one calendar year, from the date of their withdrawal, to fulfill graduation requirements.

Official transcripts from the credit-granting institution are required for proof of course completion. The student bears all expenses for any courses taken at another institution.

Students are advised to verify potential credit transferability with the Neumont Registrar, prior to enrollment at the alternate college or university. Decisions regarding transfer credit are made on a case-by-case basis. Typically, CE credits include general education courses, not unique to Neumont's core curriculum which demonstrate academic rigor from accredited institutions. Previous transfer credit decisions do not guarantee future credit acceptance.

UNDERGRADUATE PROGRAM OVERVIEW_

INTRODUCTION

Neumont University takes pride in its unique and systematic approach to deliver a quality education. The school uses problem/project based, competency based, active learning, and online learning to maximize the learning potential of each student.

Neumont University offers four Bachelor of Science degrees in its undergraduate programs:

- Bachelor of Science, Computer Science
- Bachelor of Science, Business Technology Operations Management
- Bachelor of Science, Software and Game Development
- Bachelor of Science, Web Design and Development.

PROJECT COURSES

Neumont University believes the key to a useful and applicable degree is a team-based, hands-on experience with real software projects. In support of this, students spend a large amount of their time working in teams on pertinent, real-world development projects. These project courses, together with the core lecture courses as well as the General Education courses, provide students a rich and challenging learning experience which will result in an excellent education.

To ensure depth of instruction, Neumont will occassionally couple a lecture and project course. A coupled lecture and project course are considered one prerequisite. A student must pass both in order to move into the next combination. Only one coupled lecture and project course may be taken per quarter without Provost approval.

There are a variety of project environments in which students work, both internal and external. Students work on internal projects while they are learning the intricacies of specific skills associated with their discipline. Internal software projects are controlled, designed, and structured by Neumont University instructors and professors to ensure that students master the required competencies. Students will also participate in external Enterprise Projects. Enterprise Projects are those projects developed for external customers with real business needs and constraints. These projects give students exposure to the types of environments they may encounter in their careers.

GENERAL EDUCATION COURSES

General Education courses provide instruction in foundational subject areas. While these courses are not tied directly to projects, whenever possible, General Education topics are supportive of what students are learning in their projects and other degree-related courses.

Neumont's online courses include synchronous and asynchronous instruction. As with any Neumont course, whether it be ground or online delivered, the instructor plays an integral role in delivering the material and mentoring the students. The asynchronous component of the online courses allow students to work through lessons at their own pace while the synchronous sessions integrate the traditional instructor led classrooms. This hybrid model gives students the benefit of direct instruction and mentorship from an instructor through weekly virtual classrooms as well as scheduled reviews and exams. Students will develop their communication and collaboration skills via discussion forums, chat groups, social learning, and breakout sessions.

Online courses are only offered to students currently enrolled in a degree program at Neumont University. Students enrolled in online courses will use the standard materials and equipment that are currently part of the Neumont program (school-approved laptop, course materials, etc.). No additional fees are required to enroll in an online course.

DISTANCE EDUCATION COURSES

Our online teaching pedagogy focuses on students who were unable to successfully complete a required course using the traditional classroom model. By offering the courses in an online format students can immediately retake the course during the next quarter. Neumont currently offers six online courses. By taking the course online, students can use the online format to focus their attention to the individual topics they struggled with in previous attempts and can reduce the time spent on topics that they are already familiar.

Neumont's online courses include synchronous and asynchronous instruction. As with any Neumont course, whether it be ground or online delivered, the instructor plays an integral role in delivering the material and mentoring the students. The asynchronous component of the online courses allow students to work through lessons at their own pace while the synchronous sessions integrate the traditional instructor led classrooms.

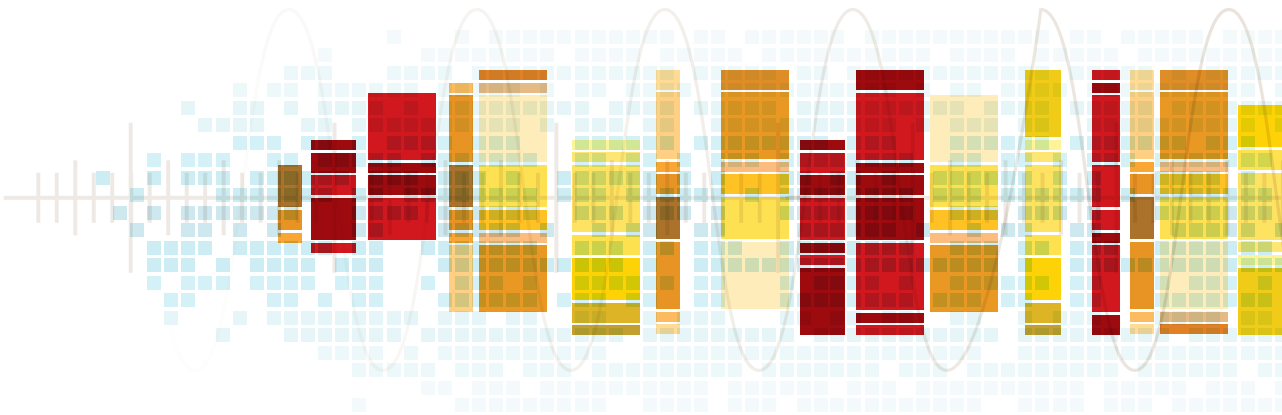
This hybrid model gives students the benefit of direct instruction and mentorship from an instructor through weekly virtual classrooms as well as scheduled reviews and exams. Students will develop their communication and collaboration skills via discussion forums, chat groups, social learning, and breakout sessions.

Online courses are only offered to students currently enrolled in a degree program at Neumont University. Students enrolled in online courses will use the standard materials and equipment that are currently part of the Neumont program (school-approved laptop, course materials, etc.). No additional fees are required to enroll in an online course.

COURSE NAMING CONVENTIONS

All courses with numbers between 100 and 299 are considered lower level courses. Courses numbered between 300 and 499 are upper level courses. The following naming conventions are used to identify all the categories of courses:

BIT	*Business Information Technology*
BUS	*Business*
CSC	*Computer Science*
DBT	*Database Technology*
FAC	*Fine Arts and Communication*
GAT	*Gaming Technology*
HPE	*Physical Education*
HUM	*Humanities*
ITH	*Information Technologies*
ITS	*Information Security*
MAT	*Mathematics*
MGT	*Management*
MOA	*Modeling and Analysis*
MTM	*Multimedia*
PRO	*Projects*
PSC	*Physical and Biological Science*
RBT	*Robotics*
SSC	*Social Science*



BACHELOR OF SCIENCE IN COMPUTER SCIENCE_

INTRODUCTION

The Neumont University Bachelor of Science in Computer Science (BSCS) program distinguishes itself with an integrated, project and problem-based curriculum that focuses on the skills most valued by today's employers. Graduates of this innovative program will be motivated, entry-level software developers who are equipped for success in the corporate world. All BSCS projects and coursework are designed to provide Neumont University graduates with a strong foundation in technical skills and standards, an understanding of the business environment, and the ability to communicate and function well as members of teams.

Upon completing the BSCS program requirements graduates will possess a Bachelor of Science in Computer Science and a portfolio of real project work.

The innovative nature of the program allows students to specialize in one or more disciplines under the computer science umbrella. Students can focus on the varying career paths that are closely tied to emerging or high demand careers in the computer science and information technology industry. Neumont University has worked closely with business and industry to develop a curriculum which will further enhance our students' skills, portfolio, and marketability.

PROGRAM OVERVIEW

Students attend classes and work on projects generally between 8:00 am and 6:00 p.m., Monday through Friday. The program is 10 quarters in length and requires a minimum of 2.5 years to complete. Many assignments are performed in groups as part of lab and project work.

PROGRAM OBJECTIVES

Graduates of the Bachelor of Science in Computer Science are expected to master the following:

- Develop software using modern languages and integrated development environments
- Understand and employ a variety of algorithms and data structures
- Design system architectures
- Understand and employ established and emerging software standards
- Develop applications with a variety of deployment mechanisms
- Understand software development in the context of business
- Participate in a range of software development lifecycle phases using a variety of software development methodologies
- Effectively communicate and collaborate in a software development environment
- Integrate disparate areas of technical and non-technical expertise through real-world projects
- Become effective problem solvers and critical thinkers

GRADUATION REQUIREMENTS

(Students enrolled in the BSCS program beginning Summer Quarter 2012)

To qualify for graduation with a Bachelor of Science in Computer Science degree, students are required to accomplish the following:

- Complete a minimum of 180 quarter credit hours with an average grade of 'C' (Cumulative Grade Point Average of 2.0) or higher for all work taken at the University
- Complete a minimum of 114 credit hours in required degree courses, including projects
- Complete a minimum of 54 credit hours in required General Education courses
- Complete a minimum of 12 credit hours of elective courses in any area
- Abide by all University rules and regulations
- To earn credits for a course, a student must earn a passing grade.
- For required courses, a passing grade is a 'C' or better. For non-required courses, a passing grade is a 'D-' or better.
- No unresolved judicial matters
- No outstanding financial obligations to the University

Students who enrolled prior to Summer 2012 should refer to the prevailing *Catalog* during their initial period of enrollment.

BSCS PROGRAM PLAN

(Students enrolled in the BSCS program beginning Summer 2012)

MINIMUM GENERAL EDUCATION CREDITS REQUIRED	**54 CREDITS**
MINIMUM COMPUTER SCIENCE CREDITS REQUIRED	**114 CREDITS**
Required Core BSCS Courses	58 credits
Required BSCS Projects and Labs	56 credits
MINIMUM ADDITIONAL ELECTIVE CREDITS REQUIRED	**12 CREDITS**
TOTAL REQUIRED FOR BS IN COMPUTER SCIENCE	**180 CREDITS**

GENERAL EDUCATION COURSES

REQUIRED GENERAL EDUCATION		**54 CREDITS**
BUS101	Personal Finance	3 credits
FAC105	Leadership and Problem-Solving	3 credits
FAC120	Spoken Communications	3 credits
FAC125	Collaborative and Interpersonal Communications	3 credits
FAC299	Marketing Your Personal Brand	2 credits
HUM105	Art and Science of Success	2 credits
HUM121	English Composition	3 credits
HUM150	Logic	3 credits
HUM221	Intermediate English Composition	3 credits
HUM305	Ethics	3 credits
MAT105	College Algebra	3 credits
MAT110	Sets, Probability, and Number Systems	3 credits
MAT150	Trigonometry	3 credits
MAT250	Calculus	3 credits
PSC220	Introduction to Physics	3 credits
SSC250	Human Relations and Personality Development	3 credits
SSC271	American Government	3 credits
CHOOSE ONE OF THE FOLLOWING:		
SSC310	American Legal System	3 credits
SSC320	Group Dynamics	3 credits
SSC350	Intellectual Property	3 credits
CHOOSE ONE OF THE FOLLOWING:		
PSC115	Introduction to Biology	2 credits
PSC201	Astronomy	2 credits
PSC210	Environmental Studies	2 credits
PSC230	Introduction to Chemistry	2 credits
TOTAL GENERAL EDUCATION CREDITS		**54 CREDITS**

REQUIRED CORE BSCS COURSES

(Students enrolled in the BSCS program beginning Summer 2012)

REQUIRED CORE COMPUTER SCIENCE COURSES		**58 CREDITS**
CSC110	Introduction to Computer Science	4 credits
CSC120	Topics in Computer Science	4 credits
CSC130	Principles of Software Engineering	4 credits
CSC150	Object Oriented Programming and Design	6 credits
CSC250	Algorithms and Data Structures I	4 credits
SC252	Algorithms and Data Structures II	4 credits
CSC230	Computational Theory	4 credits
DBT130	Databases I	4 credits
DBT230	Databases II	4 credits
MAT210	Linear Algebra	3 credits
MAT305	Problem Solving	3 credits
MAT320	Numerical Analysis	3 credits
MAT410	Discrete Structures	3 credits
MOA140	Information Modeling I	4 credits
MOA240	Information Modeling II	4 credits

REQUIRED BSCS PROJECTS AND LABS

FOUNDATIONAL COURSES AND LABS		**24 CREDITS**
CSC160	Developing for the Windows Platform	4 credits
PRO160	Windows Platform Lab	2 credits
CSC180	Introduction to Java Development	4 credits
PRO180	Java Lab	2 credits
CSC260	Introduction to Dynamic Web Programming	4 credits
PRO260	Dynamic Web Lab	2 credits
CSC280	Developing Scalable Web Applications with Java EE	4 credits
PRO280	Scalable Web Apps Lab	2 credits
DEVELOPMENTAL COURSES AND LABS		**12.5 CREDITS**
CSC360	Software Design Principles	4 credits
CSC380	Service Oriented Architecture	4 credits
PRO390	Capstone Project	4.5 credits
ENTERPRISE PROJECTS		**19.5 CREDITS**
PRO490	Enterprise Projects I	6.5 credits
PRO491	Enterprise Projects II	6.5 credits
PRO492	Enterprise Projects III	6.5 credits
ADDITIONAL ELECTIVES		**12 CREDITS**
TOTAL PROGRAM CREDITS		**180 CREDITS**

BACHELOR OF SCIENCE IN SOFTWARE AND GAME DEVELOPMENT_

INTRODUCTION

The Neumont University Bachelor of Science in Software and Game Development (BSGD) immerses students into the highly technical fields of software and video game development. This degree combines problem and project based learning concepts with real world software practices preparing students to be an immediate asset to future employers.

Students develop key soft skills while building their software development foundation. Students are exposed to different areas of software and game development including project management and planning, game play design, UI design, best practices, software methodologies, test driven development and other Q/A techniques, asset creation and tracking, and overall game and software production. Students then delve into more technical areas such as game engines, physics, mobile and console development, and computer graphics.

Graduates will not only understand the intricacies of game programming and production, but will also have a solid foundation in business software development. Graduates will be able to contribute to everyday business software using their understanding of databases, web and desktop programming.

All areas of the degree give students practice with gathering requirements, working in teams, and meeting tight deadlines. Students communicate on many technical and non-technical levels to produce solutions that satisfy industry demands.

PROGRAM OVERVIEW

Students attend classes and work on projects generally between 8:00am and 6:00pm, Monday through Friday. The program is 12 quarters in length and requires a minimum of three years to complete. During a student's progression, he or she will spend a great deal of time collaborating with others in group settings.

PROGRAM OBJECTIVES

Graduates of the Bachelor of Science in Software and Game Development are expected to master the following:

- Increase knowledge and understanding of self, the dynamics of group and team interactions, and their impact upon productivity, efficiency, and effectiveness
- Recognize the skills and techniques needed for problem solving and decision making
- Team interaction, accountability, and the importance of meeting deadlines
- Communicate effectively both orally and in writing
- Game and software production lifecycles
- Game design, game mechanics and game rules
- Asset production and integration
- Computer graphics using both game libraries and raw graphics
- Limitations and benefits of various game hardware such as mobile devices, consoles, and PCs
- Mimicking real object interactions via raw physics and physics engines
- Artificial intelligence in games and business applications
- Serious game design to simulate real-world experiences as educational and training tools
- Portfolio generation and presentation to potential customers and employers
- Business application development lifecycle and methodologies

GRADUATION REQUIREMENTS

(Students enrolled in the BSGD program beginning Summer Quarter 2012)

To qualify for graduation with a Bachelor of Science in Software and Game Development, students are required to accomplish the following:

- Complete a minimum of 180 quarter credit hours with an average grade of 'C' (Cumulative Grade Point Average of 2.0) or higher for all work taken at the University
- Complete a minimum of 126 credit hours in required degree courses, including projects
- Complete a minimum of 54 credit hours in required General Education courses
- Abide by all University rules and regulations
- To earn credits for a course, a student must earn a passing grade.
- For required courses, a passing grade is a 'C' or better. For non-required courses, a passing grade is a 'D-' or better.
- No unresolved judicial matters
- No outstanding financial obligations to the University

Students who enrolled prior to Summer 2012 should refer to the prevailing *Catalog* during their initial period of enrollment.

BSGD PROGRAM PLAN

(Students enrolled in the BSGD program beginning Summer 2012)

MINIMUM GENERAL EDUCATION CREDITS REQUIRED	**54 CREDITS**
MINIMUM BSGD CREDITS REQUIRED	**126 CREDITS**
Required Core BSGD Courses	63.5 credits
Required BSGD Projects and Labs	62.5 credits
TOTAL REQUIRED FOR BS IN SOFTWARE AND GAME DEVELOPMENT	**180 CREDITS**

BSGD GENERAL EDUCATION COURSES

REQUIRED GENERAL EDUCATION		**54 CREDITS**
BUS101	Personal Finance	3 credits
FAC105	Leadership and Problem-Solving	3 credits
FAC120	Spoken Communications	3 credits
FAC125	Collaborative and Interpersonal Communications	3 credits
FAC299	Marketing Your Personal Brand	2 credits
HUM105	Art and Science of Success	2 credits
HUM121	English Composition	3 credits
HUM150	Logic	3 credits
HUM221	Intermediate English Composition	3 credits
HUM305	Ethics	3 credits
MAT105	College Algebra	3 credits
MAT110	Sets, Probability, and Number Systems	3 credits
MAT150	Trigonometry	3 credits
MAT250	Calculus	3 credits
PSC220	Introduction to Physics	3 credits
SSC250	Human Relations and Personality Development	3 credits
SSC271	American Government	3 credits
CHOOSE ONE OF THE FOLLOWING:		
SSC310	American Legal System	3 credits
SSC320	Group Dynamics	3 credits
SSC350	Intellectual Property	3 credits
CHOOSE ONE OF THE FOLLOWING:		
PSC115	Introduction to Biology	2 credits
PSC201	Astronomy	2 credits
PSC210	Environmental Studies	2 credits
PSC230	Introduction to Chemistry	2 credits
TOTAL GENERAL EDUCATION CREDITS		**54 CREDITS**

REQUIRED CORE BSGD COURSES

(Students enrolled in the BSGD program beginning Summer 2012)

CORE GAMING AND DEVELOPMENT COURSES		**63.5 CREDITS**
CSC110	Introduction to Computer Science	4 credits
CSC120	Topics in Computer Science	4 credits
CSC130	Principles of Software Engineering	4 credits
CSC150	Object Oriented Programming and Design	6 credits
CSC190	C++ Programming	4 credits
CSC250	Algorithms and Data Structures I	4 credits
CSC252	Algorithms and Data Structures II	4 credits
DBT260	Business Database Systems	4 credits
GAT120	Topics in Game Development	4 credits
GAT180	Mobile Game Development	3 credits
GAT280	Rich Animation	3 credits
GAT310	Advanced Game Physics	3 credits
GAT350	Computer Graphics	3 credits
GAT420	Artificial Intelligence	3 credits
MAT210	Linear Algebra	3 credits
MTM230	Digital Art and Music I	3 credits
MTM330	Digital Art and Music II	3 credits
MTM410	Digital Portfolio	1.5 credits

REQUIRED BSGD PROJECTS AND LABS

FOUNDATIONAL COURSES AND LABS		**32 CREDITS**
CSC160	Developing for the Windows Platform	4 credits
PRO160	Windows Platform Lab	2 credits
CSC180	Introduction to Java Development	4 credits
PRO180	Java Lab	2 credits
CSC260	Introduction to Dynamic Web Programming	4 credits
PRO260	Dynamic Web Lab	2 credits
CSC280	Developing Scalable Web Applications with Java EE	4 credits
PRO280	Scalable Web Apps Lab	2 credits
GAT160	Game Libraries	4 credits
GAT260	Game Console Development	4 credits
DEVELOPMENTAL COURSES AND LABS		**12 CREDITS**
GAT360	Game Programming and Production	4 credits
GAT380	Game Engine Implementation and Development	4 credits
PRO395	Game Capstone Project	4 credits
STUDIO (ENTERPRISE) PROJECTS		**18.5 CREDITS**
PRO485	Game Studio I	6 credits
PRO486	Game Studio II	6 credits
PRO490	Enterprise Projects I	6.5 credits
TOTAL PROGRAM CREDITS		**180 CREDITS**

BACHELOR OF SCIENCE IN BUSINESS TECHNOLOGY OPERATIONS MANAGEMENT_

INTRODUCTION

The Neumont University Bachelor of Science in Business Technology Operations Management (BSTM) program focuses on educating students by utilizing problem and project based learning curricula. Graduates of this program will possess a diverse skill set that includes business acumen coupled with technology skills and the ability to think critically. The BSTM curriculum is designed to build professional skills, including writing, communicating, leadership, and organization. Neumont University BSTM graduates are prepared to make a significant contribution as much needed business technology leaders.

Upon completing the BSTM degree program requirements, graduates will possess a Bachelor of Science in Business Technology Operations Management degree and a portfolio of real world project work.

PROGRAM OVERVIEW

Students attend classes and work on projects generally between 8:00am and 6:00pm, Monday through Friday. The program is 10 quarters in length and requires a minimum of 2.5 years to complete. Many assignments are performed in groups as part of lab and project work.

PROGRAM OBJECTIVES

Graduates of the Bachelor of Science in Business Technology Operations Management are expected to master the following:

- Planning, organization, leadership and management within an organizational setting
- Increase knowledge and understanding of self, the dynamics of group and team interactions, and their impact upon productivity, efficiency, and effectiveness
- Recognize the skills and techniques needed for problem solving and decision making
- Communicate effectively both orally and in writing
- Understand basic accounting methods and their business applications
- Utilize financial analysis within a business environment
- Identify the broad functions of marketing and their applications to business
- Understand basic statistical analysis and its application in the business environment
- Apply the strategic management process to an analysis of the current business environment, identify and forecast trends, and make recommendations on preferred courses of action
- Integrate and synthesize the knowledge and competencies gained from technical and managerial courses
- Develop software using modern languages and integrated development environments
- Understand the relationship between business operations and IT operations
- Understand the infrastructure of a business IT system
- Integrate disparate areas of technical and non-technical expertise through real-world projects
- Apply management techniques to project management situations
- Analyze and model a business and/or system within a business

GRADUATION REQUIREMENTS

(Students enrolled in the BSTM program beginning Summer Quarter 2012)

To qualify for graduation with a Bachelor of Science in Business Technology Operations Management, students are required to accomplish the following:

- Complete a minimum of 180 quarter credit hours with an average grade of 'C' (Cumulative Grade Point Average of 2.0) or higher for all work taken at the University
- Complete a minimum of 122 credit hours in required degree courses, including projects
- Complete a minimum of 54 credit hours in required General Education courses
- Complete a minimum of 4 credit hours of elective courses in any area
- Abide by all University rules and regulations
- To earn credits for a course, a student must earn a passing grade.
- For required courses, a passing grade is a 'C' or better. For non-required courses, a passing grade is a 'D-' or better.
- No unresolved judicial matters
- No outstanding financial obligations to the University

Students who enrolled prior to Summer 2012 should refer to the prevailing *Catalog* during their initial period of enrollment.

BSTM PROGRAM PLAN

(Students enrolled in the BSTM program beginning Summer 2012)

MINIMUM GENERAL EDUCATION CREDITS REQUIRED	**54 CREDITS**
MINIMUM BSTM CREDITS REQUIRED	**122 CREDITS**
Required Core BSTM Courses	67 credits
Required BSTM Projects and Labs	55 credits
MINIMUM ADDITIONAL ELECTIVE CREDITS REQUIRED	**4 CREDITS**
TOTAL REQUIRED FOR BS IN BUSINESS TECHNOLOGY OPERATIONS MANAGEMENT	**180 CREDITS**

BSTM GENERAL EDUCATION COURSES

REQUIRED GENERAL EDUCATION		**54 CREDITS**
BUS101	Personal Finance	3 credits
FAC105	Leadership and Problem-Solving	3 credits
FAC120	Spoken Communications	3 credits
FAC125	Collaborative and Interpersonal Communications	3 credits
FAC299	Marketing Your Personal Brand	2 credits
HUM105	Art and Science of Success	2 credits
HUM121	English Composition	3 credits
HUM150	Logic	3 credits
HUM221	Intermediate English Composition	3 credits
HUM305	Ethics	3 credits
MAT105	College Algebra	3 credits
MAT110	Sets, Probability, and Number Systems	3 credits
MAT150	Trigonometry	3 credits
MAT250	Calculus	3 credits
PSC220	Introduction to Physics	3 credits
SSC250	Human Relations and Personality Development	3 credits
SSC271	American Government	3 credits
CHOOSE ONE OF THE FOLLOWING:		
SSC310	American Legal System	3 credits
SSC320	Group Dynamics	3 credits
SSC350	Intellectual Property	3 credits
CHOOSE ONE OF THE FOLLOWING:		
PSC115	Introduction to Biology	2 credits
PSC201	Astronomy	2 credits
PSC210	Environmental Studies	2 credits
PSC230	Introduction to Chemistry	2 credits
TOTAL GENERAL EDUCATION CREDITS		**54 CREDITS**

REQUIRED CORE BSTM COURSES

(Students enrolled in the BSTM program beginning Summer 2012)

CORE BUSINESS TECHNOLOGY AND OPERATIONS MANAGEMENT COURSES		**67 CREDITS**
BIT120	Business Information Systems	4 credits
BUS201	Introduction to Economics	4 credits
BUS230	Marketing Management	4 credits
BUS290	Business Fundamentals	3 credits
BUS325	Money, Finance, and Fundraising	4 credits
BUS330	Strategic Planning	3 credits
BUS350	Management, Organizational Behavior, and Leadership Practices	4 credits
BUS355	Applied Business Systems and Practices	4 credits
CSC105	Using Modern Operating Systems	2 credits
CSC110	Introduction to Computer Science	4 credits
CSC120	Topics in Computer Science	4 credits
CSC150	Object Oriented Programming and Design	6 credits
CSC440	Testing and Quality Assurance	4 credits
DBT260	Business Database Systems	4 credits
HUM115	Technical Communications	3 credits
ITH210	Networking	4 credits
MAT260	Statistics	3 credits
MGT300	Fundamentals of Project Management	3 credits

REQUIRED BSTM PROJECTS AND LABS

FOUNDATIONAL COURSES AND LABS		**18 CREDITS**
BUS130	Financial and Managerial Accounting	4 credits
PRO130	Practice in Accounting Project	2 credits
CSC240	Business Web Development	4 credits
PRO240	Business Web Development Project	2 credits
BIT330	Networks and Telecommunications in Business	4 credits
PRO330	Networking and Telecom. In Business Project	2 credits
DEVELOPMENTAL COURSES AND LABS		**24 CREDITS**
BUS345	Business Analysis, Operation, and Organization Planning	4 credits
PRO345	Business Analysis, Operation, and Organization Project	4 credits
BIT370	System Analysis and Business Modeling	4 credits
PRO370	System Analysis and Business Modeling Project	4 credits
MGT470	Practices in Project Management	4 credits
PRO470	Project Management Project	4 credits
ENTERPRISE PROJECTS		**13 CREDITS**
PRO490	Enterprise Projects I	6.5 credits
PRO491	Enterprise Projects II	6.5 credits
ADDITIONAL ELECTIVES		**4 CREDITS**
TOTAL PROGRAM CREDITS		**180 CREDITS**

BACHELOR OF SCIENCE IN WEB DESIGN AND DEVELOPMENT_

INTRODUCTION

As change, innovation, and tremendous growth continue to transform the Internet, our lives become increasingly integrated in this crucial medium. Neumont University's Bachelor of Science in Web Design and Development degree program focuses on the tools, technologies, and techniques needed to understand the language of web design and how to take that knowledge into a professional career creating a variety of interactive web sites, experiences, and applications.

The BSWD degree emphasizes both graphic design and development. Students learn the necessary core skills to survive, adapt, and thrive in the workplace as a hybrid designer/developer. In addition, the degree builds professional skills, including: writing, communicating, leadership, and organization. Students will develop their skills using Neumont University's problem and project based learning curricula.

The Neumont University's BSWD degree prepares a student for that first step into the interaction design industry- whether a student wants to pursue a role at a web development firm, an advertising agency, a media company, a large corporation, or launch his or her own entrepreneurial venture. Graduates of this degree program will be armed with the same tools used by professional developers to increase the usefulness of the Internet for billions of users across the globe.

Upon completing the BSWD degree program, graduates will possess a Bachelor of Science in Wed Design and Development as well as a vast portfolio of real world projects.

PROGRAM OVERVIEW

Students attend classes and work on projects generally between 8:00am and 6:00pm, Monday through Friday. The program is 10 quarters in length and requires a minimum of 2.5 years to complete. During a student's progression, he or she will spend a great deal of time collaborating with others in group settings.

PROGRAM OBJECTIVES

Graduates of the Bachelor of Science in Web Design and Development are expected to master the following:

- Increase knowledge and understanding of self, the dynamics of group and team interactions, and their impact upon productivity, efficiency, and effectiveness
- Recognize the skills and techniques needed for problem solving and decision making
- Communicate effectively both orally and in writing
- Develop software using modern languages and integrated development environments
- Integrate disparate areas of technical and non-technical expertise through real-world projects
- Understand business fundamentals and how they relate to the Web
- Learn concept, design, code, and deploy standards-based content for a variety of formats including desktop, handhelds, and other emerging media environments
- Develop a strong foundation of artistic graphic design skills
- Be able to use and develop in a broad range of technologies including: XHTML, CSS, XML, ActionScript, JavaScript, Adobe Creative Suite, and more
- Become self aware of one's own style, artistic direction, and creative abilities

GRADUATION REQUIREMENTS

(Students enrolled in the BSWD program beginning Summer Quarter 2012)

To qualify for graduation with a Bachelor of Science in Web Design and Development, students are required to accomplish the following:

- Complete a minimum of 180 quarter credit hours with an average grade of 'C' (Cumulative Grade Point Average of 2.0) or higher for all work taken at the University
- Complete a minimum of 116 credit hours in required degree courses, including projects
- Complete a minimum of 54 credit hours in required General Education courses
- Complete a minimum of 10 credit hours of elective courses in any area
- Abide by all University rules and regulations
- To earn credits for a course, a student must earn a passing grade.
- For required courses, a passing grade is a 'C' or better. For non-required courses, a passing grade is a 'D-' or better.
- No unresolved judicial matters
- No outstanding financial obligations to the University

Students who enrolled prior to Summer 2012 should refer to the prevailing *Catalog* during their initial period of enrollment.

BSWD PROGRAM PLAN

(Students enrolled in the BSWD program beginning Summer 2012)

MINIMUM GENERAL EDUCATION CREDITS REQUIRED	**54 CREDITS**
MINIMUM BSGD CREDITS REQUIRED	**116 CREDITS**
Required Core BSWD Courses	69 credits
Required BWGD Projects and Labs	47 credits
MINIMUM ADDITIONAL ELECTIVE CREDITS REQUIRED	**10 CREDITS**
TOTAL REQUIRED FOR BS IN WEB DESIGN AND DEVELOPMENT	**180 CREDITS**

BSWD GENERAL EDUCATION COURSES

REQUIRED GENERAL EDUCATION		**54 CREDITS**
BUS101	Personal Finance	3 credits
FAC105	Leadership and Problem-Solving	3 credits
FAC120	Spoken Communications	3 credits
FAC125	Collaborative and Interpersonal Communications	3 credits
FAC299	Marketing Your Personal Brand	2 credits
HUM105	Art and Science of Success	2 credits
HUM121	English Composition	3 credits
HUM150	Logic	3 credits
HUM221	Intermediate English Composition	3 credits
HUM305	Ethics	3 credits
MAT105	College Algebra	3 credits
MAT110	Sets, Probability, and Number Systems	3 credits
MAT150	Trigonometry	3 credits
MAT250	Calculus	3 credits
PSC220	Introduction to Physics	3 credits
SSC250	Human Relations and Personality Development	3 credits
SSC271	American Government	3 credits
CHOOSE ONE OF THE FOLLOWING:		
SSC310	American Legal System	3 credits
SSC320	Group Dynamics	3 credits
SSC350	Intellectual Property	3 credits
CHOOSE ONE OF THE FOLLOWING:		
PSC115	Introduction to Biology	2 credits
PSC201	Astronomy	2 credits
PSC210	Environmental Studies	2 credits
PSC230	Introduction to Chemistry	2 credits
TOTAL GENERAL EDUCATION CREDITS		**54 CREDITS**

REQUIRED CORE BSWD COURSES

(Students enrolled in the BSWD program beginning Summer 2012)

WEB DESIGN AND DEVELOPMENT CORE COURSES		**69 CREDITS**
CSC110	Introduction to Computer Science	4 credits
CSC120	Topics in Computer Science	4 credits
CSC130	Principles of Software Engineering	4 credits
CSC150	Object Oriented Programming and Design	6 credits
CSC316	Website Design	4 credits
CSC325	Human Computer Interface Design	4 credits
DBT260	Business Database Systems	4 credits
FAC101	Art Appreciation	2 credits
FAC140	Elements of Design	4 credits
MTM160	Graphic Design Tools	3 credits
MTM165	Graphic Design Projects	3 credits
MTM260	Media Design Tools	3 credits
MTM265	Media Design Projects	3 credits
MTM282	Interactive Web Development	4 credits
MTM316	Rich Internet Applications	4 credits
MTM350	Experience Design	2 credits
MTM370	Front-end Implementations	4 credits
MTM450	Web Game Design	3 credits
MTM470	Back-end Implementation	4 credits

REQUIRED BSWD PROJECTS AND LABS

PROJECT COURSES AND LABS		**30 CREDITS**
CSC160	Developing for the Windows Platform	4 credits
PRO160	Windows Platform Lab	2 credits
CSC180	Introduction to Java Development	4 credits
PRO180	Java Lab	2 credits
CSC240	Business Web Development	4 credits
PRO240	Business Web Development Project	2 credits
CSC260	Introduction to Dynamic Web Programming	4 credits
PRO260	Dynamic Web Lab	2 credits
CSC280	Developing Scalable Web Applications with Java EE	4 credits
PRO280	Scalable Web Apps Lab	2 credits
DEVELOPMENTAL COURSES AND LABS		**4 CREDITS**
PRO393	Capstone Project	4 credits
ENTERPRISE PROJECTS		**13 CREDITS**
PRO490	Enterprise Projects I	6.5 credits
PRO491	Enterprise Projects II	6.5 credits
ADDITIONAL ELECTIVES		**10 CREDITS**
TOTAL PROGRAM CREDITS		**180 CREDITS**

UNDERGRADUATE COURSE LISTINGS_

BUSINESS INFORMATION TECHNOLOGY

BIT120	Business Information Systems	4 credits
BIT330	Networks and Telecommunications in Business	4 credits
BIT370	System Analysis and Business Modeling	4 credits

BUSINESS

BUS101	Introduction to Personal Finance	3 credits
BUS121	Business Accounting	3 credits
BUS130	Financial and Managerial Accounting	4 credits
BUS201	Introduction to Economics	4 credits
BUS220	Marketing Communications	3 credits
BUS225	Principles of Finance	3 credits
BUS230	Marketing Management	4 credits
BUS240	Sales and Marketing Strategies	4 credits
BUS280	Human Resources and Growth Management	3 credits
BUS285	Developing Funding Strategies	4 credits
BUS290	Business Fundamentals	3 credits
BUS310	Entrepreneurship in the Business Economy	3 credits
BUS320	Persuasive Communications	3 credits
BUS325	Money, Finance, and Fundraising	4 credits
BUS330	Strategic Planning	3 credits
BUS345	Business Analysis, Operation, and Organizational Planning	4 credits
BUS350	Management, Organizational Behavior, and Leadership Practices	4 credits
BUS355	Applied Business Systems and Practices	4 credits
BUS375	Advanced Topics in Entrepreneurship	4 credits
BUS405	Entrepreneurial Planning Strategies	4 credits
BUS415	Entrepreneurial Business Strategies	3 credits
BUS420	Innovative Technology and Marketing	3 credits
BUS425	Digital Business Incubator	4 credits
BUS430	Operational Planning	3 credits
BUS440	Business Valuation and Market Analysis	4 credits

COMPUTER SCIENCE

CSC105	Using Modern Operating Systems	2 credits
CSC110	Introduction to Computer Science	4 credits
CSC120	Topics in Computer Science	4 credits
CSC130	Principles of Software Engineering	4 credits
CSC150	Object Oriented Programming and Design	6 credits
CSC160	Developing for the Windows Platform	4 credits
CSC170	Introduction to Mobile Device Programming	4 credits
CSC180	Introduction to Java Development	4 credits
CSC190	C++ Programming	4 credits
CSC230	Computational Theory	4 credits
CSC240	Business Web Development	4 credits
CSC250	Algorithms and Data Structures I	4 credits
CSC252	Algorithms and Data Structures II	4 credits
CSC260	Introduction to Dynamic Web Programming	4 credits
CSC263	Advanced .Net Programming with C#	4 credits
CSC268	Windows Mobile Devices	4 credits
CSC280	Developing Scalable Web Applications	4 credits
CSC285	Role-Based Software Development	4 credits
CSC288	Java Micro Edition (ME)	4 credits
CSC315	Innovation and Disruptive Technologies	4 credits
CSC316	Website Design	4 credits
CSC320	Software Engineering Methodologies	4 credits
CSC322	Software Design	4 credits
CSC324	XML and XSLT	4 credits
CSC325	Human Computer Interface Design	4 credits
CSC328	Enterprise JavaBeans	4 credits
CSC330	Programming Languages	4 credits
CSC335	Interactive Systems	4 credits
CSC340	Computer Architecture	4 credits
CSC350	Report Generator Programming	4 credits
CSC360	Software Design Principles	4 credits
CSC365	Building Reusable Web Components	4 credits
CSC380	Service Oriented Architecture	4 credits
CSC385	Development in Third Party Systems	4 credits
CSC390	Rational Development Tools	4 credits
CSC410	Software Architectures	4 credits
CSC415	Patterns	4 credits
CSC420	Building Feature Rich Web Sites	4 credits
CSC425	Client Server Programming	4 credits
CSC430	Enterprise Integrations with Mobile Devices	4 credits
CSC440	Testing and Quality Assurance	4 credits

DATABASE TECHNOLOGY

DBT130	Databases I	4 credits
DBT230	Databases II	4 credits
DBT260	Business Database Systems	4 credits

FINE ARTS AND COMMUNICATION

FAC101	Art Appreciation	2 credits
FAC105	Leadership and Problem-Solving	3 credits
FAC120	Spoken Communications	3 credits
FAC125	Collaborative and Interpersonal Comm. I	3 credits
FAC140	Elements of Design Theory	4 credits
FAC200	Theater	2 credits
FAC201	Music Appreciation	2 credits
FAC210	Music Composition	2 credits
FAC240	Product Development	3 credits
FAC299	Marketing Your Personal Brand	2 credits
FAC301	Leadership Development	3 credits
FAC320	Conflict Resolution	2 credits

GAMING TECHNOLOGY

GAT120	Topics in Game Development	4 credits
GAT160	Game Libraries	4 credits
GAT180	Mobile Game Development	3 credits
GAT260	Game Console Development	4 credits
GAT265	Game Console Lab	2 credits

GAT280	Rich Animation	3 credits
GAT310	Advanced Game Physics	3 credits
GAT350	Computer Graphics	3 credits
GAT360	Game Programming and Production	4 credits
GAT370	Game Networking	3 credits
GAT380	Game Engine Implementation and Development	4 credits
GAT420	Artificial Intelligence	3 credits
GAT430	Serious Games	4 credits

HEALTH AND PHYSICAL EDUCATION

HPE160	Personal Fitness	2 credits
HPE170	Healthy Living	2 credits
HPE180	Golf	2 credits

HUMANITIES

HUM100	Foundational English for Technical Professions	1 credit
HUM105	The Art and Science of Success	2 credits
HUM115	Technical Communications	3 credits
HUM120	Modern Literature	3 credits
HUM121	English Composition	3 credits
HUM150	Logic	3 credits
HUM220	Introduction to Philosophy	2 credits
HUM221	Intermediate English Composition	3 credits
HUM230	Linguistics	3 credits
HUM240	Journalism	3 credits
HUM305	Ethics	3 credits
HUM310	Critical Thinking	2 credits
HUM321	Technical Writing	3 credits

INFORMATION TECHNOLOGY

ITH210	Networking	4 credits
ITH220	Server Administration	4 credits

INFORMATION SECURITY

ITS320	Systems and Network Security	4 credits
ITS380	Auditing, Governance, and Compliance	4 credits
ITS390	Hacking, Forensics, and Countermeasures	4 credits
ITS410	Developing Secure Code	4 credits

MATH

MAT100	Foundational Math for Technical Professions	1 credit
MAT105	College Algebra	3 credits
MAT110	Sets, Probability, and Number Systems	3 credits
MAT150	Trigonometry	3 credits
MAT210	Linear Algebra	3 credits
MAT250	Calculus	3 credits
MAT260	Statistics	3 credits
MAT305	Problem Solving	3 credits
MAT320	Numerical Analysis	3 credits
MAT410	Discrete Structures	3 credits

MANAGEMENT

MGT300	Fundamentals of Project Management	3 credits
MGT470	Practices in Project Management	4 credits

MODELING AND ANALYSIS

MOA140	Information Modeling I	4 credits
MOA240	Information Modeling II	4 credits
MOA335	Business Modeling and System Design	4 credits

MULTIMEDIA

MTM110	Introduction to Digital Photography	2 credits
MTM120	Introduction to Photoshop	3 credits
MTM130	Introduction to Drawing	3 credits
MTM140	Basics of Film	2 credits
MTM160	Graphic Design Tools	3 credits
MTM165	Graphic Design Projects	3 credits
MTM220	Graphic Design	2 credits
MTM230	Digital Art and Music I	3 credits
MTM240	Video Fundamentals	3 credits
MTM260	Media Design Tools	3 credits
MTM265	Media Design Projects	3 credits
MTM282	Interactive Web Development	4 credits
MTM312	Multimedia, Game, and Entertainment Systems	4 credits
MTM316	Rich Internet Applications	4 credits
MTM330	Digital Art and Music II	3 credits
MTM350	Experience Design	2 credits
MTM355	Digital Design	3 credits
MTM370	Front-end Implementation	4 credits
MTM380	Creative Writing and Storyboarding	3 credits
MTM410	Digital Portfolio	1.5 credits
MTM412	Advanced Entertainment Systems	4 credits
MTM450	Web Game Design	3 credits
MTM470	Back-end Implementation	4 credits

PHYSICAL AND BIOLOGICAL SCIENCES

PSC115	Introduction to Biology	2 credits
PSC201	Astronomy	2 credits
PSC210	Environmental Studies	2 credits
PSC220	Introduction to Physics	3 credits
PSC230	Introduction to Chemistry	2 credits

PROJECTS

PRO130	Practice in Accounting Project	2 credits
PRO160	Windows Platform Lab	2 credits
PRO180	Java Lab	2 credits
PRO240	Business Web Development Project	2 credits
PRO260	Dynamic Web Lab	2 credits
PRO280	Scalable Web Applications Lab	2 credits
PRO285	Funding Strategy Project	2 credits

PRO320	Developmental Project I	4.5 credits
PRO330	Networking and Telecommunications Project	2 credits
PRO345	Business Analysis, Operation, and Organizational Project	4 credits
PRO360	.Net III Project	4.5 credits
PRO370	System Analysis and Business Modeling	4 credits
PRO375	Field Studies in Entrepreneurship	4 credits
PRO380	Java III Project	4.5 credits
PRO390	Capstone Project	4.5 credits
PRO393	Web Capstone Project	4 credits
PRO395	Game Capstone Project	4 credits
PRO405	Entrepreneurial Planning Project	4 credits
PRO425	Digital Business Incubator Project	4 credits
PRO470	Project Management Project	4 credits
PRO485	Game Studio I	6 credits
PRO486	Game Studio II	6 credits
PRO487	Game Studio III	6 credits
PRO490	Enterprise Projects I	6.5 credits
PRO491	Enterprise Projects II	6.5 credits
PRO492	Enterprise Projects III	6.5 credits

ROBOTICS

RBT326	Intelligent Systems	4 credits

SOCIAL SCIENCE

SSC240	Social Psychology	3 credits
SSC250	Human Relations and Personality Development	3 credits
SSC271	American Government	3 credits
SSC310	American Legal System	3 credits
SSC320	Group Dynamics	3 credits
SSC350	Intellectual Property	3 credits

UNDERGRADUATE COURSE DESCRIPTIONS_

BUSINESS INFORMATION TECHNOLOGY

BIT120 BUSINESS INFORMATION SYSTEMS (4 CREDITS)
This course introduces students to management of essential information technology resources within the business organization. Students will learn fundamental information technology infrastructure and components including computing hardware, communications and networking systems, systems level software and application software.

BIT330 NETWORKS AND TELECOMMUNICATIONS IN BUSINESS (4 CREDITS)
This course explores the role that data networks and telecommunications play in the current business landscape. Students will gain a perspective of network/telecommunications history, as well as emerging trends that will shape the future of business. Students will be exposed to general network architecture, and will learn about the basic technologies that current networks are built upon. Students will learn how these technologies influence business strategy, and how different uses of the technology can assist in business decision-making. Within the context of business strategy, discusses topics such as: data security, customer privacy, remote access/teleworkers, video and audio communication, and cost/benefit analysis.
Prerequisites: BIT120 Business Information Systems and ITH210 Networking
Corequisites: PRO330 Networking and Telecommunication Project

BIT370 SYSTEM ANALYSIS AND BUSINESS MODELING (4 CREDITS)
This course provides a thorough investigation into Systems Analysis and Design. Topics include analyzing the business case, requirements modeling, data and process modeling, and development strategies, with an increased focus on object modeling and project management. Students also learn about output and user interface design, data design, systems architecture and implementation, and systems operation, support, and security.
Prerequisites: BUS345 Business Analysis, Operation, Organizational Planning
Corequisites: PRO370 System Analysis and Business Modeling Project

BUSINESS

BUS101 INTRODUCTION TO PERSONAL FINANCE (3 CREDITS)
Provides an overview of strategies for coping with daily living expenses while planning for long-term financial security.

BUS121 BUSINESS ACCOUNTING (3 CREDITS)
Instructs students on the nature of accounting from the basic principles of accrual accounting through the preparation of basic financial statements for measurement of income and equity. Analysis and recording of financial transactions is also considered.

BUS130 FINANCIAL AND MANAGERIAL ACCOUNTING (4 CREDITS)
This course covers introductory financial reporting and analysis based on real-world examples of present business environment and accounting theory. The main focus of topics and coverage is related to understanding and using financial statements and reports. Financial and managerial accounting principles are covered in relation to the economic environment with frequent references to actual events and companies. Students will be challenged with current financial and accounting topics, including financial statement analysis, cost accounting, budgeting, and time value of money. Investments in equity securities and bonds will be briefly explained.
Corequisites: PRO130 Practice in Accounting Management

BUS201 INTRODUCTION TO ECONOMICS (4 CREDITS)
Examines economic theory as it applies to contemporary market economy. The focus is on understanding basic economic theory, economic terms, and commonly used economic indicators.

BUS220 MARKETING COMMUNICATIONS (3 CREDITS)
This course will equip students will the basic tools for developing and understanding effective marketing communications. It will focus on communication with customers in the form of advertising, sales promotion, public relations, and other areas of marketing. Print, internet, and multimedia marketing will be discussed. This course will emphasize marketing principles and best practices through developing an effective integrated marketing communications plan.

BUS225 PRINCIPLES OF FINANCE (3 CREDITS)
The Principles of Finance Course will cover the following major topics in the field of finance: financial analysis and planning, working capital management, capital budgeting, and long term financing. Finance is related to accounting and economics and attempts to provide an understanding of the relationship between the accounting and economics disciplines. The intent of this course is to present the basic concepts in finance.
Prerequisites: BUS290 Business Fundamentals

BUS230 MARKETING MANAGEMENT (4 CREDITS)
This course provides an overview of Marketing Management using best practices and principles to define target markets, identifying and building a reliable and sustainable customer base and creating and communicating the value provided to those customers. By researching marketing processes and principles the student will gain an understanding of how to apply those concepts in real world situations.

BUS240 SALES AND MARKETING STRATEGIES (4 CREDITS)

Fundamental sales and marketing concepts, principles, and issues are analyzed within present economic, social, and legal environments. Consumer behavior and functional analysis are emphasized as a fundamental of implementing business strategies.

Prerequisites: BUS201 Introduction to Economics

BUS280 HUMAN RESOURCES AND GROWTH MANAGEMENT (3 CREDITS)

This course introduces the functions of personnel/human resource management within an organization. Topics include equal opportunity and the legal environment, recruitment and selection, performance appraisal, employee development, compensation planning, and employee relations. Upon completion, students should be able to anticipate and resolve human resource concerns as well as plan for growth in an effective and efficient manner.

Prerequisites: BUS290 Business Fundamentals

BUS285 DEVELOPING FUNDING STRATEGIES (4 CREDITS)

Upon successful completion of this course, the student will understand the importance and impact of funding sources for their entrepreneurial venture. This will be accomplished by reviewing the impact of venture capital in every phase of the business venture from idea to exit including planning, teambuilding, protecting intellectual capital, identifying funding sources, raising money, writing funding agreements, and managing through to an IPO or merger and acquisition. Additionally, the student will develop and present a funding proposal.

Prerequisite: BUS225 Principles of Finance

Corequisites: PRO285 Funding Strategy Lab

BUS290 BUSINESS FUNDAMENTALS (3 CREDITS)

A survey of the various aspects of business including human resources, finance, client relations, and production. Students will be able to identify the type of information that is critical to each aspect of the business. Students will also learn about various organizational structures and some aspects of business law.

BUS310 ENTREPRENEURSHIP IN THE BUSINESS ECONOMY (3 CREDITS)

This course injects students into the entrepreneurial aspects of business including business planning, marketing, sales and finance. This course ventures beyond the classroom with many hands-on assignments intended to involve students in the business world and expose them to real and simulated start-up situations.

Prerequisites: BUS290 Business Fundamentals

BUS320 PERSUASIVE COMMUNICATIONS (3 CREDITS)

Introduces students to persuasion, sales, and negotiation in the business environment. Research, theories, and the social impact of these business tools will be discussed. Students will evaluate marketing and advertising to understand various persuasive techniques. Students will develop written and oral skills in these areas.

BUS325 MONEY, FINANCE, AND FUNDRAISING (4 CREDITS)

For many people, money is the scoreboard of life. Unfortunately, most people have no idea what money really is, how it works, or how to make it work in their favor. This course begins by exploring what money is, how it is measured, how it works, and the forces that control it. We then consider various tools and mechanisms used to manipulate and leverage money and what we can do to maximize its impact. Finally, we focus on a few key concepts that will have a tremendous impact on your financial security and quality of life.

Prerequisites: BUS290 Business Fundamentals

BUS330 STRATEGIC PLANNING (3 CREDITS)

This course will allow students to apply proven business processes that companies adopt to strategically position themselves for success. Students will learn to identify and understand the mission and vision of a company. They will use that information to develop a strategic business plan that will take into account technology, resources, and the current market. Students will use key market indicators to project potential success for their business and understand how to account and handle change.

Prerequisites: BUS290 Business Fundamentals

BUS345 BUSINESS ANALYSIS, OPERATION, AND ORGANIZATIONAL PLANNING (4 CREDITS)

Enterprise analysis and operations requires business managers to balance many aspects of the business; including marketing, suppliers, inventory and quality. This course explores how to analyzes and address these business concerns. Class members will work to develop qualitative and quantitative approaches and techniques to facilitate managing this complex environment.

Prerequisites: All foundational courses must be complete (18 credits)

Corequisites: PRO345 Business Analysis, Operation, and Organization Project

BUS350 MANAGEMENT, ORGANIZATIONAL BEHAVIOR, AND LEADERSHIP PRACTICES (4 CREDITS)

This course introduces the student to principles in Management, Organizational Behavior, and Leadership. Students will gain insights into managing both individual and group behavior through the study of topics such as motivation, stress, and conflict management. Students will also learn the qualities of a good leader and the decision making process. They will be introduced to organizational design topics such as culture and change management. Students will practice applying these principles through team projects and activities.

Prerequisites: BUS290 Business Fundamentals

BUS355 APPLIED BUSINESS SYSTEMS AND PRACTICES (4 CREDITS)

This course takes an applied view of business information systems. This course surveys current common business information systems and software, explains the applications of the systems and software and explores how to work with vendors and developers to create systems that solve real problems in the business enterprise environment.

Prerequisites: BIT120 Information Systems

BUS375 ADVANCED TOPICS IN ENTREPRENEURSHIP (4 CREDITS)

Starting a new business enterprise requires a broad business background, clear vision, strategic planning, and a plethora of leadership skills. This course provides a behind-the-scene look into a variety of local business startups. Students will sharpen their business skills and apply a variety of entrepreneurial principles as they gain a better understanding of the myriad of issues and real struggles facing actual startups.

Prerequisites: All BSTM foundational courses must be complete (18 credits)
Corequisites: PRO375 Field Studies in Entrepreneurship

BUS405 ENTREPRENEURIAL PLANNING STRATEGIES (4 CREDITS)

What does it really take to develop, produce, package, price, and launch a new product? This course provides an in-depth analysis of recent successful product launches as well as local attempts to provide new goods and services to the market. Students will gain a deep understanding of what it takes to develop a successful go-to-market strategy including sales, marketing, distribution, partnering, and support efforts required for any new product launch.

Prerequisites: BUS130 Financial and Managerial Accounting, PRO130 Practice in Accounting Project, CSC240 Business Web Development and PRO240 Business Web Development Project
Corequisite: PRO405 Entrepreneurial Planning Project

BUS415 ENTREPRENEURIAL BUSINESS STRATEGIES (3 CREDITS)

This course investigates strategies entrepreneurs employ when creating and positioning their businesses. These strategies include services versus products-offered, intellectual property-based versus execution-based, business versus consumer businesses. This course also considers strategies necessary to establish a new business including crossing the chasm. The course addresses negotiation strategies and game theory.

Prerequisites: BUS290 Business Fundamentals

BUS420 INNOVATIVE TECHNOLOGY AND MARKETING (3 CREDITS)

The forces of our dynamic technological world are tightly intertwined with the business world. This course explores the effects of innovative and disruptive technologies have on the marketing world – both in terms of technologies used for marketing and marketing innovative technologies.

Prerequisites: BUS290 Business Fundamentals

BUS425 DIGITAL BUSINESS INCUBATOR (4 CREDITS)

All startups are not equal. High-tech startups decrease their odds by leveraging new and/or unproven technology, having much-larger-than-average capital requirements and precisely timing their entry into the market. This course focuses specifically on high-tech startups of the past and present. Which ones succeeded? Which ones failed? And what made the difference between the two? Students will gain valuable insights into high-tech startups on a national and local scale that will hopefully increase their odds of hitting the big time.

Prerequisites: All BSTM foundational courses must be complete (18 credits)
Corequisites: PRO425 Digital Business Incubator Project

BUS430 OPERATIONAL PLANNING (3 CREDITS)

This course focuses on managing the production operations of a business enterprise. Operational planning involves looking at overall decisions in business development and planning, and their impact on the strategic and financial success of the business. Students will study the important concepts, issues, and procedures of an operations planning and control system.

Prerequisites: BUS290 Business Fundamentals. BUS330 Strategic Planning is strongly recommended.

BUS440 BUSINESS VALUATION AND MARKET ANALYSIS (4 CREDITS)

This course is about the analysis of financial information - particularly firms' financial statements – for making decisions to invest in businesses. Topics include models of shareholder value, a comparison of accrual accounting and discounted cash flow approaches to valuation, the analysis of profitability, growth and valuation generation in a firm, diagnosing accounting quality, forecasting earnings and cash flows, pro-forma analysis for strategy and planning, and the determination of price/earnings (P/E) and market-to-book (P/B) ratios. By the end of the course, the student should feel competent in writing a thorough, credible equity research report or investment analysis that meets the highest standards of professionalism.

Prerequisites: BUS330 Strategic Planning

COMPUTER SCIENCE

CSC105 USING MODERN OPERATING SYSTEMS (2 CREDITS)

Students learn many of the most productive ways to use modern operating systems like Windows™ and Linux. Students learn those specifics about operating systems that will enable them to be highly effective software developers. Topics of study include roles of the OS kernel, virtual memory handling, and file systems. Students will also explore functions of the operating system that will make them more productive such as shell interaction and scripting, environment variables, and security.

CSC110 INTRODUCTION TO COMPUTER SCIENCE (4 CREDITS)

Students gain exposure to a wide variety of topics in Computer Science. While building real applications in the lab portion of this course, students also learn fundamental concepts about such topics as data storage and manipulation, object-oriented programming, and other introductory topics.

CSC120 TOPICS IN COMPUTER SCIENCE (4 CREDITS)

Students gain exposure to a wide variety of topics in Computer Science. While building real applications in the lab portion of this course, students also learn about the different foci a student could have while studying Computer Science at Neumont University.

CSC130 PRINCIPLES OF SOFTWARE ENGINEERING (4 CREDITS)

This course introduces students to the software development life cycle and includes discussions on software processes, process models, and methodologies. The course will also discuss support and maintenance related to software after it has been released.

CSC150 OBJECT ORIENTED PROGRAMMING AND DESIGN (6 CREDITS)

This course provides a thorough introduction to object oriented programming. Topics include fundamentals of programming, classes and objects, inheritance, polymorphism, interfaces, events, and exception handling, with an emphasis on writing quality object-oriented code.

Prerequisites: CSC110 Introduction to Computer Science

CSC160 DEVELOPING FOR THE WINDOWS PLATFORM (4 CREDITS)

This course introduces students to various concepts in the .NET environment and to programming standards within that environment. Topics may include Windows desktop application development, multi-user application development using ASP.NET, ADO.NET, XML, and Web Services.

Prerequisites: DBT130 Relational Databases I (may be taken concurrently) or DBT260 Business Database Systems (may be taken concurrently); CSC150 Object Oriented Programming and Design

CSC170 INTRODUCTION TO MOBILE DEVICE PROGRAMMING (4 CREDITS)

This course introduces mobile device computing and programming concepts. Mobile devices include personal digital assistants (PDAs), mobile telephones, smart phones, personal entertainment devices, and computing tablets. This course explores the devices, their operating system platforms, and their hardware profiles for application programming, e.g., MIDP, CDMA, CLDC, Qualcomm, etc. Programming labs in this course will focus on game interfaces and brew.

Prerequisites: CSC105 Using Modern Operating Systems (may be taken concurrently)

CSC180 INTRODUCTION TO JAVA DEVELOPMENT (4 CREDITS)

Students are introduced to the Java core packages and APIs. Students learn skills for developing, deploying, and managing Java applications. Course content includes the language's syntax, core APIs, graphical user interface (GUI) framework(s), and platform tools.

Prerequisites: DBT130 Databases I (may be taken concurrently) or DBT260 Business Database Systems (may be taken concurrently); CSC150 Object Oriented Programming and Design

CSC190 C++ PROGRAMMING (4 CREDITS)

This course covers fundamental concepts unique to the C++ programming language. This course begins by noting the many similarities between C++ and other mainstream languages. The course then fully covers low-level constructs such as pointers, memory management, operator overloading, templates, STL, function objects, and the Boost C++ libraries.

Prerequisites: CSC150 Object Oriented Programming and Design.

CSC230 COMPUTATIONAL THEORY (4 CREDITS)

This course is designed to pique a student's interest in exploring and learning more about the theoretical side of computing. This course exposes students to conceptual tools that practitioners use in computer engineering. It develops critical thinking and problem solving skills by demonstrating elegant solutions to complicated problems.

Prerequisites: CSC250 Algorithms and Data Structures

CSC240 BUSINESS WEB DEVELOPMENT (4 CREDITS)

In today's economy even the smallest businesses are expected to have a website. In this course students will learn how businesses can improve their processes by using the Internet to interface with customers, partners, and suppliers. This will include the implementation and programming of technologies such as ecommerce, live online customer service/support, and supply chain management tools. Students will also learn the phases of web development such as analysis, development, and deployment. This course will also include research of the tools and technology (both proprietary and open source) most commonly used to develop websites.

Prerequisites: CSC110 Introduction to Computer Science
Corequisites: PRO240 Business Web Development

CSC250 ALGORITHMS AND DATA STRUCTURES I (4 CREDITS)

This course is designed to enhance a student's problem solving ability and enhance their skillset in developing solutions to common software problems using general algorithms and abstract data types. Students will utilize common data structures; understand and apply various searching and sorting algorithms to software; and make analyses of algorithm use and design.

Prerequisites: CSC150 Object Oriented Programming and Design, MAT110 Sets, Probability, and Number Systems

CSC252 ALGORITHMS AND DATA STRUCTURES II (4 CREDITS)

This course is designed as a continuation of CSC250. This course will focus on tree and table based data structures, as well as advanced algorithmic techniques and algorithm discovery/creation. Students will compare and contrast algorithms and programming methods to better understand the principles involved in being a good problem solver in regards to computer science.

Prerequisites: CSC250 Algorithms and Data Structures I

CSC260 INTRODUCTION TO DYNAMIC WEB PROGRAMMING (4 CREDITS)

This course builds on students' knowledge of the .NET environment and programming standards within that environment. Topics may include Windows desktop application development, multi-user application development using ASP.NET, ADO.NET, XML, and Web Services.

Prerequisites: CSC160 Developing for the Windows Platform and PRO160 Windows Platform Lab.
Corequisite: PRO260 Dynamic Web Lab

CSC263 ADVANCED .NET PROGRAMMING WITH C# (4 CREDITS)

This is an advanced topics course covering programming techniques, C# language features, CLR facilities, and the .NET Framework. Students will also continue to develop general programming concepts in this course. Students can expect to spend time outside of the scheduled class time working on various projects, programming assignments, reading, and researching.

Prerequisites: CSC250 Algorithms and Data Structures I

CSC268 WINDOWS MOBILE DEVICES (4 CREDITS)

This course will introduce programming Windows Mobile™ enabled devices with Microsoft visual studio .net languages.

Prerequisites: CSC170 Introduction to Mobile Device Software Development

CSC280 DEVELOPING SCALABLE WEB APPLICATIONS (4 CREDITS)

Students build upon the knowledge gained from CSC180 and begin learning the Java Enterprise Edition (Java EE) platform. Java EE technologies are introduced with an emphasis on Java Web technologies such as Servlets, Java Server Pages (JSP), the Web container, and the role of enterprise application servers. Design patterns applicable to the presentation tier will be discussed. Students learn how to put persistence strategies into practice. Applicable open-source frameworks and tools may also be introduced.

Prerequisites: CSC180 Introduction to Java Development and PRO180 Java Lab

Corequisites: PRO280 Scaleable Web Applications Lab

CSC285 ROLE-BASED SOFTWARE DEVELOPMENT (4 CREDITS)

This course introduces students to multiple viewpoints of developing system solutions in the software industry. Students will study a selection of common approaches for analyzing systems and designing solutions. All students will have a chance to test out different roles in the development process and gain an understanding of the importance of the different activities in creating successful software solutions. Through participation in various roles in design and development activities, students are encouraged to explore their future career interests. This course is a prerequisite for the specialized role courses.

CSC288 JAVA MICRO EDITION (ME) (4 CREDITS)

This course will introduce the Java Micro Edition programming language. Emphasis will be given to Netbeans and eclipse-based ides for Java ME development.

Prerequisites: CSC170 Introduction to Mobile Device Software Development

CSC315 INNOVATION AND DISRUPTIVE TECHNOLOGIES (4 CREDITS)

This course will explore the principles of technological innovation – specifically, how to identify, develop and introduce disruptive technologies. The course will also consider the impact of disruptive technologies on markets and the effects of environmental forces such as investors and competition on the success of innovation.

CSC316 WEBSITE DESIGN (4 CREDITS)

This course focuses on graphic design for websites. Students will learn basic interaction conventions, visual hierarchy, user-centered design philosophy, navigation systems, design layout approaches wire framing techniques, specifications, annotation, prototyping, and delivery to developers.

CSC320 SOFTWARE ENGINEERING METHODOLOGIES (4 CREDITS)

Software engineering methodologies that students may have experienced over the course of their project work are explored and compared in a more formal manner. Methodologies may include Rational Unified Process (RUP), Agile development, eXtreme Programming (XP), and others.

CSC322 SOFTWARE DESIGN (4 CREDITS)

This course presents the modeling language UML to students. Students will learn the basics of static and dynamic modeling in UML and how UML is applied to areas in software architecture, design and implementation.

Prerequisites: CSC130 Principles of Software Engineering

CSC324 XML AND XSLT (4 CREDITS)

Students learn to design, populate, formalize and transform XML documents using other XML technologies. The course emphasizes XML schema definitions, document queries, and transforms technologies. The basics of programmatically interfacing with XML documents are also covered.

CSC325 HUMAN COMPUTER INTERFACE DESIGN (4 CREDITS)

Principles and best practices are explored in areas such as navigation and flow, single page/screen layout, colors, GUI elements, multimedia presentation, response times, and usability analysis. Students will evaluate the effect that different technologies have on the design of a system's user interface and useful practices to neutralize deficiencies and take advantage of benefits.

CSC328 ENTERPRISE JAVABEANS (4 CREDITS)

Students build upon the knowledge gained from Introduction to Java EE Development Environment and broaden their knowledge base by learning new APIs. Students are also introduced to the Enterprise JavaBeans (EJB) technology and other enterprise services provided by the J2EE platform. Patterns applicable to the business tier will be discussed.

Prerequisites: CSC280 Developing Scalable Web Applications

CSC330 PROGRAMMING LANGUAGES (4 CREDITS)

Introduction to the broad field of programming languages. This course will explore implementation issues, the theoretical foundations of programming languages, the evolution of programming languages, as well as semantics and programming.

Prerequisites: CSC110 Introduction to Computer Science and CSC230 Computational Theory

CSC335 INTERACTIVE SYSTEMS (4 CREDITS)

Students gain an in-depth understanding of traditional human-computer interaction paradigms. Through discussion and labs, students understand how those interaction techniques are employed or discarded in non-traditional computing environments such as touch-based interaction and small devices.

Prerequisites: CSC250 Algorithms and Data Structures I

CSC340 COMPUTER ARCHITECTURE (4 CREDITS)

This course focuses on the function and design of the various components necessary to process information digitally. In includes discussions about hardware, software, assemblers, and operating systems and concentrates on the interface between hardware and software.

Prerequisites: CSC250 Algorithms and Data Structures I

CSC350 REPORT GENERATOR PROGRAMMING (4 CREDITS)

This course will introduce the RPG ILE programming language on the IBM Power i platform via tn5250 emulation (green screens). Focus will be on PDM and SEU interface programming with structured and free-form RPG, compiling, data definition, physical and logical files (indexing), SQL/400, stored procedures, triggers, batch vs. interactive jobs, data areas and queues, and debugging. A brief overview of power i development history and the code IDE will also be included. An overview of ILE activation groups and modularization with C, Java, and/or COBOL may also be included.

Prerequisites: ITH280 Introduction to Midrange Platforms

CSC360 SOFTWARE DESIGN PRINCIPLES (4 CREDITS)

Students will learn advanced software design techniques including the use of abstraction, metaphor, scope reduction, elimination of redundancy, etc. as well as the use of patterns that employ these principles. The course will help students understand how to apply these principles to build, refactor and maintain software.

Prerequisites: CSC130 Principles in Software Engineering, CSC260 Introduction to Dynamic Web Programming or CSC280 Developing Scalable Web Applications

CSC365 BUILDING REUSABLE WEB COMPONENTS (4 CREDITS)

This class covers building reusable web controls, custom controls, databound controls, custom HTTP handlers, managing the context of the request, and caching information between requests. Students move from building simple web pages to creating a customizable HTTP handling environment.

Prerequisites: CSC260 Introduction to Dynamic Web Programming

CSC380 SERVICE ORIENTED ARCHITECTURE (4 CREDITS)

This course focuses on the underpinnings of Java-based distributed computing. Students employ directed problem-based learning to explore the principles of distributed protocols including SOAP and REST. This course teaches these principles by solving real programming problems that give students additional experience in advanced Java programming. While this class will touch on some tools used to automate distributed processes, the course emphasizes general concepts with application generally to most Java distributed processing tools and techniques.

Prerequisites: CSC280 Developing Scalable Web Applications and PRO280 Scalable Web Applications Lab

CSC385 DEVELOPMENT IN 3RD PARTY SYSTEMS (4 CREDITS)

Students learn the complexities and surrounding issues related to development within 3rd party systems and API. In addition to development in said systems, issues surrounding effective documentation, well-written help files, and best practices will be explored. Students will be exposed to live and fully functional 3rd party systems from the industry and will learn from the challenges introduced in such a scenario. In addition, students may be exposed to a new and unfamiliar programming language. (Note that students enrolled in this course may be required to pay a class fee.)

Prerequisites: CSC260 Introduction to Dynamic Web Programming OR CSC280 Developing Scalable Web Applications

CSC390 RATIONAL DEVELOPMENT TOOLS (4 CREDITS)

This course will introduce the websphere development studio client for power i (wdsc) and rational developer for system i (rdi), eclipse-based ides for power i programming in Java, RPG, CL, PHP, and Cobol—essentially rational-branded replacement toolsets for 5250-based PDM and SEU programming. Focus will be given to QSH, crtjvapgm, runjva, the integrated file system (ifs), edtf, Java toolkit for i (jtopen), and oltp integration topics such as drda and cics.

Rpgcgi and rpg server pages (rsp) are web development alternatives that may also be explored.

Prerequisites: CSC280 Developing Scalable Web Applications (may be taken concurrently)

CSC410 SOFTWARE ARCHITECTURES (4 CREDITS)

Students learn to design and evaluate a variety of software architectures that occur in small- and large-scale industry environments, to evaluate the needs of a software system at design time, and to apply the appropriate architectures which will best fit those needs. The course organizes discussion around three architectural perspectives of software integration and inter-process communication (IPC): standalone, client/server, and hosted. Topics may include service oriented architectures, component based architectures, producer-consumer architectures, and application layering, with a focus on reusable architecture frameworks.

Prerequisites: CSC360 Software Design Principles or CSC380 Service Oriented Architecture (which may be taken concurrently); CSC322 Software Design or instructor permission

CSC415 PATTERNS (4 CREDITS)

Students learn to recognize and implement patterns that occur frequently in software development and to identify how to apply them when maintaining or refactoring existing software. The course will focus on how to use patterns along with object-oriented programming techniques to create a good design for common programming problems.

Prerequisites: CSC250 Algorithms and Data Structures I

CSC420 BUILDING FEATURE RICH WEBSITES (4 CREDITS)

This course focuses on creating graphic-intense web applications through plug-ins. It also covers making websites customizable to user's needs via portal frameworks. Some time is also spent covering how active page frameworks function internally.

Prerequisites: CSC260 Introduction to Dynamic Web Programming

CSC425 CLIENT SERVER PROGRAMMING (4 CREDITS)

This course will introduce delphi/400, a client/server IDE for power i programming in object-pascal or PHP—essentially an alternative toolset for 5250-based pdm and Seu or wdsc/rdi programming. Focus will be given to object/400™ and systemsobjects™ components within the delphi/400 toolset, websphere application server on i, domino on i, and odbc access from other clients such as MS Office. Other client/server strategies and technologies will also be explored such as hit, appc, ftp remoting, rjs, hllapi screen scraping, etc.

Prerequisites: CSC280 Developing Scalable Web Applications

CSC430 ENTERPRISE INTEGRATIONS WITH MOBILE DEVICES (4 CREDITS)

This course will extend the Java Micro Edition (Java ME) and Windows Mobile™ programming courses with enterprise integration strategies including tcp/ip framework usage for internet accessibility and interoperability.

Prerequisites: CSC288 Java Micro Edition (ME); CSC268 Windows Mobile Devices

CSC440 TESTING AND QUALITY ASSURANCE (4 CREDITS)

This course focuses on testing and quality assurance processes and principles. The course provides an investigation into the relationship between software development and software testing and how the two relate within the software development life cycle. Topics include: testing processes and standards, software and testing metrics, implementation-based testing, integration testing, automated testing, systems testing and quality assurance.

Prerequisite: BIT370 System Analysis and Business Modeling or CSC360 Software Design Principles or CSC380 Service Oriented Architecture

DATABASE TECHNOLOGY

DBT130 DATABASES I (4 CREDITS)

This course introduces students to database management systems with the emphasis on relational DBMSs. Students study the relational model of data, relational algebra, and basic SQL, as well as principles of data modeling and good database design. Students use modern relational database management systems (SQL Server and DB2) to apply their knowledge.

DBT230 DATABASES II (4 CREDITS)

This course extends the previous work on relational database management systems. Topics include further aspects of data definition and data manipulation in SQL, including advanced SQL queries, triggers, and stored procedures. Students apply their knowledge using modern relational DBMSs (SQL Server and DB2).

Prerequisites: DBT130 Databases I

DBT260 BUSINESS DATABASE SYSTEMS (4 CREDITS)

Business Database Systems prepares you with the knowledge to analyze, design and implement effective, robust, and successful databases. The course focuses on both the development of databases and the eventual management and administration of the system. Students will explore topics ranging from the database system development lifecycle to emerging trends and legal issues in the field.

FINE ARTS AND COMMUNICATION

FAC101 ART APPRECIATION (2 CREDITS)

Students gain a basic understanding of the visual arts. Classic and electronic images are analyzed as well as structure and cultural frameworks.

FAC105 LEADERSHIP AND PROBLEM-SOLVING (3 CREDITS)

This course introduces students to basics of leadership, business, communication, and decision-making. Students will work collaboratively to develop an understanding of unique solutions. Students will learn to understand many elements of a problem, research the problem and potential solutions, and critically think through potential solutions.

FAC120 SPOKEN COMMUNICATIONS (3 CREDITS)

Students strengthen their oral presentation skills by exploring and applying appropriate techniques for preparing and delivering speeches. Students learn speech, composition, and delivery methods needed to give effective presentations for technical and non-technical audiences alike. Students gain a basic understanding of effective and ethical public speaking, as well as develop poise and confidence in delivering public presentations to a variety of audiences.

FAC125 COLLABORATIVE AND INTERPERSONAL COMMUNICATIONS I (3 CREDITS)

Students actively develop and apply necessary collaborative skills for successful interpersonal interactions and group work. Students learn and use principles related to interpersonal communications, group dynamics, leadership, and the collaborative group life-cycle. Students are not just exposed to knowledge in these domains, but they develop practical skills that can be directly applied during their project work at Neumont University.

Prerequisites: SSC250 Human Relations and Personality Development

FAC140 ELEMENTS OF DESIGN THEORY (4 CREDITS)

This course will help students understand the basic principles of good design. Students will learn about elements of composition including line, form, texture, value, color, and shape. They will discuss and work to see how these elements interact with the principles of design: balance, movement, rhythm, emphasis, simplicity, contrast, proportion, space, and unity. Students will explore their creativity through these basic elements and principles.

FAC200 THEATER (2 CREDITS)

This course is designed to provide students a basic foundation for understanding theater and drama. They will learn theater history, acting, and analyzing productions.

FAC201 MUSIC APPRECIATION (2 CREDITS)

Students will be introduced to a range of music. They will develop skills in recognizing different components of music and styles.

FAC210 MUSIC COMPOSITION (2 CREDITS)

This course provides an overview of the songwriting and compositional creative process. A recital of performances of student compositions will be offered at the end of the semester and will be open to the public.

FAC240 PRODUCT DEVELOPMENT (3 CREDITS)

Introduces students to the basics of industrial design and product development. Students will look at how well-designed products can impact the quality and efficiency of our lives. Students will focus on the artistic elements as well as the usability of products. Students will also look at customer, market, and industry factors that impact the design, development, and success of a product.

FAC299 MARKETING YOUR PERSONAL BRAND (2 CREDITS)
Students will learn about and put into practice various topics related to effective personal communication. Major course topics are effective writing including memos, emails, resumes and cover letters, effective verbal communication including conversation, interviewing techniques and negotiation, and other relevant aspects of communication.
Prerequisites: Instructor Permission

FAC301 LEADERSHIP DEVELOPMENT (3 CREDITS)
This course permits students to examine various aspects of leadership and develop skills that will help them in future leadership positions. Included are discussions on human development and leadership theories, communication skills, small group dynamics, leadership strategies and styles, and the nature of power and influence.
Prerequisites: FAC125 Collaborative and Interpersonal Communications I

FAC320 CONFLICT RESOLUTION (2 CREDITS)
This course covers theories and practices of individual and group conflict resolution. This course will cover conflict analysis, sources of conflict, creating a safe environment, and ethical issues. Issues of gender, culture, and boundaries will also be discussed. Students will work to develop communication and listening skills that will aid in resolving conflict effectively.

GAMING TECHNOLOGY

GAT120 TOPICS IN GAME DEVELOPMENT (4 CREDITS)
This course is designed to provide an intellectual and practical framework in game development. The course will explore the game development cycle from green-lighting a project to localization and street delivery. Topics taught in the course includes project life cycles, legal framework for game development, the business of game development, development of game assets, scheduling, and documentation methods.

GAT160 GAME LIBRARIES (4 CREDITS)
Students receive exposure to various libraries used for game and graphical programming such as DirectX and OpenGL. Students load graphics and manipulate game play using these libraries. Topics covered are the rendering pipeline, related libraries, and animation using these libraries, drawing, lighting, color, and texture mapping.
Prerequisites: CSC190 C++ Programming

GAT180 MOBILE GAME DEVELOPMENT (3 CREDITS)
This course covers game development using mobile devices such as PDAs, cell phones, and smart phones. Students will build high-performance games using limited hardware resources. Students will study about various topics in the mobile gaming industry such as mobile game engines, mobile graphics, threads, media, and networking.
Prerequisites: CSC190 C++ Programming

GAT260 GAME CONSOLE DEVELOPMENT (4 CREDITS)
This course covers game production specifically for consoles. Students learn the intricacies and challenges of various console platforms. Students are also exposed to the extra performance gains consoles provide over other types of gaming hardware.
Prerequisites: CSC160 Developing for the Windows Platform

GAT265 GAME CONSOLE LAB (2 CREDITS)
Students work in teams on software development projects using concepts from GAT260. The projects provide experience with various phases of software development, give students opportunities to perform a variety of roles on software development teams, strengthen and integrate students' existing skills, and provide motivation for the acquisition of new skills. The project role and learning goals for each student are individualized in line with their knowledge base and growth focus. Projects may include interaction and/or collaboration with external clients and other stakeholders.
Prerequisites: GAT260 Game Console Development

GAT280 RICH ANIMATION (3 CREDITS)
This course covers animation within current rich web technologies. Students animate various objects with basic physical interactions. Topics such as velocity, acceleration, friction, springing, collision detection, bouncing, particle attraction, and billiard ball physics are covered. Students use these concepts to produce a web-based game.
Prerequisites: MAT150 Trigonometry and PSC220 Introduction to Physics

GAT310 ADVANCED GAME PHYSICS (3 CREDITS)
This course covers advanced topics within game physics. Students produce objects with real-time interactions between the user input, object environment, and each other. This course exposes students to both high-level physics engines then further delves into producing interactions using raw formulas. Students will also study several advanced physical topics such as numerical integration, crowds, deformable bodies, fluids and gases, and other game-specific physics concepts.
Prerequisites: CSC190 C++ Programming

GAT350 COMPUTER GRAPHICS (3 CREDITS)
This course covers fundamentals of both 2D and 3D computer graphics. Various computer graphics topics are covered such as display techniques, raster graphics, coordinate systems, transforms, projections, hidden element removal (clipping, culling), projections such as orthogonal and perspective, lighting and shading, ray tracing.
Prerequisites: MAT150 Trigonometry, MAT210 Linear Algebra

GAT360 GAME PROGRAMMING AND PRODUCTION (4 CREDITS)
This course is a precursor for the student's Game Capstone Project. Students use their experiences from all aspects of their education to thoroughly plan and design their capstone project. Students produce requirements within a reasonable scope of work. Students will produce assets, design game play, and test various proofs of concepts for their capstone project. Students will have to sell their ideas to industry professionals for approval before beginning their capstone work.
Prerequisites: GAT160 Game Libraries

GAT370 GAME NETWORKING (3 CREDITS)
This course covers concepts related to hosted and peer-to-peer networking game play. Students are exposed to several nuances within the field such as speed, concurrency resolution, latency, cheating preven-

tion, information loss and decision making, optimization, and turn-by-turn network game play. Students add online play to an existing game as a final project.
Prerequisites: CSC190 C++ Programming

GAT380 GAME ENGINE IMPLEMENTATION AND DEVELOPMENT (4 CREDITS)
This course covers fundamental topics of building and debugging a game engine. Students are exposed to various game engine challenges such as 3D math, startup and shutdown, resources, real-time simulation, human interface devices. Students work in small groups to build a small but powerful game engine.
Prerequisites: CSC190 C++ Programming

GAT420 ARTIFICIAL INTELLIGENCE (3 CREDITS)
This course begins with the fundamentals of artificial intelligence then delves deeper into game-specific artificial intelligence problems. Students learn how and where artificial intelligence appropriately applies in game play. Specifically the course delves into decision making, path finding, movement, tactical analysis, computer learning, execution management, and AI design.
Prerequisites: :CSC190 C++ Programming

GAT430 SERIOUS GAMES (4 CREDITS)
This course covers current trends in the Serious Games initiative. Students learn how to design and build games to simulate real-world scenarios in various industries. Students build an interactive simulation within a non-entertainment oriented field.
Prerequisites: GAT360 Game Programming and Production

HEALTH AND PHYSICAL EDUCATION

HPE160 PERSONAL FITNESS (2 CREDITS)
Students learn physical fitness skills essential to their health and well-being as computer professionals. This class is held at an off-site recreation center and requires students to demonstrate specific physical activity skills.

HPE170 HEALTHY LIVING (2 CREDITS)
This course provides an individualized approach to physical fitness and good nutrition, involving critical thinking and problem solving for healthy living. Students learn about beneficial living patterns and how to make decisions that maximize mental, spiritual, physical and social well-being. Students write and engage in a personalized health plan.

HPE180 GOLF (2 CREDITS)
This course introduces students to the game of golf, including rules, etiquette, and skills such as swing, grip, chipping, putting, and pitching. This course will take place off-campus. (Note that students enrolled in this course will be required to pay a class fee.)

HUMANITIES

HUM100 FOUNDATIONAL ENGLISH FOR TECHNICAL PROFESSIONS (1 CREDIT)
This course is designed to give students a foundational understanding of English grammar and composition. Students will focus on the fundamentals of reading comprehension and composition, including vocabulary, grammar, mechanics, sentence structure, and paragraphing. The importance of professional writing will be addressed.

HUM105 THE ART AND SCIENCE OF SUCCESS (2 CREDITS)
Helps students develop and refine necessary skills for success. Students will learn effective time management, communication, and research skills. Students will also discuss the importance of ethics, professionalism, and integrity throughout their life.

HUM115 TECHNICAL COMMUNICATIONS (3 CREDITS)
Prepares students to communicate effectively through both oral and written communication in various settings.

HUM120 MODERN LITERATURE (3 CREDITS)
This course explores information architecture, formulaic patterns, plot and story in fantasy and science fiction literature.

HUM121 ENGLISH COMPOSITION (3 CREDITS)
Students develop necessary writing skills to prepare them for college-level writing and to establish a solid foundation for business and technical communications. Students focus on key rhetorical concepts including purpose, audience, and contexts for writing, as well as a range of genres used in college and workplace writing. Students explore effective writing processes, build awareness of writing conventions, and expand critical thinking, reading, and writing abilities.

HUM150 LOGIC (3 CREDITS)
This course provides an introduction to propositional logic, including truth tables, truth trees, and natural deduction, with an emphasis on the application of logic to the evaluation of arguments expressed in natural language. This course will also cover full first-order predicate logic, with an emphasis on logical evaluation of arguments expressed in natural language. First-order logic topics include translation, truth trees, deduction trees, sorted logic, identity, and modal operators.

HUM220 INTRODUCTION TO PHILOSOPHY (2 CREDITS)
This course provides an overview of philosophy. Topics discussed include an introduction to metaphysics, epistemology, philosophy of science, and ethics (including ethics for software professionals).

HUM221 INTERMEDIATE ENGLISH COMPOSITION (3 CREDITS)
This course builds on the writing skills and knowledge gained in English Composition. Persuasive writing, rhetorical analysis and strategy, style and an understanding of formal argumentation, and critical thinking and analysis will be emphasized. Collaborative project management skills will be taught and used.
Prerequisites: HUM121 English Composition

HUM230 LINGUISTICS (3 CREDITS)
Students learn basic components of language in this introductory linguistics course. Students study human language and explore the grammatical structure and social function of language.

HUM240 JOURNALISM (3 CREDITS)
This course will focus on the basics of journalism and journalistic writing. Students will learn to evaluate mass media and news sources.

They will understand the potential uses and impact of news media. The course will focus on reporting and writing. Students will build skills in interviewing, information gathering, and creating well-written, concise, and interesting news items. Students will learn to develop stories that are clear, accurate, and ethical.

HUM305 ETHICS (3 CREDITS)
Students will examine the concept of ethics and the basic principles underlying ethical practice. Students will explore research and literature on ethics and relate this information to decision-making in professional and civic arenas.

HUM310 CRITICAL THINKING (2 CREDITS)
Rational dialog and debating. Logical fallacies. Deduction vs. induction. Scientific method. Realistic analysis of arguments.

HUM321 TECHNICAL WRITING (3 CREDITS)
This course applies the skills and knowledge of writing gained in Intermediate English Composition to technical writing genres. Particular emphasis will be given to genres used in the Computer Science field such documentation, requirements documents, needs analysis, and feasibility studies. Critical thinking and problem solving will be a part of the criteria for good analysis and writing in course assignments.
Prerequisites: HUM121 English Composition

INFORMATION TECHNOLOGY

ITH210 NETWORKING (4 CREDITS)
This class will provide students with a basic understanding of network communications. An in-depth study of the Internet Protocol (IP) and network stacks will familiarize students with topics such as: the physical network layer; MAC and IP Addresses; sub-networks; multicast and broadcast; TCP and UDP; and application-level protocols. Students will implement a client/server application (such as POP3, HTTP, SMTP, IM) using discussed technologies. The class may include overviews or tutorials of common programming language implementations of network technologies (such as .NET's System. Net namespace or Java's java.net Package).

ITH220 SERVER ADMINISTRATION (4 CREDITS)
Learn to install, customize, and administer different servers and operating systems in a multiuser environment. This course is based on a number of servers and operating systems. Explore topics such as operating system prioritization and load balancing, and server load analytics.

INFORMATION SECURITY

ITS320 SYSTEMS AND NETWORK SECURITY (4 CREDITS)
Students will learn networking and systems basics, designs, architecture and tools that are required for an enterprise to protect and defend hardware and software systems. Students learn how systems and networks play a role in today's public and private networks. In addition, a discussion will be presented, and hands-on labs will be used to show the use of Information Security tools in the creation, protection and management of systems and networks, including multiple platforms, operating systems and environments.
Prerequisites: ITH210 Networking

ITS380 AUDITING, GOVERNANCE, AND COMPLIANCE (4 CREDITS)
Students will understand the processes and procedures that are needed to protect a company's assets and how law enforcement, government agencies and auditors use tools to check and balance these protections against laws and requirements. The course will cover various information security standards of operation, protection and governance including legislation and existing case law around Information Security topics. Students will learn the very important role that information technology auditors take in a corporation and how they have an effect on their success or failure.

ITS390 HACKING, FORENSICS, AND COUNTERMEASURES (4 CREDITS)
Students will learn the ethical use of Information Security tools, tricks and procedures that are used in real world enterprises. Discussions will include how to protect systems and networks through the use of tools and expertise. Students will learn how a hacker would penetrate a system for exploit, how to use forensics analysis and procedures to catch criminals, and how to use countermeasures to protect vulnerable systems.
Prerequisites: ITH210 Networking

ITS410 DEVELOPING SECURE CODE (4 CREDITS)
Students will be taught the correct methods of incorporating secure code into software development projects and why it is important. Students will have the opportunity to learn about various platforms, languages and methods that are conducive to secure code development including .Net, Java and other technologies. They will understand the importance of thinking about security when creating software and not just features and functionality.
Prerequisites: CSC250 Algorithms and Data Structures I

MATH

MAT100 FOUNDATIONAL MATH FOR TECHNICAL PROFESSIONS (1 CREDIT)
This course is designed to help students improve their understanding of foundational math skills such as algebraic rules, number sets, fractions, decimals, order of operations, and functions. The course will increase the students' knowledge and competency in geometry concepts, basic graphing, and in solving linear equations.

MAT105 COLLEGE ALGEBRA (3 CREDITS)
This course introduces students to basic algebraic concepts. Students learn practical applications of algebraic concepts by finding solutions to appropriate applied problems. Topics include mathematical expressions, linear equations, functions and graphs, polynomials, exponents, and problem solving. This course provides foundational algebraic skills to succeed in subsequent math classes.

MAT110 SETS, PROBABILITY, AND NUMBER SYSTEMS (3 CREDITS)
Students are introduced to a variety of mathematical topics including basic set theory, practical applications in probability, and representation of numbers in floating point, binary, and other numeric representations.

MAT150 TRIGONOMETRY (3 CREDITS)
This introductory Trigonometry course explores functions and equations, polar coordinates, angles and triangles, similar triangles, inverse trigonometric functions, and laws of sines and cosines.

MAT210 LINEAR ALGEBRA (3 CREDITS)
This course gives students an opportunity to examine Linear Algebra and Geometry, Calculus and Planar/Solid Analytic Geometry.
Prerequisites: MAT110 Sets, Probability, and Number Systems

MAT250 CALCULUS (3 CREDITS)
This course examines several Calculus techniques including differentiation and integration.
Prerequisites: MAT105 College Algebra

MAT260 STATISTICS (3 CREDITS)
Students will learn descriptive and inferential statistical methods with emphasis on sampling design, descriptive statistics, linear regression, and correlation. Other areas covered include probability, sampling distributions, hypothesis testing and confidence intervals.
Prerequisites: MAT110 Sets, Probability, and Number Systems

MAT305 PROBLEM SOLVING (3 CREDITS)
Students are introduced to a variety of problem solving techniques. Those techniques are applied to various mathematical topics including algebra, calculus and number theory. A programming project will be presented for solution.
Prerequisites: MAT250 Calculus

MAT320 NUMERICAL ANALYSIS (3 CREDITS)
This course introduces students to numerical analysis, direct and iterative methods of solving linear systems, optimization techniques, least squares methods, and numerical handling of ordinary and partial differential equations.
Prerequisites: MAT210 Linear Algebra

MAT410 DISCRETE STRUCTURES (3 CREDITS)
This course introduces students to the study of mathematics devoted to objects that are distinct or unconnected. Students will be exposed to problems which relate to logic, probability, and operations research. Discrete mathematics is a gateway and foundation for many other Computer Science courses including: algorithms, data structures, database theory, automata, formal languages, compiler theory, computer security, and operating systems.
Prerequisite: CSC252 Algorithms and Data Structures II

MANAGEMENT

MGT300 FUNDAMENTALS OF PROJECT MANAGEMENT (3 CREDITS)
This course introduces students to principles of Project Management (PM) as they relate to Information Technology (IT) projects. The nine knowledge areas of PM will be discussed including scope, cost, schedule, integration, risk, communication, human resources, quality, and procurement. In addition, the PM process groups will be discussed including initiating, planning, executing, monitoring and controlling, and closing. Students will work collaboratively to develop an understanding of the fundamentals of Project Management of IT projects.

MGT470 PRACTICES IN PROJECT MANAGEMENT (4 CREDITS)
This course continues the study of Project Management (PM) as is relates to Information Technology (IT) projects. The nine knowledge areas of PM will be discussed in depth. These areas include scope, cost, schedule, integration, risk, communication, human resources, quality, and procurement. Each knowledge area will be discussed in depth including current practices, planning procedures and documents, diagrams and charts, and tools used to manage each area.
Prerequisites: MGT300 Fundamentals of Project Management; BIT370 System Analysis and Business Modeling
Corequisites: PRO470 Project Management Project

MODELING AND ANALYSIS

MOA140 INFORMATION MODELING I (4 CREDITS)
Students learn about modeling and querying an information system at the conceptual level and mapping between conceptual and logical (e.g. relational) levels. Object Role Modeling (ORM) is covered at an introductory level.

MOA240 INFORMATION MODELING II (4 CREDITS)
This course builds on students' knowledge of information modeling. Object Role Modeling (ORM) and relational mapping are covered at an intermediate level. Class modeling in UML is included, as well as mapping from ORM to UML.
Prerequisites: MOA140 Information Modeling I

MOA335 BUSINESS MODELING AND SYSTEM DESIGN (4 CREDITS)
Students learn to apply concepts in modeling business information and methods for mapping business requirements onto technology realizations. Detailed coverage focuses mainly on the implementation of business objects, business processes and business rules. Students will learn how to use modern tools to facilitate the production of enterprise-scale applications.
Prerequisites: MOA235 Introduction to Model Driven Development

MULTIMEDIA

MTM110 INTRODUCTION TO DIGITAL PHOTOGRAPHY (2 CREDITS)
This course provides an introduction to digital photography including graphic design and photographic editing. (Note that students enrolled in this course will be required to pay a class fee.)

MTM120 INTRODUCTION TO PHOTOSHOP (3 CREDITS)
This course introduces students to the basics of Adobe Photoshop CS. Students will work with Photoshop tools and features to create and edit digital imagery.

Students will also learn the application of this software for web development. (Note that students enrolled in this course will be required to pay a class fee.)

MTM130 INTRODUCTION TO DRAWING (3 CREDITS)
This is an introductory drawing course that covers basic drawing methods, media and concepts. This course emphasizes drawing from observation with development of relative value, negative/positive space and shape, composition, line, edge development, volumetric analysis of form, light and perspective. This class focuses on the drawing process and developing skills, as well as creating well-composed finished drawings.

MTM140 BASICS OF FILM (2 CREDITS)
This course introduces students to the art of film. Students will explore style, genre, period, and the cultural origin of films. The course will emphasize historical, theoretical, and current issues in film and their impact on current society. Students will also explore the elements of a successful film through careful analysis of various examples.

MTM160 GRAPHIC DESIGN TOOLS (3 CREDITS)
An introduction to the Adobe Creative Suite graphic design applications: Photoshop, Illustrator, Fireworks, Flash, After Effects, in-Design, and other similar programs. Students will get their feet wet by designing projects such as website mockups, photo illustrations, Bezier drawings, and printed materials.
Requires: Adobe Creative Suite Software (or lab)

MTM165 GRAPHIC DESIGN PROJE CTS (3 CREDITS)
Students will explore a variety of typical graphic design problems such as corporate identity, photo illustrations and manipulation, photography, ads, animations, information graphics, page layout, and typography.
Requires: Adobe Creative Suite Software (or lab)
Prerequisites: MTM160 Graphic Design Tools

MTM220 GRAPHIC DESIGN (2 CREDITS)
Students actively develop and apply design and layout skills in order to complete a variety of design projects. Topics include basic principles of layout, typography, and digital imagery. The course will focus on how to create and combine these elements to successfully communicate ideas in a visually compelling manner. (Note that students enrolled in this course may be required to pay a class fee.)

MTM230 DIGITAL ART AND MUSIC I (3 CREDITS)
This course focuses on sound and level design for digital applications. Students will learn the basics of sound recording, editing and audio library management. Students will also work on sound effects for in-project cut scenes, and actor dialogue. Students also learn the basics of interactive level design. Levels will be conceived, designed and built to a non-textured "white box" stage. Focus will be on design that provides engaging and immersive game play. Students will also learn how to affect level design that contributes to the overall style and theme of project.

MTM240 VIDEO FUNDAMENTALS (3 CREDITS)
This course will give students an introduction to the basics of shooting and editing digital video. Students will learn about composition in film and the elements of creating a visual story. Students will analyze films and other digital video to understand the art and aesthetics of film development and production. Students will complete short video projects throughout the quarter.

MTM260 MEDIA DESIGN TOOLS (3 CREDITS)
This course introduces students to the tools for acquiring and editing audio and video assets. The students will also be introduced to pre-production, production, and post-production tools and processes as well as related topics such as character animation, titles, motion graphics, compositing, keying, color grading, storyboarding, asset management, logging, and editing.

MTM265 MEDIA DESIGN PROJECTS (3 CREDITS)
Using the tools and techniques learned in MTM260, students will create narrative pieces such as short films, corporate sales presentations, motion graphics, software demos, cartoons, and how-to's.
Prerequisites: MTM260 Media Design Tools

MTM282 INTERACTIVE WEB DEVELOPMENT (4 CREDITS)
This course focuses on current industry languages and standards for front-end interactive web development. Students will learn some of the languages, libraries, and frameworks available for creating rich internet applications using web services and DOM manipulation.

MTM312 MULTIMEDIA, GAME AND ENTERTAINMENT SYSTEMS (4 CREDITS)
Students learn fundamentals of computer graphics, content integration, AI concepts, and industry practices, standards, and tools in multimedia, game and entertainment systems. An analysis of the difference between a business application and a gaming application in all phases of the software lifecycle will be discussed. (Note that students enrolled in this course may be required to pay a class fee.)
Prerequisites: CSC260 Introduction to Dynamic Web Programming or CSC280 Developing Scalable Web Applications

MTM316 RICH INTERNET APPLICATIONS (4 CREDITS)
Students learn fundamentals of developing complete rich internet applications utilizing frameworks that augment the functionality of the browser. Custom drawing, specialized animations, and handling large data sets are a few of the concepts discussed in class.

MTM330 DIGITAL ART AND MUSIC II (3 CREDITS)
This course covers the fundamentals of 3D modeling and texturing for digital applications. Students will learn how to model, map and create textures for characters, interactive and environmental objects. Students will also learn to use digital media tools for texture creation and enhancement. Basic lighting, rendering and animation techniques will also be covered.

MTM350 EXPERIENCE DESIGN (2 CREDITS)
This course will use the latest media technologies to create synthetic exploratory digital experiences that re-create reality and alternate realities. Students will learn techniques that will produce rich, compelling web experiences.
Prerequisites: MTM160 Graphic Design Tools and MTM260 Media Design Tools

MTM355 DIGITAL DESIGN (3 CREDITS)
This course is designed to increase the student's ability to creatively design within the digital domain. Major topics include: essentials for successful digital design, color and color accuracy in the digital world, symmetric and asymmetric layout techniques, creative use of shapes and space, large file management techniques, theoretical and applied typography, professional production methods to increase workflow, and stereographic imagery.
Recommended: Basic Photoshop Knowledge

MTM370 FRONT-END IMPLEMENTATION (4 CREDITS)
This course will explore the latest techniques in converting static visual designs into high-fidelity, clean, accurate HTML/CSS standards-compliant websites. Concepts such as graceful degradation and progressive enhancement will be explored across different desktop and mobile browser platforms. Media slicing/optimization and Search Engine Optimization (SEO) will also be explored. Students will learn about the relationship between front-end coders and graphic designers and the common potential pitfalls in these relationships.

MTM380 CREATIVE WRITING AND STORYBOARDING (3 CREDITS)
Students explore the art of creative writing specifically as it relates to storyboarding and video game development. Time is spent developing, observing, interpreting and expressing the skill. The central focus throughout the course will be on unearthing a unique and personal voice and relaying that to an alternative reality as seen in video games. Students will experiment with critical reading and thinking about creative writing through written and oral exercises.

MTM410 DIGITAL PORTFOLIO (1.5 CREDITS)
Students build a portfolio of their work for presentation to potential employers. Students reflect on their work through the program and compile a simple yet powerful presentation. The presentation will contain highlights of the student's best work from all areas of their education and project work.
Prerequisites: PRO395 Game Capstone Project

MTM412 ADVANCED ENTERTAINMENT SYSTEMS (4 CREDITS)
Students will explore development of higher end entertainment systems. Topics will include 3D animation, sound effects, advanced particle effects, network programming, etc. Students will explore concepts involved in creation of a large scale video game from concept to realization. Students will develop critical vocabulary with which to discuss the elements and craft of creative writing, become familiar with different genres of creative writing, explore and analyze the communication of meaning through writing, and produce a portfolio of original work
Prerequisites: MTM312 Multimedia, Game, and Entertainment Systems

MTM450 WEB GAME DESIGN (3 CREDITS)
This course provides an introduction to basic web game design principles and in-browser gaming experiences. Students will design, animate, and develop typical online games.

MTM470 BACK-END IMPLEMENTATION (4 CREDITS)
Students will select a project from previous courses and implement a website from start to finish that includes a designed and implemented template system, SEO, analytics, and content management system (with customized admin user interface), media elements, ties to external web services, and interactive widgets. This course will give students time to perfect and polish projects for their design portfolio.

PHYSICAL AND BIOLOGICAL SCIENCE

PSC115 INTRODUCTION TO BIOLOGY (2 CREDITS)
This course is designed to introduce students to the fundamentals of biology including cell structure, basic chemistry as applied to photosynthesis, cellular respiration, genetics, and natural selection. Students will also explore the basic similarities and differences between plant and animal systems. Laboratory exercises will give students a hands-on opportunity to critically examine and investigate the biological processes of cell structure, energy, heredity, reproduction, and other fundamental aspects of biology.

PSC201 ASTRONOMY (2 CREDITS)
This course provides a basic introduction to the science of astronomy. Students will gain critical thinking skills as they assess the origins and evolution of our galaxy, understand stellar structure and life cycles, and gain an orientation to the night sky. Students will also examine recent advances such as the discovery of black holes.

PSC210 ENVIRONMENTAL STUDIES (2 CREDITS)
This course introduces students to the field of environmental engineering. Students study environmental and ecological systems and perform quantitative and qualitative analyses of environmental problems. Environmental legislation is also discussed.

PSC220 INTRODUCTION TO PHYSICS (3 CREDITS)
This course provides an introduction to basic physics concepts. Students will examine such principles as kinematics in one and two dimensions, forces, dynamics of uniform circular motion, waves and sound, and the principle of linear superposition.

PSC230 INTRODUCTION TO CHEMISTRY (2 CREDITS)
This course introduces the fundamentals of chemistry utilizing a virtual laboratory environment. Students will develop analytical thinking skills as they perform virtual experiments and then examine and report their findings. Topics covered will include: past and present views of atomic structure, naming compounds, balancing chemical equations, the ideal gas law, acid-base chemistry, and other basics of inorganic chemistry.
Prerequisites: MAT105 College Algebra or equivalent

PROJECTS

PRO130 PRACTICE IN ACCOUNTING PROJECT (2 CREDITS)
Students work in teams on financial and managerial accounting projects. The projects provide experience with the various aspects and principles of account. This course will build upon the foundation and theory of the lecture course. Students will be given a business case study and will be asked to act in a role as an accountant for the company. Students will analyze and create accounting reports as well as make financial recommendations regarding the company.
Prerequisites: BUS130 Financial and Managerial Accounting

PRO160 WINDOWS PLATFORM LAB (2 CREDITS)

Students work in teams on software development projects. The projects provide experience with various phases of software development, give students opportunities to perform a variety of roles on software development teams, strengthen and integrate students' existing skills, and provide motivation for the acquisition of new skills. The project role and learning goals for each student are individualized in line with their knowledge base and growth focus. Projects may include interaction and/or collaboration with external clients and other stakeholders.

Prerequisite: CSC160 Developing for the Windows Platform

PRO180 JAVA LAB (2 CREDITS)

Students work in teams on software development projects. The projects provide experience with various phases of software development, give students opportunities to perform a variety of roles on software development teams, strengthen and integrate students' existing skills, and provide motivation for the acquisition of new skills. The project role and learning goals for each student are individualized in line with their knowledge base and growth focus. Projects may include interaction and/or collaboration with external clients and other stakeholders.

Prerequisites: CSC180 Introduction to Java Development

PRO240 BUSINESS WEB DEVELOPMENT PROJECT (2 CREDITS)

Students work in teams on web development projects. The projects provide experience with various phases of web development, give students opportunities to perform a variety of roles on project teams, strengthen and integrate students' existing skills, and provide motivation for the acquisition of new skills. The project role and learning goals for each student are individualized in line with their knowledge base and growth focus. Projects may include interaction and/or collaboration with external clients and other stakeholders.

Prerequisites: CSC240 Business Web Development

PRO260 DYNAMIC WEB LAB (2 CREDITS)

Students work in teams on software development projects. The projects provide experience with various phases of software development, give students opportunities to perform a variety of roles on software development teams, strengthen and integrate students' existing skills, and provide motivation for the acquisition of new skills. The project role and learning goals for each student are individualized in line with their knowledge base and growth focus. Projects may include interaction and/or collaboration with external clients and other stakeholders.

Prerequisites: CSC260 Introduction to Dynamic Web Programming

PRO280 SCALABLE WEB APPLICATIONS LAB (2 CREDITS)

Students work in teams on software development projects. The projects provide experience with various phases of software development, give students opportunities to perform a variety of roles on software development teams, strengthen and integrate students' existing skills, and provide motivation for the acquisition of new skills. The project role and learning goals for each student are individualized in line with their knowledge base and growth focus. Projects may include interaction and/or collaboration with external clients and other stakeholders.

Prerequisites: CSC280 Developing Scalable Web Applications

PRO285 FUNDING STRATEGY PROJECT (2 CREDITS)

Coupled with the lecture course, BUS285, Developing Funding Strategies for the Entrepreneur, students will apply knowledge learned in the lecture course to better understand funding strategies, venture capital, and investment opportunities in entrepreneurship ventures.

Prerequisites: BUS225 Principles of Finance; BUS285 Developing Funding Strategies for the Entrepreneur

PRO320 DEVELOPMENTAL PROJECT I (4.5 CREDITS)

Students work in teams on various projects associated with the specialization disciplines chosen by students. The projects provide experience unique to the concentrations and give students opportunities to perform and develop each of their skill sets in a chosen discipline. These projects strengthen and integrate students' existing skills, and provide motivation for the acquisition of new skills. The project role and learning goals for each student are individualized in line with their knowledge base and growth focus. Projects may include interaction and/or collaboration with external clients and other stakeholders

Prerequisites: Varies based on concentration(s) chosen

PRO330 NETWORKING AND TELECOMMUNICATIONS PROJECT (2 CREDITS)

Students will utilize various learning techniques to build a solid foundation of skills involving business network design and analysis. Students will work both on teams and individually to design solutions to data and telecommunication network problems. These problems will include both fictitious and real world assignments that will provide experience with various phases of data/telecommunication network design, strengthen business analytical skills, and enhance professional and interpersonal skills.

Prerequisites: ITH210 Networking

Corequisites: BIT330 Networks and Telecommunications in Business

PRO345 BUSINESS ANALYSIS, OPERATION, AND ORGANIZATIONAL PROJECT (4 CREDITS)

Enterprise analysis and operations requires business managers to balance many aspects of the business; including marketing, suppliers, inventory and quality. This course explores how to analyzes and address these business concerns. Class members will work to develop qualitative and quantitative approaches and techniques to facilitate managing this complex environment. As a project emphasis, this course will focus on application of the techniques and approaches described in BUS345.

Prerequisites: BUS345 Business Analysis, Operation, and Organizational Planning

PRO360 .NET III PROJECT (4.5 CREDITS)

Students work in teams on software development projects using the .Net development environment. The projects provide experience with various phases of software development, give students opportunities to perform a variety of roles on software development teams, strengthen and integrate their existing skills, and provide motivation for the acquisition of new skills. The project role and learning goals are individualized in line with each student's knowledge base and growth focus. Projects may include interaction and/or collaboration with external clients and other stakeholders.

Prerequisites: CSC360 Software Design Principles

PRO370 SYSTEM ANALYSIS AND BUSINESS MODELING (4 CREDITS)

Students work in teams on business case study projects. The projects provide experience with various phases of the analysis, modeling, architecture, development, support, and management of information technology projects. Students are given various opportunities to perform a variety of roles on IT teams, strengthen and integrate students' existing skills, and provide motivation for the acquisition of new skills. The project role and learning goals for each student are individualized in line with their knowledge base and growth focus. Projects may include interaction and/or collaboration with external clients and other stakeholders.

Prerequisites: BIT370 System Analysis and Business Modeling

PRO375 FIELD STUDIES IN ENTREPRENEURSHIP (4 CREDITS)

Starting a new business enterprise requires a broad business background, clear vision, strategic planning, and a plethora of leadership skills. This course explores provides a behind-the-scenes look into a variety of local business startups. Students will sharpen their business skills and apply a variety of entrepreneurial principles as they gain a better understanding of the myriad of issues and real struggles facing actual startups.

Prerequisites: BUS375 Advanced Topics in Entrepreneurship

PRO380 JAVA III PROJECT (4.5 CREDITS)

Students work in teams on software development projects. The projects provide experience with various phases of software development, give students opportunities to perform a variety of roles on software development teams, strengthen and integrate students' existing skills, and provide motivation for the acquisition of new skills. The project role and learning goals for each student are individualized in line with his or her knowledge base and growth focus. Projects may include interaction and/or collaboration with external clients and other stakeholders.

Prerequisites: CSC380 Service Oriented Architecture

PRO390 CAPSTONE PROJECT (4.5 CREDITS)

Students work either in teams or individually on a project which demonstrates the overall attainment of the learning objectives of a student's academic program. The project must be approved by the instructor. Students may choose to complete a project in an interest area or career direction of their own choosing or a project can be assigned to them by the instructor. The projects provide experience unique to the end of the program and give students opportunities to perform and develop each of their skill sets in a chosen discipline. These projects strengthen and integrate students' existing skills and provide motivation for the acquisition of new skills. The project role and learning goals for each student are individualized in line with his/her knowledge base and growth focus. Projects may include interaction and/or collaboration with external clients and other stakeholders.

Prerequisites: Provost or Instructor Approval

PRO393 WEB CAPSTONE PROJECT (4 CREDITS)

Students work either in teams or individually on a project which demonstrates the overall attainment of the learning objectives of a student's academic program. The project must be approved by the instructor. Students may choose to complete a project in an interest area or career direction of their own choosing or a project can be assigned to them by the instructor. The projects provide experience unique to the end of the program and give students opportunities to perform and develop each of their skill sets in a chosen discipline. These projects strengthen and integrate students' existing skills and provide motivation for the acquisition of new skills. The project role and learning goals for each student are individualized in line with his/her knowledge base and growth focus. Projects may include interaction and/or collaboration with external clients and other stakeholders.

Prerequisites: Provost or Instructor Approval

PRO395 GAME CAPSTONE PROJECT (4 CREDITS)

Students work either in teams or individually on a project which demonstrates the overall attainment of the learning objectives of a student's academic program. The project must be approved by the instructor. Students may choose to complete a project in an interest area or career direction of their own choosing or a project can be assigned to them by the instructor. The projects provide experience unique to the end of the program and give students opportunities to perform and develop each of their skill sets in a chosen discipline. These projects strengthen and integrate students' existing skills and provide motivation for the acquisition of new skills. The project role and learning goals for each student are individualized in line with his/her knowledge base and growth focus. Projects may include interaction and/or collaboration with external clients and other stakeholders.

Prerequisites: Provost or Instructor Approval

PRO405 ENTREPRENEURIAL PLANNING PROJECT (4 CREDITS)

What does it really take to develop, produce, package, price, and launch a new product? This course provides an in-depth analysis of recent successful product launches as well as local attempts to provide new goods and services to the market. Students will gain a deep understanding of what it takes to develop a successful go-to-market strategy including sales, marketing, distribution, partnering, and support efforts required for any new product launch.

Prerequisites: BUS405 Entrepreneurial Planning Strategies

PRO425 DIGITAL BUSINESS INCUBATOR PROJECT (4 CREDITS)

All startups are not equal. High-tech startups decrease their odds by leveraging new and/or unproven technology, having a much-larger-than-average capital requirement, and precisely timing their entry into the market. This course focuses specifically on high-tech startups of the past and present. Which ones succeeded? Which ones failed? And what made the difference between the two? Students will gain valuable insights into high-tech startups on a national and local scale that will hopefully increase their odds of hitting the big time.

Corequisites: BUS425 Digital Business Incubator

PRO470 PROJECT MANAGEMENT PROJECT (4 CREDITS)

This course is the project portion of the study of Project Management (PM) as is relates to Information Technology (IT) projects. There will be several projects assigned that will cover numerous PM knowledge areas. The PM knowledge areas include scope, cost, schedule, integration, risk, communication, human resources, quality, and procurement. Each knowledge area will be discussed in depth including in MGT 470 and a concurrent project will be assigned in this class.

Corequisites: MGT470 Practices in Project Management

PRO485 GAME STUDIO I (6 CREDITS)
Students spend 20 hours per week working as part of a team making games for real projects. Studio projects are designed to give students experience working on projects similar to ones they may encounter upon graduation. Placement on some projects may be competitive and may require mastery of a set of competencies.
Prerequisites: PRO395 Game Capstone Project

PRO486 GAME STUDIO II (6 CREDITS)
Students spend 20 hours per week working as part of a team making games for real projects. Studio projects are designed to give students experience working on projects similar to ones they may encounter upon graduation. Placement on some projects may be competitive and may require mastery of a set of competencies.
Prerequisites: PRO485 Game Studio I

PRO487 GAME STUDIO III (6 CREDITS)
Students spend 20 hours per week working as part of a team making games for real projects. Studio projects are designed to give students experience working on projects similar to ones they may encounter upon graduation. Placement on some projects may be competitive and may require mastery of a set of competencies.
Prerequisites: PRO486 Game Studio II

PRO490 ENTERPRISE PROJECTS I (6.5 CREDITS)
Students spend 20 hours per week working as part of a team to provide solutions to real clients. Enterprise projects are designed to give students experience working on projects similar to ones they may encounter upon graduation. Placement on some projects may be competitive and may require mastery of a set of competencies.
Prerequisites: Instructor Permission

PRO491 ENTERPRISE PROJECTS II (6.5 CREDITS)
Students spend 20 hours per week working as part of a team to provide solutions to real clients. Enterprise projects are designed to give students experience working on projects similar to ones they may encounter upon graduation. Placement on some projects may be competitive and may require mastery of a set of competencies.
Prerequisites: PRO490 Enterprise Projects I

PRO492 ENTERPRISE PROJECTS III (6.5 CREDITS)
Students spend 20 hours per week working as part of a team to provide solutions to real clients. Enterprise projects are designed to give students experience working on projects similar to ones they may encounter upon graduation.
Placement on Enterprise Projects may be competitive and may require mastery of a set of competencies.
Prerequisites: PRO491 Enterprise Projects II

PRO495 ENTERPRISE PROJECTS IV (9 CREDITS)
Students spend 30 hours per week working as part of a team to provide solutions to real clients. Enterprise projects are designed to give students experience working on projects similar to ones they may encounter upon graduation. Placement on some projects may be competitive and may require mastery of a set of competencies.
Prerequisites: Instructor permission

PRO499 ENTERPRISE PROJECTS V (12 CREDITS)
Students spend 40 hours per week working as part of a team to provide solutions to real clients. Enterprise projects are designed to give students experience working on projects similar to ones they may encounter upon graduation. Placement on some projects may be competitive and may require mastery of a set of competencies.
Prerequisites: Instructor permission

ROBOTICS

RBT326 INTELLIGENT SYSTEMS (4 CREDITS)
Students learn a range of techniques that can be used to add 'intelligent' behavior to information systems. The course outlines the broad historical and philosophical context of Artificial Intelligence, but the primary focus is on understanding how to utilize techniques of proven value in modern industrial and commercial applications. Topics include Knowledge Representation and its automation, algorithms for searching large problem spaces, and techniques for making systems more reactive to their environment.

SOCIAL SCIENCE

SSC240 SOCIAL PSYCHOLOGY (3 CREDITS)
This course explores social behavior by the individual in the group. This includes action, interaction, dependency and interdependency as well as sensations, anticipation and adaptation.

SSC250 HUMAN RELATIONS AND PERSONALITY DEVELOPMENT (3 CREDITS)
Students examine themselves across four dimensions of the self: their personality, the physical self, the mental self and the emotional self. Students evaluate their future expectations to strengthen their attitudes toward achievement and success and seek ways to improve how they take responsibility for what is expected of them. Students learn practical skills based on four internal components: self-awareness, motivation, self-regulation and adeptness in relationships. Students learn how respecting others creates a positive work environment. Students develop a strategy for positively dealing with change and associated stresses.

SSC271 AMERICAN GOVERNMENT (3 CREDITS)
This course will introduce students to the American governmental system. Students should develop a working understanding of government institutions, political processes, and political behavior. This course will delve into the workings of the three branches of the national government and the role it plays in American society. This class will also discuss civil liberties and civil rights.

SSC310 AMERICAN LEGAL SYSTEM (3 CREDITS)
This course provides students with a fundamental overview of the American legal system. An understanding of the law is important to an understanding of the values of American society; this study is essential to the development of students' sense of justice and responsible judgment. This course is intended to help students understand "law" as a process of restoring, maintaining, and creating social order whose functions are to resolve disputes, facilitate and protect agreement, and constantly examine the legal concepts of a society through

maintaining continuity and consistency. The student is expected to develop an analytical and logical understanding of legal principles as opposed to mere memorization of legal rules as they relate to American public policy, constitutional rights, and contractual obligations.

SSC320 GROUP DYNAMICS (3 CREDITS)

This course provides a comprehensive examination of the forces that drive the formation and activities of groups. Students will have an opportunity to investigate in-depth the principles and concepts related to group structure and lifecycle, influence and power, constructive conflict, productivity, decision-making, leadership, intergroup relations, and large group behavior. Students will learn best practices for participating in and leading groups.

Prerequisites: FAC125 Collaborative and Interpersonal Communications I

SSC350 INTELLECTUAL PROPERTY (3 CREDITS)

This course provides an overview of the intellectual property laws of the United States. The purpose of the course is to give students an understanding of copyright, patent, trademark, and trade secret law, and how those laws fit into their vocational field.

GRADUATE PROGRAMS_

BRETT KOTTER
CLASS OF 2009
SOFTWARE DEVELOPER
UGENIUS TECHNOLOGIES

ADMISSIONS_

Neumont University's Acceptance Committee evaluates students' potential to succeed in the Master of Science in Computer Science program by evaluating academic potential, work experience, and student motivation.

To apply for admittance to Neumont University the prospective student submits the following documents for review by the Acceptance Committee:

- Application
- Proof of Bachelors Degree (official transcripts)
- Evidence of academic performance, such as GMAT scores or college transcripts

The Acceptance Committee reviews each application and evaluates the applicant in the following ways:

- Academic potential is determined by looking at college transcripts and/or GMAT scores, if available.
- Work experience is evaluated by looking at the application as well as any letters of recommendation.
- Student motivation can be evaluated by looking at the student questionnaire along with transcripts and any letters of recommendation.

As part of the admissions process prospective MSCS students will also have an interview with one or more members of the MSCS faculty.

INTERNATIONAL APPLICANTS

Neumont University is authorized under federal law to enroll non-immigrant students. An international application for admission is considered complete and ready for review when the documents and records have been received. Documents include a completed application signed, dated, and accompanied by a non-refundable international student application fee of $125. This fee must be drawn from a U.S. bank account, be an international money order, or be paid by credit card.

In order to satisfy the general admissions requirements listed above, foreign educational documents, including proof of high school graduation or its equivalent, (if the institution attended was not a U.S. institution) must be evaluated by a credential evaluation service that is a member of NACES at the applicant's own expense; for a complete list of NACES credential evaluation services visit www.naces.org.

Applicants will need to authorize the credential evaluation company to send documents directly to Neumont University after evaluation. Students must obtain approval from the Office of the Registrar for any credential evaluation.

Contact the Registrar's office for a list of authorized evaluation companies.

Proven English language proficiency is required if English is not the applicant's first language. The preferable method of proving English proficiency is official test results of the TOEFL (Test of English as a Foreign Language). Applicants with TOEFL scores of 550+ (213+ computer-based score, 79+ internet-based score) will be considered for admission. In addition to or in place of the TOEFL exam, the University, at its discretion, may require students to complete a telephone interview in English in addition to TOEFL examination scores.

Official test results (SAT or ACT) are recommended.

Once these documents are complete, the application will be submitted for review. Admitted applicants will then need to provide the following:

> An official bank statement from the bank (not just a receipt) showing sufficient funds to cover expenses for a calendar year of attendance at Neumont University. Please contact your admissions representative for the current dollar amount. F-1 students are required to provide proof of additional funds for each F-2 dependent. If the applicant has a sponsor, the sponsor will need to complete the affidavit of support. Scholarship money can be applied toward the certifying amount.

All international students who are currently studying in the United States on an F-1 student visa and who are transferring from another U.S. institution are required to submit a Transfer Eligibility Form prior to the issuing of the new I-20.

All international student scholarships are contingent on meeting I-9 eligibility requirements and lawful F-1 status. Admitted, eligible students will be issued an I-20 form from Neumont University.

TRANSFER STUDENTS

Neumont University may award transfer credit for courses that meet our evaluation criteria from an institution accredited by an agency recognized by the U.S. Department of Education. Courses taken at a foreign institution will be accepted for transfer on the basis of the report of a credential evaluation service.

Credit will be accepted only for courses in which a grade of 'C' or higher was earned. The number of credits awarded for a course will not exceed the number of credits offered for the related Neumont University course.

Students may not transfer more than 10 credits toward their graduate degree.

MASTER OF SCIENCE IN COMPUTER SCIENCE_

Master of Science in Computer Science (MSCS) students are expected to have successfully completed the Neumont University BSCS program or an approved equivalent. Additional criteria may apply to certain courses that provide advanced coverage of certain areas. Students who do not meet these criteria will be required to complete any prerequisite courses before taking the graduate courses in those areas.

PROGRAM OBJECTIVES

- Design System Architectures
- Employ established and emerging software standards
- Model and develop information systems
- Develop applications with a variety of deployment mechanisms
- Understand software development in the context of business
- Perform an effective review of the literature in a given field
- Write technical papers to a professional standard

PROGRAM DETAILS

To make the program available to the maximum number of students, it is offered on a full-time, half-time, and part-time basis. The program also offers some flexibility (under faculty advisement) in the ratio of Lecture/Lab courses to project work.

Students must complete a minimum of 54 quarter credit hours, with an average cumulative GPA of 3.0 or higher, in order to be eligible for graduation.

MSCS PROGRAM PLAN

REQUIRED LECTURE/LAB COURSES	**12 CREDITS**
(3 required courses)	
REQUIRED SEMINAR COURSES	**6 CREDITS**
ELECTIVE COURSES	**18 CREDITS**
REQUIRED RESEARCH PROJECTS	**18 CREDITS**
TOTAL REQUIRED FOR MS IN COMPUTER SCIENCE	**54 CREDITS**

LECTURE/LAB COURSES **12 CREDITS REQUIRED**

Select three courses from the list below:

CSC520	Enterprise Architecture	4 credits
CSC560	Process and Data Patterns	4 credits
DBT530	Data Warehousing and Business Intelligence	4 credits
MOA535	Business Modeling and System Design	4 credits
MOA540	Advanced Information Modeling	4 credits
MOA542	Advanced Modeling Topics I	4 credits

SEMINAR COURSES **6 CREDITS REQUIRED**

CSC581	Advanced Computing Seminars I	1.5 credits
CSC582	Advanced Computing Seminars II	1.5 credits
CSC583	Advanced Computing Seminars III	1.5 credits
CSC584	Advanced Computing Seminars IV	1.5 credits
CSC585	Advanced Computing Seminars V	1.5 credits
CSC586	Advanced Computing Seminars VI	1.5 credits
CSC587	Advanced Computing Seminars VII	1.5 credits
CSC588	Advanced Computing Seminars VIII	1.5 credits

ELECTIVE COURSES **18 CREDITS REQUIRED**

Select 18 additional credits from any combination of Seminar Courses, Research Project Courses and/or Elective Lecture/Lab Courses.

ELECTIVE LECTURE/LAB COURSES

CSC500	Introduction to Software Development	4 credits
DBT500	Business Database Systems	4 credits
DBT524	Querying XML Data with XPath and XQuery	4 credits
MOA500	Business Information Modeling	4 credits
MOA544	Advanced Modeling Topics II	4 credits
MOA635	Advanced Model Driven Development	4 credits

RESEARCH PROJECT COURSES **18 CREDITS REQUIRED**

Select a minimum of 38 credit hours from this list (minimum 6 credits from Enterprise Projects):

CSC590-3 Research Project I - 9 hours/week	3 credits
CSC590-6 Research Project I - 18 hours/week	6 credits
CSC590-9 Research Project I – 27 hours/week	9 credits
CSC590-12 Research Project I - 36 hours/week	12 credits
CSC591-3 Research Project II - 9 hours/week	3 credits
CSC591-6 Research Project II - 18 hours/week	6 credits
CSC591-9 Research Project II – 27 hours/week	9 credits
CSC591-12 Research Project II - 36 hours/week	12 credits
CSC592-3 Research Project III - 9 hours/week	3 credits
CSC592-6 Research Project III - 18 hours/week	6 credits
CSC592-9 Research Project III – 27 hours/week	9 credits
CSC592-12 Research Project III - 36 hours/week	12 credits
CSC593-3 Research Project IV - 9 hours/week	3 credits
CSC593-6 Research Project IV - 18 hours/week	6 credits
CSC593-9 Research Project IV – 27 hours/week	9 credits
CSC593-12 Research Project IV - 36 hours/week	12 credits
CSC594-3 Research Project V - 9 hours/week	3 credits
CSC594-6 Research Project V - 18 hours/week	6 credits
CSC595-3 Research Project VI - 9 hours/week	3 credits
CSC595-6 Research Project VI - 18 hours/week	6 credits
CSC596-3 Research Project VII - 9 hours/week	3 credits
CSC597-3 Research Project VIII - 9 hours/week	3 credits

TOTAL PROGRAM CREDITS **54 CREDITS**

GRADUATE COURSE DESCRIPTIONS_

CSC500 INTRODUCTION TO SOFTWARE DEVELOPMENT (4 CREDITS)

This course provides an introduction to software development using Java as an example of a modern programming language. Students gain an understanding of key software concepts while building essential skills in programming. The course encourages the development of professional programming habits, and the ability to produce working solutions at a good level of quality. Students also gain an appreciation of software architectures and methodologies to link software to business requirements. No previous programming experience is required.

CSC520 ENTERPRISE ARCHITECTURE (4 CREDITS)

Enterprise Architecture is an increasingly important topic in the management of large-scale information systems and their associated resources. This course provides an introduction to the main issues involved in forming a strategic view of the enterprise in an informatics context. Students learn how the information resources of an organization can be defined by integrating different perspectives such as business, software application, data and technology. A number of case studies will be referenced during the course, including the Federal Enterprise Architecture (originated by the U.S. Office of Management and Budget).

CSC560 PROCESS AND DATA PATTERNS (4 CREDITS)

This course introduces students to the concept of repeatable business patterns and shows how they can be used in the specification and development of software solutions. The patterns cover common business object types such as Party, Product, Order, Shipment, etc. and common business process elements such as task branching and synchronization, extended transactions, event handling, etc. Students learn how such patterns can be represented using industry standard notations and how they can be realized using standard development tools.

CSC581 ADVANCED COMPUTING SEMINARS I (1.5 CREDITS)

This instructor-led course examines current topics in Computer Science at a graduate level. A different selection of topics will be covered each quarter so that the course remains focused on issues that are of current importance. Instruction will utilize appropriate combinations of lecture, discussion, technical walk-through, critical review, and other means of exploring advanced computing concepts. The course has two main objectives:

- Provide students with a good understanding of a range of topics at the forefront of modern Computer Science;
- Develop student skills in the critical assessment of computing concepts, particularly in areas related to technology application.

Students will be required to play an active role in class proceedings.

CSC582 ADVANCED COMPUTING SEMINARS II (1.5 CREDITS)

This instructor-led course examines current topics in Computer Science at a graduate level. A different selection of topics will be covered each quarter so that the course remains focused on issues that are of current importance. Instruction will utilize appropriate combinations of lecture, discussion, technical walk-through, critical review, and other means of exploring advanced computing concepts. The course has two main objectives:

- Provide students with a good understanding of a range of topics at the forefront of modern Computer Science;
- Develop student skills in the critical assessment of computing concepts, particularly in areas related to technology application.

Students will be required to play an active role in class proceedings.

CSC583 ADVANCED COMPUTING SEMINARS III (1.5 CREDITS)

This instructor-led course examines current topics in Computer Science at a graduate level. A different selection of topics will be covered each quarter so that the course remains focused on issues that are of current importance. Instruction will utilize appropriate combinations of lecture, discussion, technical walk-through, critical review, and other means of exploring advanced computing concepts. The course has two main objectives:

- Provide students with a good understanding of a range of topics at the forefront of modern Computer Science;
- Develop student skills in the critical assessment of computing concepts, particularly in areas related to technology application.

Students will be required to play an active role in class proceedings.

CSC584 ADVANCED COMPUTING SEMINARS IV (1.5 CREDITS)

This instructor-led course examines current topics in Computer Science at a graduate level. A different selection of topics will be covered each quarter so that the course remains focused on issues that are of current importance. Instruction will utilize appropriate combinations of lecture, discussion, technical walk-through, critical review, and other means of exploring advanced computing concepts. The course has two main objectives:

- Provide students with a good understanding of a range of topics at the forefront of modern Computer Science;
- Develop student skills in the critical assessment of computing concepts, particularly in areas related to technology application.

Students will be required to play an active role in class proceedings.

CSC585 ADVANCED COMPUTING SEMINARS V (1.5 CREDITS)

This instructor-led course examines current topics in Computer Science at a graduate level. A different selection of topics will be covered each quarter so that the course remains focused on issues that are of current importance. Instruction will utilize appropriate combinations of lecture, discussion, technical walk-through, critical review, and other means of exploring advanced computing concepts. The course has two main objectives:

- Provide students with a good understanding of a range of topics at the forefront of modern Computer Science;
- Develop student skills in the critical assessment of computing concepts, particularly in areas related to technology application.

Students will be required to play an active role in class proceedings.

CSC586 ADVANCED COMPUTING SEMINARS VI (1.5 CREDITS)

This instructor-led course examines current topics in Computer Science at a graduate level. A different selection of topics will be covered each quarter so that the course remains focused on issues that are of current importance. Instruction will utilize appropriate combinations of lecture, discussion, technical walk-through, critical review, and other means of exploring advanced computing concepts. The course has two main objectives:

- Provide students with a good understanding of a range of topics at the forefront of modern Computer Science;
- Develop skills in the critical assessment of computing concepts, particularly in areas related to technology application.

Students will be required to play an active role in class proceedings.

CSC587 ADVANCED COMPUTING SEMINARS VII (1.5 CREDITS)

This instructor-led course examines current topics in Computer Science at a graduate level. A different selection of topics will be covered each quarter so that the course remains focused on issues that are of current importance. Instruction will utilize appropriate combinations of lecture, discussion, technical walk-through, critical review, and other means of exploring advanced computing concepts. The course has two main objectives:

- Provide students with a good understanding of a range of topics at the forefront of modern Computer Science;
- Develop student skills in the critical assessment of computing concepts, particularly in areas related to technology application.

Students will be required to play an active role in class proceedings.

CSC588 ADVANCED COMPUTING SEMINARS VIII (1.5 CREDITS)

This instructor-led course examines current topics in Computer Science at a graduate level. A different selection of topics will be covered each quarter so that the course remains focused on issues that are of current importance. Instruction will utilize appropriate combinations of lecture, discussion, technical walk-through, critical review, and other means of exploring advanced computing concepts. The course has two main objectives:

- Provide students with a good understanding of a range of topics at the forefront of modern Computer Science;
- Develop student skills in the critical assessment of computing concepts, particularly in areas related to technology application.

Students will be required to play an active role in class proceedings.

CSC590-3 RESEARCH PROJECT I – 9 HOURS PER WEEK (3 CREDITS)

This research project provides an opportunity for students to engage in focused research, and optionally development, on the state-of-the-art in a selected area of computer science. The student will review the relevant literature to become familiar with leading-edge research in the area, and then develop theoretical and/or practical proposals to extend the relevant body of knowledge. Typically, the student will author or co-author a detailed specification for these extensions, implement parts of the specification in code, and author or co-author a technical paper suitable for submission for publication as a Neumont University technical report or as an article in a respected workshop proceedings, conference proceedings, or journal. If the theoretical content is sufficient (e.g. detailed discussion of new algorithms developed by the student), no software specification or coding is required.

Prerequisites: Instructor approval

CSC590-6 RESEARCH PROJECT I – 18 HOURS/WEEK (6 CREDITS)

This research project provides an opportunity for students to engage in focused research, and optionally development, on the state-of-the-art in a selected area of computer science. The student will review the relevant literature to become familiar with leading-edge research in the area, and then develop theoretical and/or practical proposals to extend the relevant body of knowledge. Typically, the student will author or co-author a detailed specification for these extensions, implement parts of the specification in code, and author or co-author a technical paper suitable for submission for publication as a Neumont University technical report or as an article in a respected workshop proceedings, conference proceedings, or journal. If the theoretical content is sufficient (e.g. detailed discussion of new algorithms developed by the student), no software specification or coding is required.

Prerequisites: Instructor Permission

CSC590-9 RESEARCH PROJECT I – 27 HOURS/WEEK (9 CREDITS)

This research project provides an opportunity for students to engage in focused research, and optionally development, on the state-of-the-art in a selected area of computer science. The student will review the relevant literature to become familiar with leading-edge research in the area, and then develop theoretical and/or practical proposals to extend the relevant body of knowledge. Typically, the student will author or co-author a detailed specification for these extensions, implement parts of the specification in code, and author or co-author a technical paper suitable for submission for publication as a Neumont University technical report or as an article in a respected workshop proceedings, conference proceedings, or journal. If the theoretical content is sufficient (e.g. detailed discussion of new algorithms developed by the student), no software specification or coding is required.

Prerequisites: Instructor Permission

CSC590-12 RESEARCH PROJECT I – 36 HOURS/WEEK (12 CREDITS)

This research project provides an opportunity for students to engage in focused research, and optionally development, on the state-of-the-art in a selected area of computer science. The student will review the relevant literature to become familiar with leading-edge research in the area, and then develop theoretical and/or practical proposals to extend the relevant body of knowledge. Typically, the student will author or co-author a detailed specification for these extensions, implement parts of the specification in code, and author or co-author a technical paper suitable for submission for publication as a Neumont University technical report or as an article in a respected workshop proceedings, conference proceed-

ings, or journal. If the theoretical content is sufficient (e.g. detailed discussion of new algorithms developed by the student), no software specification or coding is required.
Prerequisites: Instructor Permission

CSC591-3 RESEARCH PROJECT II – 9 HOURS/WEEK (3 CREDITS)
This research project provides an opportunity for students to engage in focused research, and optionally development, on the state-of-the-art in a selected area of computer science. The student will review the relevant literature to become familiar with leading-edge research in the area, and then develop theoretical and/or practical proposals to extend the relevant body of knowledge. Typically, the student will author or co-author a detailed specification for these extensions, implement parts of the specification in code, and author or co-author a technical paper suitable for submission for publication as a Neumont University technical report or as an article in a respected workshop proceedings, conference proceedings, or journal. If the theoretical content is sufficient (e.g. detailed discussion of new algorithms developed by the student), no software specification or coding is required.
Prerequisites: Instructor Permission

CSC591-6 RESEARCH PROJECT II – 18 HOURS/WEEK (6 CREDITS)
This research project provides an opportunity for students to engage in focused research, and optionally development, on the state-of-the-art in a selected area of computer science. The student will review the relevant literature to become familiar with leading-edge research in the area, and then develop theoretical and/or practical proposals to extend the relevant body of knowledge. Typically, the student will author or co-author a detailed specification for these extensions, implement parts of the specification in code, and author or co-author a technical paper suitable for submission for publication as a Neumont University technical report or as an article in a respected workshop proceedings, conference proceedings, or journal. If the theoretical content is sufficient (e.g. detailed discussion of new algorithms developed by the student), no software specification or coding is required.
Prerequisites: Instructor Permission

CSC591-9 RESEARCH PROJECT II – 27 HOURS/WEEK (9 CREDITS)
This research project provides an opportunity for students to engage in focused research, and optionally development, on the state-of-the-art in a selected area of computer science. The student will review the relevant literature to become familiar with leading-edge research in the area, and then develop theoretical and/or practical proposals to extend the relevant body of knowledge. Typically, the student will author or co-author a detailed specification for these extensions, implement parts of the specification in code, and author or co-author a technical paper suitable for submission for publication as a Neumont University technical report or as an article in a respected workshop proceedings, conference proceedings, or journal. If the theoretical content is sufficient (e.g. detailed discussion of new algorithms developed by the student), no software specification or coding is required.
Prerequisites: Instructor Permission

CSC591-12 RESEARCH PROJECT II – 36 HOURS/WEEK (12 CREDITS)
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Prerequisites: Instructor Permission

CSC592-3 RESEARCH PROJECT III – 9 HOURS/WEEK (3 CREDITS)
This research project provides an opportunity for students to engage in focused research, and optionally development, on the state-of-the-art in a selected area of computer science. The student will review the relevant literature to become familiar with leading-edge research in the area, and then develop theoretical and/or practical proposals to extend the relevant body of knowledge. Typically, the student will author or co-author a detailed specification for these extensions, implement parts of the specification in code, and author or co-author a technical paper suitable for submission for publication as a Neumont University technical report or as an article in a respected workshop proceedings, conference proceedings, or journal. If the theoretical content is sufficient (e.g. detailed discussion of new algorithms developed by the student), no software specification or coding is required.
Prerequisites: Instructor Permission

CSC592-6 RESEARCH PROJECT III – 18 HOURS/WEEK (6 CREDITS)
This research project provides an opportunity for students to engage in focused research, and optionally development, on the state-of-the-art in a selected area of computer science. The student will review the relevant literature to become familiar with leading-edge research in the area, and then develop theoretical and/or practical proposals to extend the relevant body of knowledge. Typically, the student will author or co-author a detailed specification for these extensions, implement parts of the specification in code, and author or co-author a technical paper suitable for submission for publication as a Neumont University technical report or as an article in a respected workshop proceedings, conference proceedings, or journal. If the theoretical content is sufficient (e.g. detailed discussion of new algorithms developed by the student), no software specification or coding is required.
Prerequisites: Instructor Permission

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Prerequisites: Instructor Permission

CSC592-12 RESEARCH PROJECT III – 36 HOURS/WEEK (12 CREDITS)

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Prerequisites: Instructor Permission

CSC593-3 RESEARCH PROJECT IV – 9 HOURS/WEEK (3 CREDITS)

This research project provides an opportunity for students to engage in focused research, and optionally development, on the state-of-the-art in a selected area of computer science. The student will review the relevant literature to become familiar with leading-edge research in the area, and then develop theoretical and/or practical proposals to extend the relevant body of knowledge. Typically, the student will author or co-author a detailed specification for these extensions, implement parts of the specification in code, and author or co-author a technical paper suitable for submission for publication as a Neumont University technical report or as an article in a respected workshop proceedings, conference proceedings, or journal. If the theoretical content is sufficient (e.g. detailed discussion of new algorithms developed by the student), no software specification or coding is required.
Prerequisites: Instructor Permission

CSC593-6 RESEARCH PROJECT IV – 18 HOURS/WEEK (6 CREDITS)

This research project provides an opportunity for students to engage in focused research, and optionally development, on the state-of-the-art in a selected area of computer science. The student will review the relevant literature to become familiar with leading-edge research in the area, and then develop theoretical and/or practical proposals to extend the relevant body of knowledge. Typically, the student will author or co-author a detailed specification for these extensions, implement parts of the specification in code, and author or co-author a technical paper suitable for submission for publication as a Neumont University technical report or as an article in a respected workshop proceedings, conference proceedings, or journal. If the theoretical content is sufficient (e.g. detailed discussion of new algorithms developed by the student), no software specification or coding is required.
Prerequisites: Instructor Permission

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Prerequisites: Instructor Permission

CSC593-12 RESEARCH PROJECT IV – 36 HOURS/WEEK (12 CREDITS)

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Prerequisites: Instructor Permission

CSC594-3 RESEARCH PROJECT V – 9 HOURS/WEEK (3 CREDITS)

This research project provides an opportunity for students to engage in focused research, and optionally development, on the state-of-the-art in a selected area of computer science. The student will review the relevant literature to become familiar with leading-edge research in the area, and then develop theoretical and/or practical proposals to extend the relevant body of knowledge. Typically, the student will author or co-author a detailed specification for these extensions, implement parts of the specification in code, and author or co-author a technical paper suitable for submission for publication as a Neumont University technical report or as an article in a respected workshop proceedings, conference proceedings, or journal. If the theoretical content is sufficient (e.g. detailed discussion of new algorithms developed by the student), no software specification or coding is required.
Prerequisites: Instructor Permission

CSC594-6 RESEARCH PROJECT V – 18 HOURS/WEEK (6 CREDITS)

This research project provides an opportunity for students to engage in focused research, and optionally development, on the state-of-the-art in a selected area of computer science. The student will review the relevant literature to become familiar with leading-edge research in the area, and then develop theoretical and/or practical proposals to extend the relevant body of knowledge. Typically, the student will

author or co-author a detailed specification for these extensions, implement parts of the specification in code, and author or co-author a technical paper suitable for submission for publication as a Neumont University technical report or as an article in a respected workshop proceedings, conference proceedings, or journal. If the theoretical content is sufficient (e.g. detailed discussion of new algorithms developed by the student), no software specification or coding is required.
Prerequisites: Instructor Permission

CSC595-3 RESEARCH PROJECT VI – 9 HOURS/WEEK (3 CREDITS)
This research project provides an opportunity for students to engage in focused research, and optionally development, on the state-of-the-art in a selected area of computer science. The student will review the relevant literature to become familiar with leading-edge research in the area, and then develop theoretical and/or practical proposals to extend the relevant body of knowledge. Typically, the student will author or co-author a detailed specification for these extensions, implement parts of the specification in code, and author or co-author a technical paper suitable for submission for publication as a Neumont University technical report or as an article in a respected workshop proceedings, conference proceedings, or journal. If the theoretical content is sufficient (e.g. detailed discussion of new algorithms developed by the student), no software specification or coding is required.
Prerequisites: Instructor Permission

CSC595-6 RESEARCH PROJECT VI – 18 HOURS/WEEK (6 CREDITS)
This research project provides an opportunity for students to engage in focused research, and optionally development, on the state-of-the-art in a selected area of computer science. The student will review the relevant literature to become familiar with leading-edge research in the area, and then develop theoretical and/or practical proposals to extend the relevant body of knowledge. Typically, the student will author or co-author a detailed specification for these extensions, implement parts of the specification in code, and author or co-author a technical paper suitable for submission for publication as a Neumont University technical report or as an article in a respected workshop proceedings, conference proceedings, or journal. If the theoretical content is sufficient (e.g. detailed discussion of new algorithms developed by the student), no software specification or coding is required.
Prerequisites: Instructor Permission

CSC596-3 RESEARCH PROJECT VII – 9 HOURS/WEEK (3 CREDITS)
This research project provides an opportunity for students to engage in focused research, and optionally development, on the state-of-the-art in a selected area of computer science. The student will review the relevant literature to become familiar with leading-edge research in the area, and then develop theoretical and/or practical proposals to extend the relevant body of knowledge. Typically, the student will author or co-author a detailed specification for these extensions, implement parts of the specification in code, and author or co-author a technical paper suitable for submission for publication as a Neumont University technical report or as an article in a respected workshop proceedings, conference proceedings, or journal. If the theoretical content is sufficient (e.g. detailed discussion of new algorithms developed by the student), no software specification or coding is required.
Prerequisites: Instructor Permission

CSC597-3 RESEARCH PROJECT VIII – 9 HOURS/WEEK (3 CREDITS)
This research project provides an opportunity for students to engage in focused research, and optionally development, on the state-of-the-art in a selected area of computer science. The student will review the relevant literature to become familiar with leading-edge research in the area, and then develop theoretical and/or practical proposals to extend the relevant body of knowledge. Typically, the student will author or co-author a detailed specification for these extensions, implement parts of the specification in code, and author or co-author a technical paper suitable for submission for publication as a Neumont University technical report or as an article in a respected workshop proceedings, conference proceedings, or journal. If the theoretical content is sufficient (e.g. detailed discussion of new algorithms developed by the student), no software specification or coding is required.
Prerequisites: Instructor Permission

DBT500 BUSINESS DATABASE SYSTEMS (4 CREDITS)
Relational databases underpin the majority of today's business information systems. This course provides students with a working knowledge of relational database technology, emphasizing its application in practical information systems. The course covers the relational model of data, and the use of the industry-standard SQL language as a means of defining, manipulating, and controlling databases. Students use modern relational database management systems (such as SQL Server and DB2) to apply their knowledge.

DBT524 QUERYING XML DATA WITH XPATH AND XQUERY (4 CREDITS)
XML has become the standard approach for representing structured data in a form that can be transferred between computer systems. XML can be used to capture a wide range of information, from highly structured (such as tables of statistics) to relatively loosely structured (such as a book). This course provides students with the basic knowledge and skills required to extract meaningful information from XML documents of all kinds. The course is based on the XPath and XQuery languages defined by the World Wide Web Consortium (W3C).
Prerequisites: DBT230 (Databases II) or equivalent

DBT530 DATA WAREHOUSING AND BUSINESS INTELLIGENCE (4 CREDITS)
This course explores a number of topics in business intelligence systems, especially data warehousing. Students learn the principles underlying efficient utilization of modern business intelligence systems, and apply these principles using the latest technologies provided by industrial DBMSs such as Microsoft's SQL Server and IBM's DB2. Students will learn how to integrate data from various sources, use controlled denormalization to design efficient data warehouses and data marts, analyze and mine data, and design appropriate reports.
Prerequisites: DBT230 (Databases II) or equivalent

MOA500 BUSINESS INFORMATION MODELING (4 CREDITS)
This course provides a solid basis for modeling business information and business rules at a conceptual level, and transforming high level information models into relational database schemas for implementation in practical database management systems. While it's conceptual emphasis is on Object-Role Modeling (ORM) it also covers the class diagramming technique within the Unified Modeling Language (UML), and discusses how to transform ORM models into UML class models.

MOA535 BUSINESS MODELING AND SYSTEM DESIGN (4 CREDITS)

Students learn to apply concepts in modeling business information and methods for mapping business requirements onto technology realizations. Detailed coverage focuses mainly on the implementation of business objects, business processes and business rules. Students will learn how to use modern tools to facilitate the production of enterprise-scale applications.

Prerequisites: Students must have successfully completed at least one of the following: Neumont University course MOA235 (Introduction to Model Driven Development) or an acceptable equivalent course, or a minimum of two years experience in specifying, procuring, or developing business-facing software applications.

MOA540 ADVANCED INFORMATION MODELING (4 CREDITS)

This course covers further concepts in modeling business information and business rules. A selection will be made from topics such as Entity Relationship modeling, conceptual schema equivalence and optimization, reverse engineering and data migration, normalization and controlled denormalization, meta-modeling, conceptual query languages, mapping ORM to XML Schema, and model management.

Prerequisites: MOA240 Information Modeling II or equivalent

MOA542 ADVANCED MODELING TOPICS I (4 CREDITS)

This course explores a number of advanced topics in modeling business information and business rules. It assumes familiarity with conceptual information modeling approaches such as Object-Role Modeling (ORM) and Entity Relationship (ER) modeling, as well as class diagramming within the Unified Modeling Language (UML). A selection will be made from topics such as advanced subtyping, advanced derivation, nominalization/objectification, business rule modalities, rule formalization and verbalization, conceptual joins, collection types, higher-order types, open/closed world semantics, basic temporal semantics, and data model patterns.

Prerequisites: MOA240 Information Modeling II

MOA544 ADVANCED MODELING TOPICS II (4 CREDITS)

This course explores a number of advanced topics in modeling business information and business rules. It assumes familiarity with conceptual information modeling approaches such as Object-Role Modeling (ORM) and Entity Relationship (ER) modeling, as well as the class diagramming technique within the Unified Modeling Language (UML). A selection will be made from topics such as formal textual constraints, dynamic rules, advanced temporal modeling, thing/occurrence distinctions, advanced derivation options, mapping conceptual schemas to object oriented schemas, mapping conceptual schemas to Extensible Markup Language (XML) schemas, ontologies and the semantic web, mapping conceptual schemas to the Web Ontology Language (OWL), and pragmatic issues in modeling.

Prerequisites: MOA240 Information Modeling II

MOA635 ADVANCED MODEL DRIVEN DEVELOPMENT (4 CREDITS)

Students learn further advanced concepts in model-driven development, including the application of relevant industry standards, the characteristics of successful modeling projects, and issues in managing models, such as version control, verification, validation, and governance. Coverage of specialized tools will be included as appropriate.

Prerequisites: Students must have successfully completed at least one of the following: MOA435 (Model Driven Development II) or MOA535 (Business Modeling and System Design) or an acceptable equivalent course or a minimum of two years experience in developing business-facing software applications using a modern object-oriented programming language.

STUDENT AFFAIRS_

KENT BARTON
CLASS OF 2010
SOFTWARE DEVELOPER
ITT EXELIS

HOUSING

A far cry from traditional dorm life, Neumont housing offers affordable, furnished, apartment-style living close to campus. Student activities find a nucleus here. All rooms are shared. See www.neumont.edu/studenthousing for more information.

All housing is fully furnished, including:

- A washer and dryer
- Couches
- Beds
- Lamps
- Two bedroom apartments
- Shared by four students.

STUDENT ADVISING

Advising encompasses several important areas of student life. The school advises and assists students in course selection and registration, dropping and adding courses, and meeting graduation requirements.

LIBRARY (DALE HULL LEARNING CENTER)

The goal of the Dale Hull Learning Center is twofold:

- Serve the information needs of students and faculty members of the Neumont University community
- Offer users the convenience and flexibility of a ubiquitous digital library infrastructure, which delivers library materials to the desktop

The library achieves these goals by using on-line library services. Traditional resources include both journal publications and general periodicals. The online library hosts subscription-based databases, online books, journals, technical reports, reference tools, and other information products. Users have 24-hour availability from campus or remote locations. The University's Learning Center is overseen by the Learning Center Director and the Office of University Relations, which works with faculty to ensure that library collection remains current.

Information about the Learning Center is available online at: www.neumont.edu/library.

CAREER SERVICES

The Office of Career Services assists graduates in identifying potential career paths, a positive self-image, technical competencies, and career expectations. Upon completion of the program, Neumont University will assist graduates in locating career opportunities in Computer Science and related fields. We have established strong relationships with potential employers and foster these relationships as they help us identify what the industry considers necessary technologies and valuable skills for the success of our graduates.

Although the University does not, in any way, guarantee employment, it is the goal of Neumont University to help our graduates realize a high degree of personal and professional development and successful employment.

More information about the career services program can be found in the careers and alumni section of www.neumont.edu.

UNIVERSITY POLICIES_

CELESTE ROBY
BARRY NIX
GREG WHELAN
CLASS OF 2012

FAMILIARITY WITH UNIVERSITY REGULATIONS

The *Course Catalog* and *Student Handbook*, are made available to all students on the Neumont website, set forth the policies and regulations under which the institution operates. It is the responsibility of the student to familiarize themselves with these policies and regulations and to comply accordingly.

PROGRAMS AND CHARGES

The University reserves the right to modify its tuition and fees; to add to or withdraw members from its faculty and staff; to revise its academic programs; and to withdraw subjects or courses if registration falls below the required number. A specific course requirement may be changed or waived by the Provost upon written request and for reasonable cause. The total credits specified in each area of the degree are the minimum requirements for completion.

CAMPUS SECURITY

In compliance with the crime awareness provisions of the Campus Security Act of 1990, crime statistics and campus security policies are available through the Office of Student Affairs and on the Neumont University website.

STUDENT CONDUCT

Each student is held responsible for conforming to local, state, and federal laws and for behaving in a manner consistent with the best interest of the University and of the student body. Students should not interfere with other students' rights, safety, health, or right to learn. Violations to conduct standards include, but are not limited to:

- Theft
- Disruptive behavior
- Possession or use of firearms, explosives, or other dangerous substances
- Vandalism or threats of actual damage to property or physical harm to others
- Possession, sale, transfer, or use of illegal drugs
- Appearance of being under the influence of alcohol or illegal drugs, possession or consumption of alcohol on campus
- Harassing or abusive acts which invade an individual's right to privacy including sexual harassment or abuse against members of a particular race, ethnic, religious, or cultural group
- Any activity that may be perceived as hazing, which is defined as a situation or activity which intentionally or recklessly endangers the physical or mental health or safety of an individual for the purpose of admission or initiation into any affiliation or organization associated with the University
- Reckless or intentional use of invasive software such as viruses and worms destructive to hardware, software, or data files
- Academic dishonesty
- Violence or the threat of violence
- Violation of any Housing or University policy
- Violation of the Acceptable Use Policy for school-issued equipment

Note: This list is not exhaustive. To view the full version of the Student Code, please refer to the Neumont University Student Handbook.

The University reserves the right to suspend or dismiss any student at any time when such action is deemed to be in the best interest of the student or the student body. Dismissal may be the result of misconduct; poor academic performance – even when the student has met Satisfactory Academic Progress requirements – or in response to other compelling indications that a student may not be successful at Neumont; a student is deemed mentally or medically unfit for school enrollment; or due to other factors that warrant separating a student from school.

ACADEMIC HONESTY

The University adheres to the tenet that professional attitude begins in the classroom. For that reason, students and faculty of the University will not tolerate or commit any form of academic dishonesty.

Academic misconduct includes, but is not limited to:

- use of any unauthorized assistance in taking quizzes, tests, or examinations;
- use of sources beyond those authorized by the instructor in writing papers, preparing reports, solving problems, or carrying out other assignments;
- the acquisition, without permission, of tests or other academic material belonging to a member of the university faculty or staff;
- engaging in any behavior specifically prohibited by a faculty member in the course syllabus or class discussion;
- unauthorized file sharing (authorized file sharing guidelines for a class are defined by the instructor); copying work or allowing work to be copied in whole or in part through any means (electronic copy, printed copy, manually-created copy, etc.);
- collaboration beyond the scope that is allowed by the instructor;
- using deceit to gain academic credit; plagiarism.

Acts of academic dishonesty are defined as falsification of materials submitted for a grade, representation of another's work as one's own, or violation of test conditions as designated by the instructor. Academic dishonesty can also be collaboration beyond the scope that is allowed by an instructor, file-sharing, submitting false documentation for excused absence requests, or other deceit used to gain academic credit.

Note: This list is not exhaustive. To view the full version of the Student Code, please refer to the Neumont University Student Handbook.

ALCOHOL AND SUBSTANCE ABUSE STATEMENT

The University does not permit or condone the use or possession of alcohol, marijuana, or any other illegal drug, narcotic, or controlled substance by students or employees while on school premises. Alcohol is only permitted in designated areas in the student housing in compliance with state and local laws.

In accordance with the Drug-Free Schools and Communities Act Amendments of 1989 (Public Law 101-226), the following policy is in effect:

> Students found in violation of the unlawful possession, use, or distribution of drugs or alcohol on the University campus, or as any part of the institution's activities, will be subject to disciplinary sanctions from the University.

Students are subject to all local, state, and federal laws. Students should also be aware that the use of illicit drugs and the abuse of alcohol are dangerous to personal health and present an additional risk for pregnant women and their unborn children.

Drug and alcohol counseling referrals are available at the University to students through the Office of Student Affairs. Individuals needing treatment or rehabilitation will be referred to an appropriate community resource. Neumont University does not assume the responsibility for the cost incurred for drug treatment or rehabilitation.

SEXUAL HARASSMENT POLICY

The University strives to provide and maintain an environment free of all forms of harassment, including sexual harassment.

The following guidelines are issued which legally define sexual harassment as unwelcome sexual advances, requests for sexual favors, and other verbal or physical conduct of a sexual nature when:

- Submission to such conduct is made either explicitly or implicitly as a term or condition of an individual's employment,
- Submission to or rejection of such conduct by an individual is used as the basis for employment or academic decisions affecting such an individual, or
- Such conduct has the purpose or effect of unreasonably interfering with an individual's academic or work performance or creating an intimidating, hostile, or offensive working environment.

The University will not tolerate sexual harassment. Behavior toward any employee or student by a member of the staff, faculty, or student body which constitutes unwelcome sexual advances, including comments of a sexual nature, or inappropriate conduct, including the display of derogatory drawings, cartoons, or posters, will be dealt with quickly and vigorously and will result in disciplinary action up to and including termination or dismissal.

The sexual harassment of any employee or student of Neumont University is forbidden. The Office of Student Affairs is responsible for receiving and investigating complaints of sexual harassment involving a student(s). Any employee, student, or administrator who is aware of an alleged incident of sexual harassment involving a student(s) should take immediate action by bringing the matter to the attention of the Office of Student Affairs.

JUDICIAL PROCEDURES

Students who violate school policies, including the Student Code, *Housing Rules and Regulations*, instructions from a faculty member, the *Acceptable Use Policy*, or other school policies will be subject to judicial sanctions which may include suspension or dismissal from the University. Judicial procedures will be handled through the Office of Student Affairs. Details of the appeal process can be found in the Student Code, located in the *Student Handbook*.

STUDENT COMPLAINTS

Generally, complaints should be directed to the Office of Student Affairs. If Student Affairs is not able to address the student's complaint, the student may seek additional assistance from the following:

> Academic concerns: Office of University Relations
> Operational issues or concerns: President

If a student feels that the University has not adequately addressed a complaint or concern, the student may consider contacting the Accrediting Council, at 750 First Street, N.E., Suite 980, Washington, DC 20002-4241, (202) 336-6780.

Students may also contact the Utah State Commission on Postsecondary Education at the Heber Wells Building, Second Floor, 160 East 300 South, SM Box 136704, Salt Lake City, UT 84114-6704, (801) 530-6601.

Students will NOT be subject to unfair actions as a result of initiating a complaint.

STATEMENT OF NON-DISCRIMINATION

Neumont University does not discriminate on the basis of race, color, national origin, sex, religion, age, marital status, veteran status, or disability, in the administration of its educational and admissions policies, scholarship and loan programs, or other university administered programs.

Neumont University complies with Title VI of the Civil Rights Act of 1964, the Age Discrimination in Employment Act of 1967, Title IX of the Education Amendments of 1972, Section 504 of the Rehabilitation Act of 1973, the Age Discrimination Act of 1975, and the Americans with Disabilities Act of 1990. The Americans with Disabilities Act of 1990, as amended, protects qualified applicants, students, and employees with disabilities from discrimination in hiring, promotion, discharge, pay, job training, fringe benefits, classification, referral, and other aspects of employment on the basis of disability. The law also requires that covered entities provide qualified applicants, students, and employees with disabilities with reasonable accommodations that do not impose undue hardship.

GRADE APPEALS

Grade appeals must be submitted to the Registrar no later than the first day of the quarter or sprint following the quarter for which a grade is being appealed. Appeals received after the first day of the sprint may not be considered. The Appeals Committee will meet in a timely manner, as needed, to consider grade appeals.

Please contact the Office of the Registrar for the proper grade appeal documents and procedures.

FAMILY EDUCATIONAL RIGHTS AND PRIVACY ACT OF 1974

The Family Educational Rights and Privacy Act (FERPA) affords students certain rights with respect to their education records. These rights include:

(1) The right to inspect and review the student's education records within 45 days of the day the University receives a request for access.

A student should submit to the Registrar a written request that identifies the record(s) the student wishes to inspect. The University official will make arrangements for access and notify the student of the time and place where the records may be inspected. If the records are not maintained by the University official to whom the request was submitted, that official shall advise the student of the correct official to whom the request should be addressed.

(2) The right to request the amendment of the student's education records that the student believes are inaccurate, misleading, or otherwise in violation of the student's privacy rights under FERPA.

A student who wishes to ask the University to amend a record should write the University official responsible for the record, clearly identify the part of the record the student wants changed, and specify why it should be changed.
If the University decides not to amend the record as requested, the University will notify the student in writing of the decision and the student's right to a hearing regarding the request for amendment. Additional information regarding the hearing procedures will be provided to the student when notified of the right to a hearing.

(3) The right to provide written consent before the University discloses personally identifiable information from the student's education records, except to the extent that FERPA authorizes disclosure without consent.

The University discloses education records without a student's prior written consent under the FERPA exception for disclosure to school officials with legitimate educational interests. A school official is a person employed by the University in an administrative, supervisory, academic or research, or support staff position (including law enforcement unit personnel and health staff); a person or company with whom the University has contracted as its agent to provide a service instead of using University employees or officials (such as an attorney, auditor, or collection agent); a person serving on the Board of Trustees; or a student serving on an official committee, such as a disciplinary or grievance committee, or assisting another school official in performing his or her tasks.

A school official has a legitimate educational interest if the official needs to review an education record in order to fulfill his or her professional responsibilities for the University.

Upon request, the University also discloses education records without consent to officials of another school in which a student seeks or intends to enroll.

(4) The right to file a complaint with the U.S. Department of Education concerning alleged failures by the University to comply with the requirements of FERPA. The name and address of the Office that administers FERPA is:

Family Policy Compliance Office
U.S. Department of Education
400 Maryland Avenue, SW
Washington, DC 20202-5902

NOTICE FOR DIRECTORY INFORMATION

The Family Educational Rights and Privacy Act (FERPA), a Federal law, requires that Neumont University, with certain exceptions, obtain your written consent prior to the disclosure of personally identifiable information from your education records. However, Neumont may disclose appropriately designated "directory information" without written consent, unless you have advised the university to the contrary in accordance with Neumont procedures.

The primary purpose of directory information is to allow Neumont University to include information from your educational records in certain school publications. Examples include:

- academic and attendance recognition
- commencement programs
- promotional material on behalf of the university

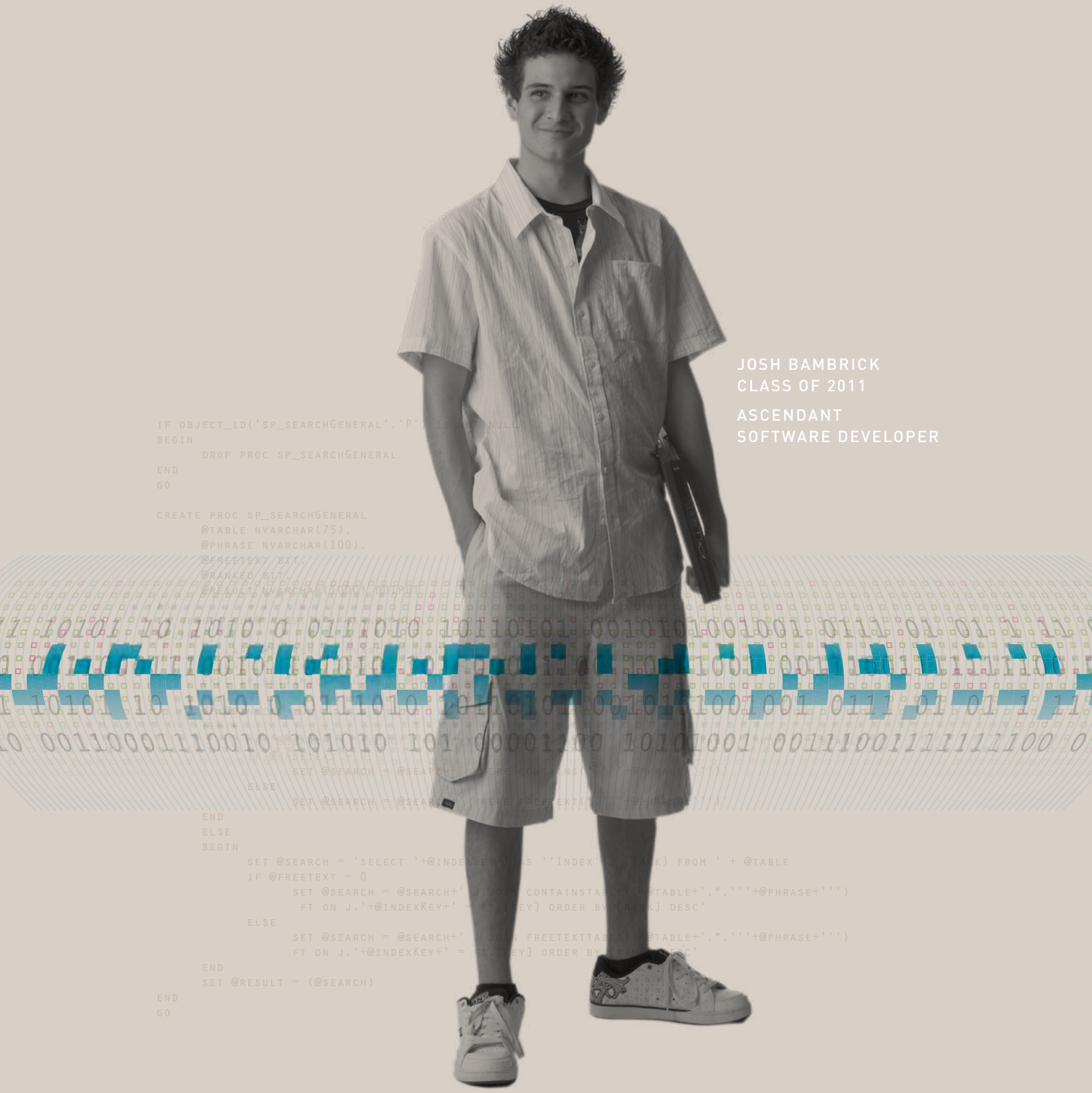
Directory information, which is information that is generally not considered harmful or an invasion of privacy if released, can also be disclosed to outside organizations without a student's prior written consent.

Neumont University has designated the following information as directory information:

- Student's name
- Participation in officially recognized activities
- Address
- Telephone listing
- Electronic mail address
- Photograph
- Degrees, honors, and awards received
- Date and place of birth
- Dates of attendance
- Cohort number
- Personal websites
- Internal and Enterprise project topics and partners
- The most recent educational agency or institution attended

More information on Neumont's FERPA policy is available on the website.

_SCHOLARSHIPS AND FINANCIAL AID



JOSH BAMBRICK
CLASS OF 2011

ASCENDANT
SOFTWARE DEVELOPER

SCHOLARSHIPS AND FINANCIAL AID_

Paying for college is a challenge for most students and their families. Neumont University provides assistance through the Office of Financial Aid to help students formulate a plan to finance their education, and financial aid is available for those who qualify.

Sources of funding for a Neumont education include:

- Neumont scholarships, including merit-based, need-based, and resident-based scholarships
- Federal grants: Pell, SEOG, IASG
- Federal loans: Subsidized Federal Direct Loans, Unsubsidized Federal Direct Loans, and Federal Direct PLUS Loans
- Private lending options
- Veterans assistance programs
- Alternative financing programs

Since the primary responsibility for the education of a student rests with the student and his or her family, it is presumed that the student and the family will make the maximum effort to provide for the expenses of an undergraduate education. Financial aid, regardless of the source, should always be considered a supplement to, not a substitute for, family financial support.

NEUMONT SCHOLARSHIPS

Neumont University has allocated $2,000,000 in scholarships (financial aid awarded by the institution that does not have to be repaid by students) to reduce the cost of attendance for first-time, full-time students in 2012. This translates into an average tuition scholarship rate of 18%, though individual tuition scholarship rates vary by student, depending on academic achievement, need, and residency at the time of application.

APPLYING FOR SCHOLARSHIPS

To apply for scholarships, incoming students must complete the *Neumont University Application for Admission* and provide any additional information noted in the description of each scholarship. Any required additional materials must be received, in their entirety, by the Scholarship Committee before the published deadline. For scholarship application deadlines, contact the Admissions Department or visit www.neumont.edu/scholarships. Send all additional materials to scholarship@neumont.edu.

Students are encouraged to submit their Application for Admission and any supplemental materials promptly, since Neumont scholarships are awarded on a first-come, first-served basis.

There are three types of Neumont scholarships:

- *Merit-based scholarships*,which are available to undergraduate and graduate students who have demonstrated superior academic performance in high school or college, as determined by the Neumont Scholarship Committee.
- *Need-based scholarships*, which are available to undergraduate students with demonstrated financial need, as determined by the student's Expected Family Contribution (EFC) derived from the Free Application for Federal Student Aid (FAFSA).
- *Utah resident scholarships*, which are available to undergraduate students who meet specific Utah residency requirements.

All Neumont scholarships are governed by the following rules:

- Scholarships are only available to full-time students making normal progress. Normal progress is defined as ten continuous quarters from the first date of attendance at Neumont to graduation (twelve quarters for students enrolled in the BSGD program). Any student who drops below full-time status may forfeit his or her scholarship. Exceptions may be considered for students with unexpected family or health events, or students withdrawing or deferring enrollment for full-time humanitarian, community, military, or religious service.
- Scholarship awards expire at the end of the standard degree program duration. The clock for the standard enrollment period beings on a student's first day of class and expires at the conclusion of the 10th quarter for BSCS, BSTM, and BSWD programs, and the 12th quarter for the BSGD program.
- Any changes to the Enrollment Agreement between the student and Neumont University may result in the loss of a scholarship award.
- The total dollars available to be applied to a student's account may not exceed, on a cumulative basis, more than 100% of charges for tuition. Scholarship awards to any student, for any quarter, are limited to the total amount of tuition due that quarter.
- Scholarships are awarded at the time of enrollment only. All decisions of the Neumont University Scholarship Committee are final.

- Scholarships are subject to cancellation on delinquent student accounts.

In addition to scholarship specific requirements, all scholarships are subject to forfeiture for:

- Poor academic performance
- Judicial infractions, including academic misconduct
- Delinquent student accounts
- Withdrawal from continuous enrollment
- Failure to meet cumulative Grade Point Average (cGPA) requirements

UNDERGRADUATE SCHOLARSHIPS

NEUMONT MERIT-BASED SCHOLARSHIP

Merit-based scholarships are awarded to first-time, entering students who have demonstrated superior academic performance in high school or college. There are two types of merit-based scholarships:

ACHIEVEMENT SCHOLARSHIP

To encourage enrollment of highly-qualified students who demonstrate superior academic competency and skill, Neumont University grants merit-based scholarships of $ 5,000 to $12,500 for the entire program (up to $1,250 per academic quarter) for the 10-quarter BSCS, BSTM, and BSWD programs, or $6,000 to $15,000 for the entire program (up to $1,500 per academic quarter) for the 12-quarter BSGD program.

INTERNATIONAL SCHOLARSHIP

To encourage the enrollment of highly qualified international students, Neumont University awards international students merit scholarships, ranging from $400 to $800 per academic quarter, for a total of $4,000-$8,000 for the 10-quarter BSCS, BSTM, and BSWD programs and $4,800-9,600 for the 12-quarter BSGD program.

PRESIDENTIAL SCHOLARSHIPS

Neumont reserves Presidential Scholarships for the five most academically accomplished applicants who have submitted an application by the General Acceptance deadline of January 31, 2011. Applicants are offered either a 100% tuition scholarship of $72,000 for the 10-quarter BSCS, BSTM, and BSWD programs ($7,200 per academic quarter) or $86,400 for the 12-quarter BSGD program ($7,200 per academic quarter), or a 50% tuition scholarship of $36,000 for the 10-quarter BSCS, BSTM, and BSWD programs ($3,600 per academic quarter), or $43,200 for the 12-quarter BSGD program ($3,600 per academic quarter). Presidential Scholarship recipients may not receive any other merit or need-based Neumont scholarship.

Prospective students who would like to be considered for any Neumont merit scholarship should:

- Complete *Neumont's Application for Admission*
- Submit high school transcripts
- Submit transcripts for any post-secondary education (if applicable)
- Submit an official standardized test score (ACT or SAT). Significant work experience may be counted in lieu of a standardized test score.

Merit scholarship recipients must maintain a cGPA of 3.50 or higher. Students who forfeit scholarship eligibility due to inadequate cGPA will be allotted one quarter of scholarship probation during their enrollment, as described in the *Scholarship Probation and Reinstatement* section. In addition, merit scholarship recipients must maintain full-time enrollment and abide by student conduct standards, as outlined in the current edition of the *Student Handbook*.

NEUMONT NEED-BASED SCHOLARSHIPS

Need-based scholarships are awarded to first-time, entering students who have demonstrated financial need. They are designed to assist students and their families, regardless of academic performance.

ACCESS SCHOLARSHIP

The Financial Aid Department awards need-based scholarships of $4,000 to $10,000 for the entire program (up to $1,000 per academic quarter) for the 10-quarter BSCS, BSTM, and BSWD programs, or $4,800 to $12,000 (up to $1,000 per academic quarter) for the 12-quarter BSGD program. Need is determined by the student's Expected Family Contribution (EFC) derived on the Free Application for Federal Student Aid (FAFS). Access scholarships are applied to quarterly tuition costs and awarded for each academic calendar year. An academic calendar year is defined as three quarters (nine months).

Annual renewal of need-based aid is not automatic. Students must reapply for need-based financial assistance each academic year (every three quarters). Depending upon calculated need in subsequent years, Neumont need-based scholarship awards may vary from one academic year to the next. Factors that are used to determine the annual Neumont need-based scholarship award include family income, assets, household size, and number of family members in college, as declared on the FAFSA.

Prospective students who would like to be considered for need-based scholarships should:

- Complete Neumont's *Application for Admission*
- Complete the Free Application for Federal Student Aid (FAFSA)
- Complete Neumont's *Paying for College Form*

Need-based scholarship recipients must maintain a cGPA of 2.50 or higher. Students who forfeit scholarship eligibility due to inadequate cGPA will be allotted one quarter of scholarship probation during their enrollment, as described in the *Scholarship Probation and Reinstatement* section. In addition, need-based scholarship recipients must maintain full-time enrollment status and abide by student conduct standards, as outlined in the current edition of the *Student Handbook*.

NEUMONT UTAH RESIDENT SCHOLARSHIP

To encourage the enrollment of highly-qualified Utah students, Neumont awards Utah Resident Scholarships to first-time, full-time students who are residents of Utah. Awards are $4,000 for the entire 10-quarter BSCS, BSTM, and BSWD programs ($400 per academic quarter) and and $4,800 for the entire 12-quarter BSGD program ($400 per academic quarter).

Eligible students must meet the following qualifications:

- For 2012 (or later) high school graduates: who graduated from a Utah high school, as evidenced by the presentation of a diploma awarded by a Utah high school.
- For 2011 (or earlier) high school graduates: Utah residency for 12 months prior to the first day of classes, as evidenced by the presentation of a Utah driver's license or other government-issued identification, or other University-approved proof of residency.
- Utah high school graduates who did not live in the state of Utah in the 12 months prior to the first of day of classes are not eligible for this scholarship. Exceptions may include students who meet the qualifications to be considered Utah residents, but were living outside of Utah, as a result of full-time humanitarian, community, military, or religious service.
- Only first-time applicants meeting the residency requirements are eligible for the Utah scholarship.

While there are no cGPA requirements for the Neumont Utah Resident Scholarship, recipients must maintain full-time enrollment status and abide by student conduct standards, as outlined in the current edition of the *Student Handbook*.

SCHOLARSHIP FORFEITURE

Students will forfeit their scholarship award in a given quarter for one or more of the following reasons:

- Their cGPA falls below the specified level for the scholarship and they have exhausted their scholarship probation period.
- They withdraw from full-time enrollment. Students may petition the Dean of Students to maintain scholarships when exceptional circumstances require less than full-time enrollment. Any exceptions must be approved by the Dean of Students in writing.
- They have violated Neumont academic honesty standards, as outlined in the current edition of the *Student Handbook* and in the Student Affairs section of this *Course Catalog*. Forfeiture of scholarship awards is at the discretion of the Student Conduct Administrator.
    - Forfeiture of scholarship may occur as a consequence of a first or subsequent offense—depending on the severity and nature of the offense.
    - The period of scholarship ineligibility may range from one quarter to the duration of a student's enrollment, at the discretion of the Student Conduct Administrator.
- They have violated other Neumont University standards, as outlined in the current edition of the *Student Handbook* and other publications referenced in the handbook—such as *Housing Rules and Regulations*, *Acceptable Use Policy,* and course syllabi. Forfeiture of scholarship award is at the discretion of the Student Conduct Administrator.
    - Loss of scholarship may occur as a consequence of a first or subsequent offense—depending on the severity and nature of the offense.
    - The period of scholarship ineligibility may range from one quarter to the duration of a student's enrollment at Neumont, at the discretion of the Student Conduct Administrator.

UNDERGRADUATE SCHOLARSHIP PROBATION AND REINSTATEMENT OF SCHOLARSHIP

- Students who forfeit their scholarship due to inadequate cGPA will be allotted one quarter of scholarship probation, which means the scholarship remains in effect for the first quarter after the student does not meet scholarship cGPA eligibility criteria.
    - If, at the end of the probationary quarter, the student's cGPA remains below the scholarship requirement, the scholarship is lost until his or her cGPA meets or exceeds the scholarship cGPA requirement.
    - A student may go on scholarship probation status once.
- Students, who forfeit a scholarship due to inadequate cGPA during their standard enrollment period, may be eligible for scholarship reinstatement in future quarters if they meet or exceed the minimum scholarship cGPA requirement in a future quarter.
    - Reinstated scholarships are awarded for subsequent quarters, but are not awarded retroactively.
    - Scholarships resume in the quarter after the quarter in which the scholarship requirement cGPA has been reached.
- Scholarships lost due to a violation of University standards resume in the quarter after completion of a scholarship ineligibility period, as determined by the Student Conduct Administrator.
- Presidential scholarships, once forfeited, may not be reinstated. Presi-

dential scholarship recipients who forfeit their scholarship but achieve the required cGPA in a future quarter will be eligible to receive an Achievement scholarship ($1,250 per academic quarter). In addition, if they submit a FAFSA, they will be qualified to receive the appropriate need-based scholarship, as outlined in the scholarship matrix.

GRADUATE SCHOLARSHIPS

To encourage enrollment of highly qualified students to our graduate programs, Neumont University grants scholarships of up to 25% of tuition costs to students who demonstrate superior academic competency and skills. Graduate students may defer a scholarship one time, for one quarter. Written requests for scholarship deferment should be submitted to the Office of Admissions.

MAINTAINING GRADUATE SCHOLARSHIP AWARDS

Scholarship recipients must maintain a minimum 3.50 cGPA for continued scholarship eligibility. Scholarship recipients whose cGPA drops below the 3.50 minimum are given one quarter to remediate their cGPA and meet the requirement. Failure to remediate one's cGPA in the allotted timeframe will result in scholarship ineligibility for the duration of the program.

Please note the following information regarding Neumont graduate scholarships:

- All decisions of the Neumont University Scholarship Committee are final.
- Scholarship awards to any student, for any quarter, are limited to the total amount of tuition due that quarter.
- Scholarships are subject to cancellation for:
    - Poor academic performance
    - Judicial infractions, including academic misconduct
    - Delinquent student accounts
    - Withdrawal from continuous enrollment
    - Failure to meet cGPA requirements

FEDERAL FINANCIAL AID PROGRAMS

All Title IV financial aid funds received by the institution will be credited to the student's account with the exception of requirements set forth in Section 682.604 of current federal regulations. The different types of financial aid programs available to those who qualify are discussed in detail below. Additional information may be obtained at www.fafsa.ed.gov.

SELECTION OF ELIGIBLE APPLICANTS

In accordance with Title 34 of the Code of Federal Regulations, Part 668.43(B)(3), the following procedures describe how aid recipients are selected from the pool of eligible applicants.

FEDERAL PELL GRANT

This grant is designed to assist students who desire to continue their education beyond high school. Federal Pell Grants are only awarded to undergraduate students who have not earned a Bachelor or professional degree. Each student is entitled to apply for a Federal Pell Grant. Eligibility is determined by the student's need, the cost of attendance, and the amount of money appropriated by Congress to fund the program. The amount of the grant is determined by a standard formula used by the Department of Education. The amount of grant available to the student will depend on the Expected Family Contribution (EFC) and the cost of attendance. See www.fafsa.gov for current amounts.

For many students, the Federal Pell Grant provides a "foundation" of financial aid to which other aid may be added to defray the cost of college education. Students or prospective students may secure an application to participate in the Federal Pell Grant program from the Financial Aid Office or from a high school counselor. The application will be transmitted electronically through a federally approved needs analysis system that will determine the applicant's Expected Family Contribution (EFC).

SUPPLEMENTAL EDUCATION OPPORTUNITY GRANT

Supplemental Education Opportunity Grant (SEOG) is awarded to applicants with a zero (0) EFC as funds are available.

WILLIAM D. FORD FEDERAL DIRECT LOAN (DIRECT LOAN) PROGRAM

Loans made through this program are referred to as Direct Loans. Eligible students and parents borrow directly from the U.S. Department of Education at participating schools. Direct Loans include subsidized and unsubsidized Direct Loans, Direct PLUS Loans, and Direct Consolidation Loans.

IRAQ AND AFGHANISTAN SERVICE GRANT

For students who are not Pell-eligible due only to having less financial need than is required to receive Pell funds; whose parent or guardian died as a result of military service in Iraq or Afghanistan after the events of 9/11; and who, at the time of the parent's or guardian's death, were less than 24 years old or were enrolled at least part-time at an institution of higher education. Maximum is same as Pell maximum; payment adjusted for less-than-full-time study. Grants do not need to be repaid.

SUBSIDIZED FEDERAL DIRECT LOANS

The subsidized loan is deferred while the student is enrolled at least half time and for a period of six months beyond the student's last date of attendance. During this period the interest is paid by the federal

government as long as the student remains enrolled in at least a half-time status. Applications for deferment can be obtained from the lender. For additional deferment information, contact the Financial Aid Office.

If the student is a dependent undergraduate student, he or she may borrow up to:

- $3,500 if he or she is a first-year student enrolled in a program of study that is at least a full academic year.
- $4,500 if he or she has completed the first year of study and the remainder of the program is at least a full academic year.
- $5,500 a year if he or she has completed two years of study and the remainder of the program is at least a full academic year.

For periods of undergraduate study that are less than an academic year, the amounts the student can borrow will be less than those previously listed. Ask Financial Aid Office personnel for specific details. The maximum indebtedness for a dependent undergraduate student is $23,000.

Graduate students may borrow up to $20,500 for each academic year with no more than $8,500 of this amount being in subsidized loans. The maximum total indebtedness for a graduate student is $138,500 with no more than $65,500 of this amount being in subsidized loans

Origination fees and insurance premium fees, which may vary by lending institution, will be deducted proportionately from each disbursement and paid to the federal government.

UNSUBSIDIZED FEDERAL DIRECT LOANS

The unsubsidized Direct loan is available to eligible students, regardless of family income and is designed for those who do not qualify, in whole or in part, for subsidized Direct loans. An unsubsidized Direct loan is not awarded based on need. The term "unsubsidized" means that interest is not paid for the student during the "in-school" period.

The terms of an unsubsidized Direct loan are the same as those for a subsidized Direct loan with the exceptions of the following: the government does not pay interest on the student's behalf on an unsubsidized Direct loan. All interest that accrues on the loan during enrollment and the grace period is required to be paid by the student. The student has two options of repayment of the accrued interest: (1) make monthly or quarterly payments; or (2) the student may capitalize the accrued interest.

If the student is an independent undergraduate student or a dependent student whose parents are unable to get a PLUS loan, he or she may borrow up to:

- $9,500 if he or she is a first-year student enrolled in a program of study that is at least a full academic year. (No more than $3,500 of this amount may be in subsidized loans.)
- $10,500 if he or she completed one year of study and the remainder of the program is at least a full academic year. (No more than $4,500 of this amount may be in subsidized loans.)
- $12,500 a year if he or she completed two years of study and the remainder of the program is at least a full academic year. (No more than $5,500 of this amount may be in subsidized loans.)

For periods of undergraduate study that are less than an academic year, the amounts the student can borrow will be less than those previously listed. The maximum total indebtedness for an independent undergraduate student is $57,500. (No more than $23,000 of this amount may be in subsidized loans.)

The student will be charged an origination fee/insurance premium on the amount of the unsubsidized Direct loan not to exceed 4 percent. The fee will be deducted proportionately from each disbursement and paid to the federal government.

FEDERAL PARENT LOANS FOR UNDERGRADUATE STUDENTS (PLUS)

The Federal PLUS loan is available to parents of dependent students to help pay for the educational expenses of the student. PLUS loans are not based on need, but when combined with other resources, cannot exceed the student's cost of education.

Parents may borrow up to cost of attendance minus other aid per eligible dependent student. There is a four percent origination fee on a PLUS loan made on or after July 1, 2010, and up to one percent direct insurance premium may be deducted proportionately from the loan principal after each payment. The interest rate is a fixed 7.9 percent.

Repayment begins within 60 days of the final disbursement unless the parent qualifies for and is granted a deferment by the lender. There is no grace period for these loans. Interest begins to accumulate at the time the first disbursement is made, and parents will begin repaying both the principal and interest while the student is in school. Although the minimum payment amount is $50 per month with at least five years of repayment, the actual payment and schedule is determined by the total amount borrowed.

For deferment information, contact the Financial Aid Office.

The information in this guide was compiled in the summer of 2010. For changes to the federal student aid programs since then, visit www.federalstudentaid.ed.gov and click on "Students, Parents and Counselors."

ALTERNATIVE FINANCING PROGRAMS

Neumont University offers alternative financing arrangements to supplement Title IV financial aid. These loans are not guaranteed by the federal government and may be subject to credit approval. Some of these loan programs are funded by the University and are administered (collection of monthly payments, servicing of the loan, etc.) by an independent servicing company. The amount that a student may borrow under these alternative loan programs is limited by several factors, including the federal guidelines which establish the amount of financial aid for which the student is eligible, less the expected family contribution toward the educational costs and any other types of financial aid for which the student has qualified or may qualify. If a student has exhausted all external sources of financial aid, both federal and private, he or she may apply for a University-funded loan, which is serviced by Tuition Options. Application for this type of funding takes into consideration additional factors including the availability of funds and the academic qualifications of the applicant. More information about alternative loan programs may be obtained by visiting the Financial Aid Office.

VETERAN'S ASSISTANCE PROGRAMS

Programs at Neumont University are approved for veterans training.

VETERAN EDUCATION AND EMPLOYMENT ASSISTANCE ACT OF 1976 AS AMENDED

Veterans eligible for training under the Montgomery G.I. Bill are entitled to a monthly allowance while attending the University. Veterans with over three years of active duty or two years of active duty and four years in the selected reserve are entitled to a maximum of 36 months of training. The University will assist in preparing and submitting applications.

WAR ORPHAN EDUCATIONAL ASSISTANCE

This program provides financial assistance for the education of sons and daughters of veterans who died or were permanently and totally disabled in, or as a result of, service in the Armed Forces of the United States. Benefits are similar to those of the G.I. Bill. Widows and wives of disabled veterans may also be eligible for this program. The University will assist in preparing and submitting applications.

VOCATIONAL REHABILITATION FOR VETERANS

Neumont University participates in the VA Yellow Ribbon program by matching up to 50% or $10,800.00 per calendar year. Students may apply for their VA educational benefits at any time.

Veterans disabled during war time or in certain peace time service may be eligible for educational benefits and training under this program. Applications must be filed directly with the Veterans Administration. Students receiving veterans' benefits are required by the Veterans Administration to provide transcripts of credit from all post-secondary schools previously attended.

The Post-9/11 GI Bill provides financial support for education and housing to individuals with at least 90 days of aggregate service on or after September 11, 2001, or individuals discharged with a service-connected disability after 30 days. You must have received an honorable discharge to be eligible for the Post-9/11 GI Bill.

The Post-9/11 GI Bill became effective for training on or after August 1, 2009. The amount of support that an individual may qualify for depends on where they live and what type of degree they are pursuing. For a summary of Post-9/11 GI Bill benefits, see www.gibill.va.gov.

Approved training under the Post-9/11 GI Bill includes graduate and undergraduate degrees, and vocation/technical training. All training programs must be offered by an institution of higher learning (IHL) and approved for GI Bill benefits. Additionally, tutorial assistance, and licensing and certification test reimbursement are approved under the Post-9/11 GI Bill.

The Post-9/11 GI Bill will pay your tuition based upon the highest in-state tuition charged by an educational institution in the state where the educational institution is located. For more expensive tuition, a program exists which may help to reimburse the difference. This program is called the "Yellow Ribbon Program". For more information on the Yellow Ribbon Program go to www.gibill.va.gov.

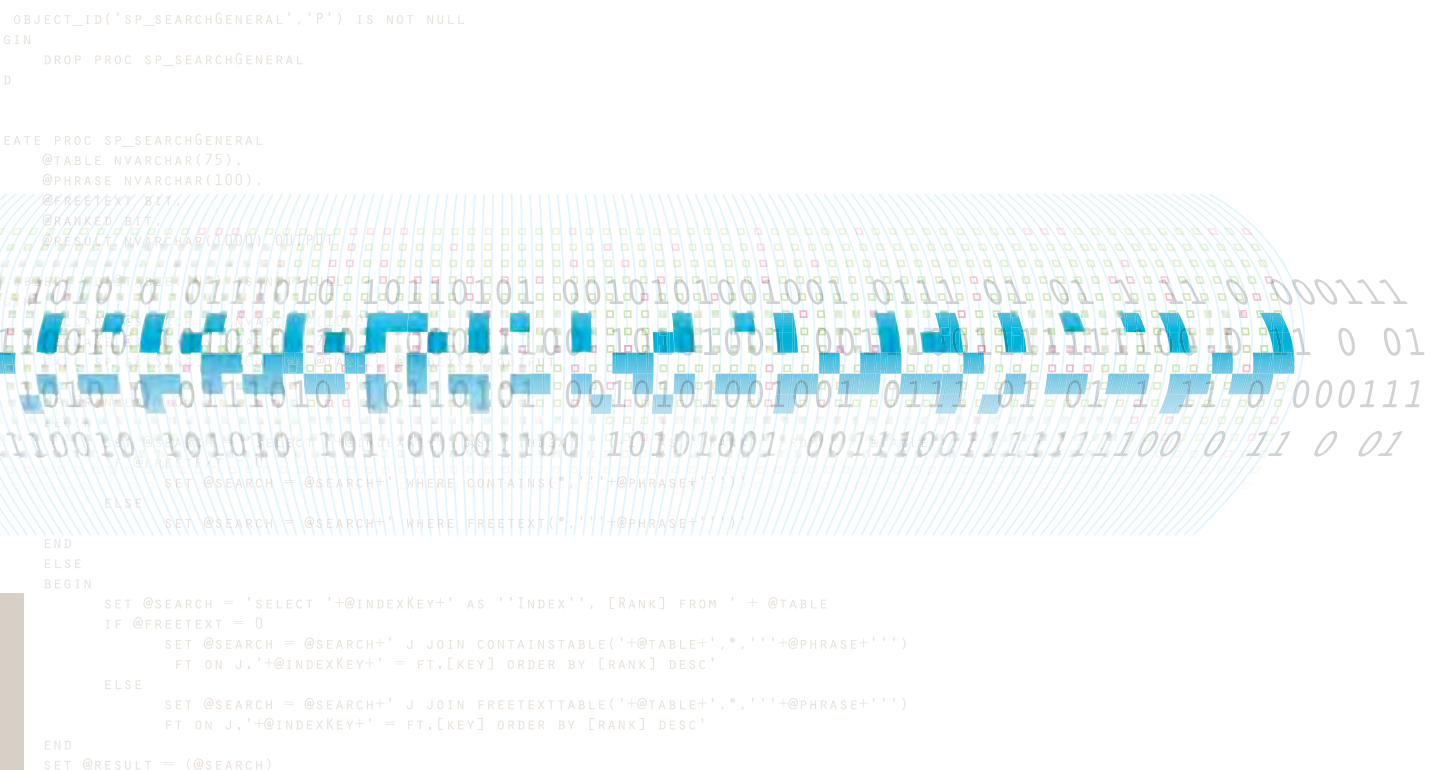
The Post-9/11 GI Bill also offers some service members the opportunity to transfer their GI Bill to dependents, for more information visit www.gibill.va.gov.

FEDERAL FINANCIAL AID

To be eligible for federal financial aid, a student must:

- Be enrolled as a regular student in an eligible program of study on at least a half-time basis (with the exception of Pell Grants);
- Have a high school diploma or the equivalent;

- Be a U.S. citizen, or an eligible non-citizen. Verification of eligible non-citizen status may be required;
- Have financial need, as determined by a needs analysis system approved by the Department of Education;
- Maintain Satisfactory Academic Progress;
- Provide required documentation for the verification process and determination of dependency status;
- Not owe a refund on a Pell Grant, FSEOG, or State Grant previously received from any college;
- Not have borrowed in excess of the annual aggregate loan limits for the Title IV financial aid programs;
- Be registered for the Selective Service, if a male born after December 31, 1959; and
- Have a valid Social Security number.



_FINANCIAL INFORMATION

TYLER GARLIK
DANNY WARREN
JONATHAN ROSS
TAYLOR AYCOCK
CLASS OF 2009

FINANCIAL INFORMATION_

TUITION AND FEES

Tuition is charged per quarter and is based on the full-time rate, in accordance with the chart below,(subject to change). Expected length of attendance for undergraduates is ten (10) quarters (12 quarters for BSGD students), assuming a normal rate of progress. The calendar contains four quarters. However, the academic year is three quarters.

UNDERGRADUATE TUITION AND FEES

Application fee (non-refundable) — $35 ($125 Int'l)
Required of all applicants

Registration Fee — $100
Required of all first time students.

Tuition for students enrolled after Fall 2008
in a 10 quarter program (12 quarters for BSGD) — $7,200 per quarter

Per Credit Charge (applies to part-time students only) — $495/QCH
Per quarter credit hour, assessed in place of the quarterly charge, only when the student is carrying less than 12 units per term

Student Activity and Facility Usage Fee — $150 per quarter

Technology Fee* — $350 per quarter
* *Various courses may require a lab or software fee*

Neumont Approved Laptop purchase price estimate* — $2,000
* *Price is estimated, See www.encodingthenext.com for model information. Neumont approved laptops, purchased through Neumont's designated laptop vendor are required student material. Outside equipment is not permitted for instructional use.*

For those who qualify, laptops may be purchased using Financial Aid. Any laptop purchased using Financial Aid is the property of Neumont University until paid in full by the funding source (federal or private lender). Students who withdraw owing a balance on their laptop must return their laptop to Neumont University within (3) days of withdrawal or remaining funds will be charged to the student's account.

BSGD Software License Fee — $50 per quarter
Beginning quarter 5

BSWD Software License Fee — $50 per quarter
Beginning quarter 5

GRADUATE TUITION AND FEES

Application Fee (non-refundable) — $35 ($125 Int'l)
Required of all applicants

Registration Fee — $100
Required of all first time students

Tuition (assessed on a per credit basis) — $550/QCH
Per quarter credit hour, assessed quarterly

Activity, Facility, and Technology Fee — $150 per quarter

ALL PROGRAMS

Late Registration Fee — $50
Per Sprint, assessed to students who register for a course after the online registration deadline

Late Dropped Class Fee — $50
Per Sprint, assessed to students who drop a course after the online registration deadline.

Transcript Fee — $5
Each official transcript is $5.00 plus a National Student Clearinghouse processing fee and can be ordered through the Neumont website.

Audit Fee — $100
Charge to audit a course

Graduation Fee — $100
Charged in last quarter of enrollment

PART TIME STUDENTS

The minimum full-time course load for undergraduate students is 12 credits per quarter and eight credits per quarter for graduate students. If a student falls below a full-time load, a per unit charge will be assessed in place of the quarterly charge described above.

TEXTBOOKS

Textbook costs per quarter are dependent upon the classes for which the student is registered and the textbooks purchased. Textbooks may be purchased through the online bookstore in accordance with official university policies. At the time of issuance, textbooks become the responsibility of the student.

FINANCIAL OBLIGATION

A student who has applied, is accepted, and has begun courses at the University assumes a definite financial obligation. Each student is legally responsible for his or her own educational expenses for the period of enrollment. Tuition and fees for each term are due in full prior to the start of the term. Students who are unable to pay in full prior to the start of the term must arrange a payment plan for the balance. Any student who is delinquent in a financial obligation to the University including damage to University property, library fines, or payment of tuition and fees is subject to exclusion from any or all of the usual privileges of the University.

PAYMENT POLICY

The University requires that arrangements for payment of tuition for all courses be completed in full at the time of registration. Students may choose to pay tuition and fees by check, cash, and/or credit card.

The University offers the services of several private companies that offer alternative methods of paying for educational costs. The Office of Financial Aid will assist students in budgeting a payment plan using a wide range of financing alternatives. Students eligible for employer-sponsored tuition reimbursement benefits may request a deferred payment plan. Further questions regarding these payment plans should be directed to a representative in the the Office of Financial Aid.

Students qualifying for federal financial assistance programs may use certain types of loans and/or grants to satisfy their financial obligations at the time of registration, even though the aid may not have been physically disbursed to them or posted to their accounts. Students seeking to meet their financial obligations in this manner must understand that it is their responsibility to provide all information and documentation necessary to obtain all forms of financial aid by the deadlines imposed by the fund source. Failure to do so may result in the student having to provide immediate payment of all applicable tuition and fees.

FINANCIAL ASSISTANCE INFORMATION

Neumont University offers Financial Aid for those who qualify. It is the goal of the University to assist all eligible students in procuring financial aid that enables them to attend the University. The University participates in various federal and private student financial assistance programs. The financial aid programs are designed to provide assistance to students who are currently enrolled or accepted for enrollment, but whose financial resources are inadequate to meet the full cost of their education. A full description of financial aid programs is included below. Students should meet with the Office of Financial Aid to discuss the specific financial assistance available.

The primary responsibility for meeting the cost of education rests with the student and his or her family. All financial aid is awarded on the basis of need regardless of age, sex, race, color, religion, national or ethnic origin, marital or veteran status, or disability. Need is defined as the difference between the cost of education for one academic year and the amount a student's family can be reasonably expected to contribute to this cost of education for the same period.

Additional information regarding federal student aid can be found at www.studentaid.ed.gov by searching for the *Student Guide*. The direct link is:
http://studentaid.ed.gov/students/publications/student_guide/index.html

CONSUMER INFORMATION

Most of the information dissemination activities required b y the Higher Education Amendments of 1998 have been satisfied within the *Course Catalog*. However, the Office of Financial Aid are available to discuss consumer information in more detail with current and prospective students.

NEED AND COST OF ATTENDANCE

Once the application is completed, the information will be used in a formula established by the U.S. Congress that calculates need and helps determine eligibility. When combined with other aid and resources, a student's aid package may not exceed the student's calculated need.

Tuition and fees, books, and other education expenses are considered in determining the student's cost of attendance. These include personal expenses, room and board, and transportation. Information on how those costs are derived may be obtained from the Financial Aid Office.

BORROWER RIGHTS AND RESPONSIBILITIES

When a student takes on a student loan, he or she has certain rights and responsibilities:

The borrower has the right to receive the following information before the first loan disbursement:

- The full amount of the loan,
- The interest rate,
- When the student must start repaying the loan,
- The effect borrowing will have on the student's eligibility for other types of financial aid,
- A complete list of any charges the student must pay (loan fees) and information on how those charges are collected,
- The yearly and total amounts the student can borrow,
- The maximum repayment periods and the minimum repayment amount,
- An explanation of default and its consequences,
- An explanation of available options for consolidating or refinancing the student loan, and
- A statement that the student can prepay the loan at any time without penalty.

The borrower has the right to receive the following information before leaving school:

- The amount of the student's total debt (principal and estimated interest), what the student's interest rate is, and the total interest charges on the loan(s);
- A loan repayment schedule that lets the student know when his or her first payment is due, the number and frequency of payments, and the amount of each payment;
- If the student has FFELP loans, the name of the lender or agency that holds the student's loan(s), where to send the student's payments, and where to write or call if the student has questions;
- The fees that a student should expect during the repayment period, such as late charges and collection or litigation costs if delinquent or in default;
- An explanation of available options for consolidating or refinancing the student's loan; and
- A statement that the student can repay his/her loan without penalty at any time.

The borrower has a responsibility to:

- Understand that by signing the promissory note, the student is agreeing to repay the loan according to the terms of the note;
- Make payments on the student loan even if the student does not receive a bill or repayment notice;
- Continue to make payments until notification that the request for a deferment or forbearance has been granted;
- Notify the appropriate representative (institution, agency, or lender) that manages the student's loan when the student graduates, withdraws from school, or drops below half-time status; changes his or her name, address, or Social Security number; or transfers to another institution; and
- Receive exit counseling before leaving school.

TITLE IV CODE OF CONDUCT REQUIREMENTS

1. A ban on revenue-sharing arrangements with any lender. This is defined as any arrangement between a school and a lender that results in the lender paying a fee or other benefits, including a share of the profits, to the school, its officer, employees or agents, as a result of the school recommending the lender to its students or families of those students.

2. A ban on employees of the financial aid office receiving gifts from any lender, guaranty agency, or loan servicer. This is not limited just to those providers of the Title IV loans. The statutory language refers to lenders of "educational loans" thus private education loans offered to students at your institution are covered in this provision as well. The law does provide for some exceptions related to specific types of activities or literature. This includes:

- Brochures or training material related to default aversion or financial literacy.
- Food, training, or informational materials as part of training as long as that training contributes to the professional development of those individuals attending the training.
- Favorable terms and benefits to the student employed by the institution as long as those same terms are provided to all students at the institution.
- Entrance and exit counseling as long as the institution's staff are in control and they do not promote the services of a specific lender.
- Philanthropic contributions from a lender, GA or servicer unrelated to education loans.
- State education, grants, scholarships, or financial aid funds administered by or on behalf of the State.

3. A ban on contracting arrangements whereby any employee of the school's financial aid office may not accept any fee, payment or financial benefit as compensation for any type of consulting arrangement or contract to provide services to or on behalf of a lender relating to education loans.

4. A prohibition against steering borrowers to particular lenders, or delaying loan certifications. This includes assigning any first-time borrower's loan to a particular lender as part of their award packaging or other methods.

5. A prohibition on offers of funds for private loans. Schools may not request or accept such offers. This includes any offer of funds for loans to students at the institution, including funds for an opportunity pool loan, in exchange for providing concessions or promises to the lender for a specific number of loans, or inclusion on a preferred lender list.

6. A ban on staffing assistance from a lender. Schools may not request or accept any assistance with call center staffing or financial aid office staffing. However, the law does not prohibit schools from requesting or accepting assistance from a lender related to:

- Professional development training for financial aid administrators.
- Providing educational counseling materials, financial literacy materials, or debt management materials to borrowers, provided that such materials disclose to borrowers the identification of any lender that assisted in preparing or providing such materials.
- Staffing services on a short-term, nonrecurring basis to assist the school with financial aid-related functions during emergencies, including State-declared or federally declared natural disasters, and other localized disasters and emergencies identified by the Secretary.

7. A ban on advisory board compensation. Employees of the institution may not receive anything of value from a lender, guarantor, or group in exchange for serving in this capacity. They may, however, accept reimbursement for reasonable expenses incurred while serving in this capacity.

POLICIES AND PROCEDURES FOR VERIFICATION OF APPLICANT INFORMATION

Some students will be selected by the U.S. Department of Education for a process called verification. If selected for verification, the student must provide documentation to support the data elements contained on the FAFSA. Generally, this documentation would include copies of income tax returns or a certification that a return was not required to be filed, sources and amounts of income, household size, number of family members attending post-secondary schools, dependency status, etc. The following procedures will be in effect for those students who have been selected for verification:

- Selected applicants must submit required verification documents within thirty (30) days of notification;
- Students will be informed of their responsibilities regarding the verification of application information, including the institution's deadline for completion of any actions required;
- Students will be given a clear explanation of the documentation needed to satisfy the verification requirements and the process for document submission;
- The institution will inform students in a timely manner of the consequences of failing to complete the verification requirements and the actions the University will take if the student does not submit the requested documentation within the time period specified;
- The institution will assist the student in correcting erroneous information;
- If the student fails to provide the required documentation within the established time frame, the student will be treated as a cash paying student until the documents are provided;
- If the student does not meet the deadline and is not capable of making cash payments, he or she may be dismissed from the University. If dismissed, the student may re-enter the University only when he or she can provide the documentation;
- Students will be notified if the results of verification change the student's scheduled award;
- Any suspected case of fraud will be reported to the Regional Office of the Inspector General, or, if more appropriate, to a state or local law enforcement agency having jurisdiction to investigate the matter. Referrals to local or state agencies will be reported on an annual basis to the Inspector General;
- No interim disbursements of Title IV aid will be made prior to the completion of verification.

ENTRANCE AND EXIT INTERVIEW/LOAN COUNSELING

The Department of Education requires that any student receiving a federal educational loan be notified concerning his or her loans. The University counsels each student regarding loan indebtedness and gives each student an entrance test and mails an exit interview regarding the loan to ensure that the student understands the amount borrowed and the student's rights and responsibilities regarding repayment.

The student must report to the Financial Aid Office prior to withdrawal or graduation for loan counseling. The purpose of this session is to inform the student of his/her tentative total loans received while in attendance, refunds that may be made, and to provide the student with an estimated payment schedule. If the student is unable to meet with the Financial Aid Office, an exit interview will be mailed.

CANCELLATIONS, WITHDRAWALS AND REFUND POLICY

CANCELLATIONS

The applicant's signature on the Neumont University application does not constitute admission into the University until the student has been accepted for admission by the Neumont University Acceptance Committee. The applicant may request cancellation until the end of the third day of the first term of attendance. The refund will be made within 30 days of receipt of such notice. First time students who withdraw within three calendar days after courses have commenced will not be assessed tuition charges.

WITHDRAWALS AND REFUNDS

The University employs a fair and equitable refund policy that complies with federal, state, and accreditation guidelines for the return of unearned tuition and fees in the event of withdrawal. To withdraw, a student must notify the Office of the Registrar.

Whenever possible, the withdrawal is conducted personally with the Registrar. To make an appointment for withdrawal, please contact the Neumont University Registrar at 10701 South River Front Parkway, Suite 300, South Jordan, Utah 84095.

Any monies due a student shall be refunded within 30 days of the date on which Neumont University has determined that a withdrawal has taken place. A withdrawal is considered to have occurred on the date that the student completes appropriate withdrawal forms with the Registrar. If the student ceases attendance without providing official notification, the withdrawal date used in the refund and federal Return to Title IV calculation is the last date of attendance at an academically-related activity as the withdrawal date.

If the student is unable to begin the institution's withdrawal process or otherwise provide official notification of his or her intent to withdraw because of illness, accident, or other such circumstances beyond the student's control, a third party may provide notice to the Registrar's office. The date of withdrawal will be the date that most accurately reflects when the student ceased academic attendance due to the circumstances beyond the student's control.

RETURN TO TITLE IV

The first calculation is done only for students who have received Title IV student financial aid and is required by federal law, which specifies the formula for the calculation (see Federal Student Aid Guide). This "Return to Title IV" calculation is made to determine how much federal grant and loan assistance the student has earned under the federal policy. Any unearned funds must be returned to the federal student aid programs.

INSTITUTIONAL REFUND POLICY

The second calculation is to determine how much of the tuition and fees the institution may retain under the institutional refund policy. Students who have completed more than 60 percent of the quarter will receive no refund.

For students who terminate their schooling before completing more than 60 percent of the quarter, the University will perform a pro rata refund calculation.

Under a pro rata refund calculation, the University is entitled to retain only the percentage of charges (tuition, fees, etc.) proportional to the period of enrollment completed by the student. The period of enrollment completed by the student is calculated by dividing the total number of weeks in the term into the number of weeks completed in that period (as of the withdrawal date). The percentage of weeks attended is rounded up to the nearest 10 percent and multiplied by the institutional charges for the quarter. The period of enrollment completed by the student is calculated by dividing the number of days in attendance by the total number of days in the term.

Any unpaid balance of tuition and fees that remains after calculating the institutional refund policy and returning the amount of unearned financial aid funds, if any, based on the Federal Return of Title IV Funds policy, must be paid by the student to the institution.

Timely notification by the student will result in the student being charged tuition and fees only for the portion of the period of enrollment that he or she attended as well as ensuring a timely return of federal funds and any other refunds that may be due. Failure of students to provide official notification to the University of the intent to withdraw means that the students will continue to be obligated for the tuition and fees and will delay both the return of federal funds to the appropriate programs and the return of any other refunds that may be due.

It is extremely important that the student understand the implications of withdrawing before completing the coursework in the quarter because of its potential impact on the student's finances. The Financial Aid Office provides assistance to students to determine the exact impact of early withdrawal on their repayment obligations.

If the student (or parent, in the case of a PLUS loan) is eligible for additional funds at the time of withdrawal, the student may receive additional SFA funds.

If the student received more SFA funds than he or she earned under the Federal Return of Title IV Funds policy, the institution, and in some cases the student, is required to return the unearned funds to the Federal program(s) or lender, as applicable.

RETURN OF STUDENT FINANCIAL AID (SFA) FUNDS

If it is determined that SFA program funds must be returned, based on the student's financial aid award, the return of SFA funds will be made in the following order:

1. Unsubsidized Federal Direct Loan Program;
2. Subsidized Direct Loan Program;
3. Federal PLUS Loan Program;
4. Federal Pell Grant Program; and any
5. Other grant or loan assistance authorized by Title IV of the HEA.

REFUNDS UNDER EXCEPTIONAL CIRCUMSTANCES

Tuition and fees for the current term will be refunded in full under the following circumstances:

- Courses cancelled by the University;
- Involuntary call to active military duty;
- Exceptional circumstances, with approval of the President of the University (or designee).

_ACADEMIC INFORMATION

ACADEMIC INFORMATION_

DEFINITION OF ENROLLMENT STATUS

The University awards credit in the form of quarter credits. One quarter credit is equivalent to a minimum of 10 class hours of theory or lecture instruction, a minimum of 20 hours of supervised laboratory instruction, or a minimum of 30 hours of internship and/or externship practice.

ACADEMIC EVENT POLICY

The purpose of the Academic Event Policy is to foster those behaviors that facilitate student learning and reflect the standards expected in the workplace.

Students are expected to be present at all of their regularly scheduled courses. A student may be assigned a zero for any assignment missed because of absences. Grades may be lowered because of excessive absences. Students are also expected to be in class on time and remain for the entire session. Grades may also be lowered due to violations of these policies.Classroom participation is particularly important at Neumont University since many of the courses require collaborative learning activities among groups.

Students who violate the Academic Event Policy may be subject to removal from a class and/or advising. Neumont University reserves the right to dismiss a student based upon poor attendance.

Instructors may have an even more rigid attendance policy for their individual courses that will be announced at the beginning of each quarter and included in the course syllabus.

Refer to the *Student Handbook* for the specific details regarding the Neumont University Academic Event Policy.

GRADING SYSTEM AND PROGRESS REPORTS

Grades earned in each course are recorded on the student's permanent record. Evaluation of student achievement will be made in relation to the attainment of the specific objectives. At the beginning of a course, the instructor will provide students with a syllabus detailing these objectives and the basis upon which grades are determined. A cumulative grade point average (cGPA) of 2.00 is required for graduation. A student who fails a course is permitted to continue as long as the student makes satisfactory progress towards graduation.

Grade definitions are as follows:

GRADE	GRADE POINT	INCLUDED IN PACE	INCLUDED IN CGPA
A	4.00	Y	Y
A -	3.70	Y	Y
B+	3.30	Y	Y
B	3.00	Y	Y
B-	2.70	Y	Y
C+	2.30	Y	Y
C	2.00	Y	Y
C-	1.70	Y	Y
D+	1.30	Y	Y
D	1.00	Y	Y
D-	0.70	Y	Y
F *(Fail)*	0.00	Y	Y
P *(Pass)*	N/A	Y	N
R (Research)	N/A	N	N
AUD (Audit)	N/A	N	N
TR *(Transfer)*	N/A	Y	N
TO *(Test out)*	N/A	Y	N
IW *(Involuntary Withdrawal)*	N/A	N	N
XF (Academic Misconduct)	0.00	Y	Y
W *(Withdrawal)*	N/A	Y	Y
WU *(Withdrawal Unsatisfactory)*	0.00	Y	N
WS *(Withdrawal Satisfactory)*	N/A	Y	N
INC *(Incomplete)*	N/A	Y	N

GPA AND CGPA CALCULATIONS

The grade point average (GPA) for each quarter and cumulative grade point average (cGPA) are calculated on courses taken in residence at the University. The GPA for each quarter is calculated by dividing the points earned that quarter by the total cumulative credits attempted for the GPA. The cGPA is calculated by dividing the total cumulative points earned by the total cumulative credits attempted for the GPA.

The number of points awarded for each course is determined by multiplying the points listed for each letter grade by the number of credits of the course. For example, a grade of A in a four-credit course earns 4 (credits) X 4.0 (points) for a total of 16.0 points and a grade of C in a three-credit course earns 3 (credits) X 2.0 (points) for a total of 6.0 points.

RESEARCH (R)

An 'R' grade is given when a student is making satisfactory progress in a research or capstone course that extends beyond the end of the term (sprint or quarter) or in a project extending over more than one term (sprint or quarter).
Students receiving an 'R' grade must complete the course within one quarter of the posting of the 'R' grade; if not an 'F' grade will be assigned as the final course grade.

Instructors may not change 'R' grades without the permission of Provost.

In the event that the original instructor is no longer available to grade the work, the Provost will assign a faculty member who will resolve the 'R' grade.

In the undergraduate programs, only the capstone courses will qualify for 'R' grade assignment.

ACADEMIC MISCONDUCT GRADE (XF)

As academic misconduct devalues both the student and the institution, a grade of 'XF' is given to any student who is:

- found guilty of academic misconduct in a course, and
- the student is assigned a failing course grade as a result of the judicial process.

In cases of multiple academic misconduct violations and/or those that result in academic suspension or dismissal, a student may be assigned a failing course grade in one or all courses. The 'XF' designation is a permanent record of a failing grade that is assigned as a judicial sanction.

W/WU/WS/IW COURSE WITHDRAWAL

Students who officially withdraw from a course after the Add/Drop Period but before the completion of the first 8 class days of the sprint will be given a 'W' (withdraw) grade for that course. Between class day 9 and class day 12 of the course, students will earn a 'WS' (withdraw satisfactory) or 'WU' (withdraw unsatisfactory), depending on the status of course work accomplished as of the withdrawal date. Students who are enrolled in the University are not allowed to withdraw from a class after class day 12 of the sprint. Quarter-length courses are subject to the Sprint 1 withdrawal calendar.

A grade of 'WU' is given to a student for violation of Neumont's Academic Policy. Refer to the *Student Handbook* for the specific details regarding the Neumont University Academic Event.

An official course withdrawal is initiated with the Office of the Registrar. A 'W' or a 'WS' grade does not apply to a student's grade point average but does apply to a student's rate of progress. A 'WU' grade is applicable to both a student's grade point average and course completion ratio and is the equivalent to a grade of 'F.'

An 'IW' (involuntary withdrawal) does not apply to a student's grade point average nor does it apply to a student's pace.

Final grades are reported at the completion of each sprint and are available for each student.

INCOMPLETE (INC)

An Incomplete 'INC' is a temporary designation given at the instructor and Provost's discretion to a student whose course work has been of acceptable quality but who, through no fault of his or her own, is unable to complete the required course material on schedule. This designation indicates that more than 50% of the course work has been completed, the student has been in attendance, and he or she satisfactorily completed the required work. An Incomplete 'INC' that has not been resolved by the first day of the following quarter will automatically be assigned a letter grade of 'F'. In the interim, the grade of 'INC' will be calculated as credits attempted in the calculation of successful course completion percentage, but it will not impact the student's GPA or cGPA. If the student receives a grade of 'INC' in a prerequisite course in Sprint 1 of a quarter, they will not be able to take the associated course during Sprint 2, as they will not have received credit for the prerequisite course.

ADD/DROP PERIOD

The Add/Drop Period is defined as the first three class days of the first sprint of the quarter. Students may add or drop courses for either sprint during the Add/Drop Period. Late fees may apply (see Financial Information section for details). Students who do not have an academic event during the Add/Drop Period may be removed from the course or courses in question. Students who have no recorded academic events during the Add/Drop Period may be dismissed from the university.

COURSE ADJUSTMENT PERIOD

The Course Adjustment Period is the first three school days of the second sprint of the quarter. Students may add or drop courses for the second sprint during the Course Adjustment Period; the Course Adjustment Period does not apply to quarter-length courses. Late fees may apply (see Financial Information section for details).

Students who do not have a course that begins in Sprint 2 must have an academic event during the Course Adjustment Period , or they may be removed from the course or courses in question.

COMMENCEMENT

Commencement exercises will be held at least once per year. All students completing their course work are included in the graduating class of that year. All students upon whom degrees are to be conferred are encouraged to participate in the commencement exercises.

Graduates must fulfill all financial obligations, including tuition charges, fees, and other expenses, before the degree is granted.

COURSE AUDITING

Audited courses do not impact a student's Pace or Grade Point Average. They are an opportunity for students to sit in a class but not participate in any assignments, assessments, or group work.

Students may audit Neumont courses under the following conditions: 1) have a cumulative Grade Point Average (cGPA) of 3.50 or higher, 2) have previously passed the course, or the course is not required for graduation. Authorization to audit shall require the permission from the Vice President of Academics and daily permission from the instructor. The audit option is dependent on that course's maximum allowable enrollment. Students taking the course for credit have priority over audit students for instructor time and response to individualized questions.
Permission to audit a course is requested through the Student Advisement Coordinator, prior to the end of the Add-Drop (Sprint 1) or Course Adjustment (Sprint 2) periods. There is a $100 per course per quarter audit fee.

GRADUATION WITH HONORS

Undergraduate students who have earned the requisite credits for graduation with the following cumulative grade point averages are entitled to the appropriate honors: 3.5–3.75, cum laude; 3.76–3.89, magna cum laude; 3.90 and above, summa cum laude.

TRANSFER TO OTHER COLLEGES

The University neither implies nor guarantees that credits completed at the University will be accepted by other institutions. Since rules and grade requirements vary, each institution has policies that govern the acceptance of credit from other institutions. Transfer of credit is a privilege granted by the institution to which a student may seek admission. Therefore, if the student anticipates a transfer of credits earned at Neumont University, the student must have already inquired with those institutions from which recognition of academic work at the University will be sought.

ACADEMIC LOAD

A student taking twelve (12) or more quarter hours toward the Bachelors degree will be classified as a full-time student for that term. A student taking eight (8) or more quarter hours toward the Master degree will be classified as a full-time student for that term. Students may register for no more than 23 credits per quarter. Students who meet specific academic criteria may apply for an exemption to the credit limit. See the *Student Handbook* for details.

REPEATING COURSES

A student may repeat a course taken at the University in order to improve their cumulative Grade Point Average. Credit is only given for the last grade earned when repeating a course. Repeated courses will appear on the student's transcript. The first attempt will also be shown; however, the cumulative Grade Point Average (cGPA) will be recomputed to count only the most recent attempt. All repeats will be charged at the current tuition rate. The availability of Title IV federal funding may be affected by multiple retakes of the same course.

Credits may only be earned once per course. If a student retakes a course from which they have earned credit, the credits for the first course completed will not count toward earned credits. However, those credits will count toward the pace as credits attempted. Repeating a course may impact Title IV funding.

ACADEMIC DEFICIENCIES

Following the conclusion of each grading period, the academic records of each student will be audited by the Registrar. As a result of this audit, it may be necessary to reschedule the student or to place the student on a status of financial aid warning, financial aid probation, academic dismissal or extended enrollment.

SATISFACTORY ACADEMIC PROGRESS

STANDARDS OF SATISFACTORY ACADEMIC PROGRESS

Students must maintain Satisfactory Academic Progress (SAP) in order to remain eligible to continue as regularly enrolled students of the university and to remain eligible for Title IV/HEA funding. (Title IV/HEA is federal student financial aid, such as Pell Grants and federal direct loans.)

All students, whether or not they receive Title IV/HEA funding, are subject to the SAP standards outlined in this catalog. SAP is measured for all students at the end of each academic quarter. Satisfactory Academic Progress is determined by measuring the student's cumulative grade point average (cGPA) and the student's pace toward completion

of their academic program. If a student fails to meet the required standards of SAP, which are outlined in the SAP tables included in this section, he or she will be placed on Financial Aid Warning ("Warning") or Financial Aid Probation ("Probation"). Students enrolled in all education levels (undergraduate and graduate) are subject to SAP standards as outlined in the SAP tables.

The elements of Satisfactory Academic Progress are as follows:

- Cumulative grade point average
- Pace (rate of progress), including maximum time frame

Neumont University uses progressive cGPA and pace standards. Undergraduate and graduate students enrolled in their first three quarters have lower cGPA and pace requirements than students in their fourth quarter or later. This system gives students time to adjust to the rigors of college or a graduate program.

For information on how a student's cGPA and pace of completion are affected by course incompletes, withdrawals, retakes/repetitions, or transfers of credit from other institutions, see the GRADING SYSTEM AND PROGRESS REPORTS unit in the ACADEMIC INFORMATION section of the *Course Catalog*.

CUMULATIVE GRADE POINT AVERAGE

To meet SAP requirements, students must meet specific cumulative grade point average (cGPA) requirements during their enrollment. For information on cGPA requirements for each program, refer to the SAP tables included in this section. cGPA is measured at the end of each quarter.

An academic year is defined as three quarters. Students with a cGPA of 1.99 or lower at the end of the 2nd, 3rd, 4th, etc., academic years will be dismissed. Note that students in this situation are not eligible for Warning status. However, in the case of a successful mitigating circumstances appeal, these students may be eligible for Probation or they may apply for Extended Enrollment status. For more information, see the APPEAL and EXTENDED ENROLLMENT sections of the *Course Catalog*.

PACE

The university specifies the pace at which a student must progress through his or her educational program to ensure that all students will complete the program within the maximum time frame. Neumont calculates the pace at which the student is progressing by dividing the cumulative number of hours the student has successfully completed by the cumulative number of hours the student has attempted. A student must complete all of the requirements for graduation without exceeding 150% of the required quarter credit hours for the program in which they are enrolled; this limitation is known as maximum time frame. Undergraduate students may attempt a maximum of 270 credits (150% of 180 credits). Graduate students may attempt a maximum of 81 credits (150% of 54 credits). (For illustrative purposes: If a student had attempted 84 credits and earned 76 credits, their pace would equal 90.4%.)

Thus, in addition to the cGPA requirements, a student must successfully complete a certain percentage of the credits attempted. The pace (or rate of progress) requirements per quarter are noted in the undergraduate and graduate SAP tables.

ELEMENTS OF SAP - TABLES

SATISFACTORY ACADEMIC PROGRESS-
Undergraduate Programs

EVALUATION	CUMULATIVE GRADE POINT AVERAGE (cGPA)	PACE (RATE OF PROGRESS)
1st Quarter	1.50	40.00%
2nd Quarter	1.75	45.00%
3rd Quarter	1.85	50.00%
4th Quarter	2.0	55.00%
5th Quarter	2.0	60.00%
6th Quarter and thereafter	2.0	66.67%

SATISFACTORY ACADEMIC PROGRESS-
Graduate Programs

EVALUATION	CUMULATIVE GRADE POINT AVERAGE (cGPA)	PACE (RATE OF PROGRESS)
1st Quarter	2.5	50.00%
2nd Quarter	2.75	55.00%
3rd Quarter	2.85	60.00%
4th Quarter	3.0	60.00%
5th Quarter	3.0	60.00%
6th Quarter and thereafter	3.0	66.67%

PACE REQUIREMENTS REVIEW

Pace is reviewed at the end of each quarter, once grades have been posted, to determine if the student is progressing satisfactorily toward graduation. If it becomes mathematically impossible to complete the program within the maximum time frame, a student may be immediately dismissed.

The student may appeal or continue as a Non-Degree Seeking student at the regular tuition rate until they have completed the maximum allowable credits.

WARNING

The institution evaluates SAP at the end of every quarter. If a student does not meet SAP requirements he or she will be notified by the Office of the Registrar using his or her official Neumont student e-mail account.

For a student who did not meet the cGPA and/or pace requirements at the end of a quarter, the university will, for the following quarter, place the student on Warning status. To meet SAP standards and return to good standing, the student must—at the end of their Warning quarter— meet the cGPA and pace requirements outlined in the SAP table. ("Good standing" is defined as meeting or exceeding all SAP criteria for that evaluation point. See the SAP table.) The university will disburse Title IV/HEA program funds to the student while on Warning status.

Students who, at the end of a quarter in which they are on Warning status, do not meet SAP but who meet the following criteria will be eligible for Probation and Title IV/HEA funds in the subsequent quarter:

- The student's Warning quarter grade point average is 2.67 or higher; and,
- The student's Warning quarter pace (credits earned and attempted in that quarter alone) is 80% or higher.

The university evaluates the record of every Warning student who does not meet SAP to determine whether or not they meet these quarter criteria.

In essence, this is a mitigating circumstances appeal that is filed by the university on behalf of qualifying students; the student does not need to complete appeal paperwork or provide documentation. (See the APPEAL section of the *Course Catalog*.)

PROBATION

For a student who did not meet the SAP requirements at the end of their Warning quarter, or who did not have a cGPA of 2.0 or higher at the end of their second or subsequent academic year, the university may place them on Probation for the subsequent quarter and disburse Title IV/HEA program funds. To be eligible, the student must appeal (in writing) the determination based on mitigating circumstances (see DISMISSAL APPEAL section of the *Course Catalog*), and:

- The university determines that the student should be able to meet SAP standards by the end of the subsequent quarter; or,
- The student agrees to a university- and student-sanctioned academic plan—which may include requirements such as taking a reduced course load, enrolling in specific courses, or other requirements—that, if followed, will ensure that student is able to meet the university's SAP standards by a specific point in time.

To meet SAP standards and return to good standing, the student must—at the end of their Probation quarter— meet the cGPA and pace requirements outlined in the SAP table. ("Good standing" is defined as meeting or exceeding all SAP criteria for that evaluation point. See the SAP table.) The university will disburse Title IV/HEA program funds to the student while on Probation status.

DISMISSAL

A student who does not meet SAP at the end of their Warning or Probation quarter may be dismissed from the university. Dismissal will occur unless the student has a successful mitigating circumstances appeal and is then granted a quarter of Probation (and, hence, the ability to continue their enrollment). A dismissed student is not eligible for Title IV/HEA funds.

APPEALING A DISMISSAL

An appeal is a process by which a student who has not met the university's SAP standards petitions the institution for reconsideration of their eligibility for Title IV/HEA program assistance and for continued school enrollment.Students that have been notified that they did not meet SAP standards at the end of a Warning or Probation quarter and will therefore be dismissed from the university, or who did not have a cGPA of 2.0 or higher at the end of their second or subsequent academic year, will have the opportunity to appeal the determination for mitigating circumstances.

Grounds for a mitigating circumstances appeal are:

- Death or serious illness of a family member
- The student missed a substantial amount of class due to an illness or injury
- The student met the requirements specified by the institution in the student's academic plan
- Quarter grade point average and pace requirements as outlined in the WARNING and PROBATION sections
- Other special circumstances

Additional appeal requirements:

- In the appeal, the student must submit information regarding why they failed to make SAP and what has changed in their situ-

ation that will allow them to meet SAP standards at their next evaluation point.
- The student must submit the appeal and all required information to the Registrar no later than the last Friday before the start of the subsequent quarter.

Students should use the SAP Dismissal Appeal form, which can be obtained from the Registrar's Office. The completed SAP Dismissal Appeal form must be turned in to the Registrar's Office no later than 4:00 p.m. on the Friday prior to the start of the next quarter.

If the appeal is accepted, the student is allowed an additional quarter of Probation, during which they are eligible for Title IV/HEA funding. The outcome of the appeal and conditions for reinstatement are recorded by the Appeal Committee and are communicated to the student. If a student does not appeal or the appeal is denied, and the student declines or is not eligible for Extended Enrollment, the student will be dismissed from the university. Dismissed students will lose their eligibility for Title IV/HEA funding. The lender will be notified of the student status change within 30 days from the last date of attendance.

EXTENDED ENROLLMENT STATUS

A student who does not meet SAP and who has been notified that they will be dismissed from the university may be eligible to continue in an extended enrollment status, but will be subject to the following limitations:

- The student may be in extended enrollment status for one quarter following a Warning or Probation quarter.
- The student will not be eligible for federal financial aid of any kind (Title IV/HEA) and will be charged for courses at the current tuition rate.
- Credits attempted during the extended enrollment quarter will be counted toward cGPA and pace/maximum time frame.
- At the end of an extended enrollment quarter, students must meet SAP standards or they will be dismissed from the university; these students may not appeal their dismissal.
- Students will not be eligible to graduate if they exceed one and one-half times the standard time frame, either as a regular student or in an extended-enrollment status. (See the PACE section.)
- The student must petition the Office of Student Affairs in writing for approval of extended enrollment status. If extended enrollment status is granted, the student must meet with a member of the Office of Student Affairs and agree to a written corrective action plan. A request for extended enrollment status will only be granted if the student can mathematically meet SAP at the end of the extended enrollment quarter.
- At the end of the extended enrollment status period, if the student has met SAP requirements, he or she will—for the subsequent quarter—resume eligibility for federal financial aid and return to good academic standing with the university. If Satisfactory Academic Progress is still not met, he or she will be dismissed from the university with no immediate appeal option. (For more information, see RE-ESTABLISHING ELIGIBILITY re-admission requirements in the *Course Catalog*.)

RE-ESTABLISHING ELIGIBILITY

- A student will be removed from Warning, Probation, or Extended Enrollment status — and 1. re-establish eligibility for Title IV/HEA funds and 2. return to good academic standing — only when he or she fully meets the standards of SAP for their evaluation point(see SAP table).
- (For illustrative purposes: a student who is on Warning status in their third quarter, due to having a cGPA that is below the 1.75 requirement for their second quarter, must have a cGPA of 1.85 at the end of their Warning/third quarter; this is because the student must meet SAP requirements for the end of the Warning/third quarter, and in this case that requirement is higher than the requirement in place at the previous evaluation point/second quarter.
- A student who has completed a Warning quarter and meets SAP will resume eligibility for Title IV/HEA funds and return to good academic standing. A student who does not meet SAP must appeal and have that appeal granted (placed on Probation for the subsequent quarter), be approved for Extended Enrollment, or be dismissed from the university.
- A student who has completed a Probation quarter and who meets SAP will resume eligibility for Title IV/HEA funds and return to good academic standing.
- A student on Probation who does not meet SAP may only receive an additional quarter of probation if the university determines that they have fully met the requirements specified in the student's academic plan; otherwise, the student must be approved for Extended Enrollment or be dismissed from the university.
- The university will notify a student who is on Warning, Probation, or Extended Enrollment status regarding whether or not they have met the standards of SAP and of their status for the following quarter.

Students dismissed from the university may apply for re-admission to the university with a return date of no sooner than one year after their dismissal. The student must show evidence that the issues causing the academic deficiency and dismissal have been addressed and corrected.

Evidence might include community service completed, a successful record of employment, or academic accomplishment at another college or university, and other personal development activities. If re-accepted to the university, the student would be placed on Warning status for their first post-reenrollment quarter and be eligible for Title IV/HEA funding. The student's application is reviewed by the Acceptance Committee, whereupon the application is either approved or denied. Students who are interested in applying for re-admission to the university should contact the Office of the Registrar.

TRANSFER CREDIT - APPLICATION OF GRADES AND CREDITS

Transfer credits are not included in the calculation of cGPA but are included in the calculation for pace: total number of credits attempted and earned.

TRANSFERRING TO ANOTHER NEUMONT PROGRAM

For a student who transfers to a different degree program, the university will recalculate SAP based on the credits attempted and grades earned that count toward the student's new program of study. A student who would have been out-of-compliance with SAP in their original degree program may be in-compliance in their new program of study.

APPLICATION OF SAP POLICY

Credit is earned for courses in which a student earns a passing grade. For required courses, a passing grade is a 'C' or better. For non-required courses, a passing grade is a 'D-' or better. Credits attempted are defined as those credits for which students are enrolled at the end of the add/drop or course adjustment period.

If there is grade change (including resolution of an incomplete), SAP is calculated after the change to determine whether the student is in good standing with the university. Students enrolled in all educational levels at Neumont are subject to all elements of SAP standards.

No student on Warning or Probation status will be allowed to graduate. Thus, every Neumont graduate must have a cGPA of 2.0 or higher.

APPLICATION OF GRADES AND CREDITS

Transfer credits are not included in the calculation of cGPA but are included in the "Total Number of Credits Earned." A grade for a repeated course replaces the original grade in the calculation of cGPA; however, the original course credits remain included in the "Total Number of Credits Attempted" in order to determine the required progress level. The original credits are considered as not successfully completed.

TRANSCRIPTS

All student academic records are retained, secured, and disposed of in accordance with local, state, and federal regulations. All student record information is maintained on the University computer system. Permanent records are kept in paper form or electronically. The University maintains complete records for each student that include grades, prior education and training, and awards received.

Student academic transcripts, which include grades, are available through the Office of the Registrar. Student records may only be released to the student or his/her designee as directed by the Family Educational Rights and Privacy Act of 1974. Official transcripts will be released to students who are current with their financial obligation (i.e., tuition and fees due to the University are paid current per the student's financial agreement).

NEUMONT UNIVERSITY

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