2005-2006 Student Catalog

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

PRESIDENT'S MESSAGE

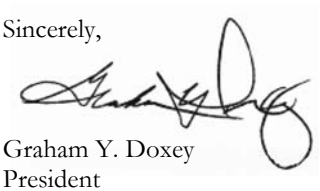
It is my privilege and pleasure to welcome you to Neumont University, the Salt Lake City campus of the 103-year-old Morrison University.

The Neumont University Computer Science degree program is different from that of many other colleges or universities. The hallmark of a Neumont University education is its project-based learning curriculum that focuses on the skills most valued by employers. Our Computer Science 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 as members of teams. Students have unprecedented access to technology and are mentored by some of the most respected software leaders of our time. Our program excels at offering this combination of hands-on learning and faculty leadership.

Neumont University's mission is to educate the most sought-after software developers and informatics professionals. We strive each day to educate, serve, and support our students in every aspect of University life. Working with our enterprise partners who provide the University with real-world projects that help educate our students, Neumont University plans to provide a consistent source of talented, trained graduates in the field of software development to Global 1000 employers.

I encourage you to explore our program as outlined in this catalog and on our web site (www.neumont.edu). The Neumont University team stands ready to assist you.

Sincerely,



Graham Y. Doxey
President

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ABOUT NEUMONT UNIVERSITY

MISSION

Neumont University's mission is to educate the most sought-after software developers and informatics professionals.

INSTITUTIONAL GOALS

In support of our mission, the University has adopted the following goals:

Academic Goals

1. Provide students with the opportunity to develop the necessary technical, business, and value skills, knowledge, and experience to enter the workplace as productive, competent software development or informatics professionals.
2. Provide learning environments where students are immersed in daily application of software development, computer science, and informatics principles and practices.
3. Foster strong relationships with leading software development companies and professionals to situate student learning in the context of authentic problems faced by the technology industry.
4. Advance the state of current knowledge and skills in model transformations, trusted components, and information system architecture and share this knowledge with students through teaching, applied research, development, and publication.
5. Improve student learning by innovating and applying best practices in the areas of project-based learning, competency-based assessment, and instructional technology during all stages of learning.

Student Service Goals

1. Help students adapt to an intensive, accelerated project-based learning environment which is significantly different from a traditional educational environment.
2. Reward those students who demonstrate self-discipline, motivation, and academic achievement.
3. Encourage creativity and individual expression by providing rich project experiences that mirror the target employment environments.
4. Build a bridge between students and employers in the community and globally by engaging in community and global software development projects.
5. Graduate successful, competent students who greatly value their Neumont University experience.

HISTORY, LEGAL CONTROL AND GOVERNANCE

Neumont University is a branch campus of Morrison University, a private proprietary university which is owned and 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, Suite 300, South Jordan, Utah 84095. Neumont Holdings, LLC Officers include H.F. "Scott" McKinley, Chief Executive Officer, Graham Y. Doxey, President, and Maurine A. Findley, Executive Vice President.

Neumont University introduced its Computer Science program at its Salt Lake City facility in January 2004. Its main campus, Morrison University, has a 103 year history of service to residents of the state of Nevada.

ACCREDITATION

The University is accredited by the Accrediting Council for Independent Colleges and Schools (ACICS) to award a Bachelor of Science degree 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, Washington, D.C. 20002; (202) 336-6780.

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. It is the student's responsibility to determine whether credits or degrees from the institution will transfer to other institutions. 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 Box146704, Salt Lake City, Utah 84114-6704. Their telephone number is (801) 530-6601.

PHYSICAL FACILITIES

Neumont University meets the demands of today's software developers with a modern facility where students use the latest equipment and technology. Each student has access to the latest hardware and software needed to complete their course work. Neumont University classrooms are designed to mirror the kind of working environment students would encounter in the workplace.

Neumont University is located in South Jordan, Utah, at the south end of the Salt Lake valley, home of the 2002 Winter Olympics. Nearby Salt Lake City is Utah's state capital, situated along the western slope of the Wasatch Mountain Range. Neumont University is minutes from world-class ski resorts, mountain climbing, mountain biking and hiking trails.

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 undo hardship.

ADMISSIONS

GENERAL ADMISSIONS REQUIREMENTS

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

- Application
- Student questionnaire
- Proof of high school graduation or its equivalent
- 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 at any time. Applicants are informed of their acceptance status after all information has been received and reviewed. The offer of admission will be valid only for the term requested on the application. A student who wishes to defer their enrollment at the University for one quarter beyond the quarter of acceptance may request deferred admission. A written request must be received by the Registrar 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 nonimmigrant students. An international application for admission is considered complete and ready for review when the following documents and records have been received:

1. 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.
2. In order to satisfy the general admissions requirements listed above, 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 one of the following credential evaluation services at the applicant's own expense.

   You will need to authorize the credentials evaluating company to send your documents directly to Neumont University after evaluation.

World Education Services, Inc Bowling Green Station P.O. Box 5087 New York, NY 10274-5087 Tel: (212) 966-6311 Fax: (212) 739-6100 info@wes.org	Josef Silny & Associates, Inc. International Educational Consultants P.O Box 248233 Coral Gables, Florida 33124 Tel: (305) 273-1616 Fax: (305) 273-1338 www.jsilny.com
World Educational Services, Inc. 665 3rd Street Suite 400 San Francisco, CA 94107 Tel: (415) 677-9378 Fax: (415) 677-9333 www.wes.org/	Educational Credential Evaluators, Inc. P.O Box 514070 Milwaukee, Wisconsin 53202-3470 Tel: (414) 289-3400 www.ece.org

3. 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 500+ (173+ computer-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.
4. Official test results of the 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:

1. 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.
2. A Transfer Eligibility Form for International Students must be signed and completed. 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 this 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.

For courses to be considered for transfer credit, a student must request a transfer credit review from the Office of Academic Programs and submit official transcripts and course descriptions from the time period when the courses were taken. Transfer credit requests must be made within the first quarter of attendance at Neumont University.

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

Computer Science Courses:
To receive transfer credit for a Neumont University required Computer Science course, the student must pass a competency test for that specific course. The transferring course must match the Neumont University course for content and general outcome requirements on the basis of review by the Office of Academic Programs of the transcripts and course description in the original institution's catalog or class syllabus from the time period the course was taken.

General Education Courses:
To receive transfer credit for a Neumont University required General Education course, the transferring course must be comparable to the Neumont University course for content and general outcome requirements on the basis of review by

the Office of Academic Programs of the transcripts and course description in the original institution's catalog or class syllabus from the time period the course was taken.

Neumont University may accept transfer credits to meet the elective General Education course requirements as long as the course is in a General Education subject area that Neumont University offers.

The maximum number of General Education transfer credits that Neumont University will award for previous coursework is 54 credit hours.

Advanced Placement and CLEP Examination Acceptance Policy
Neumont University allows credit for Advanced Placement (AP) and CLEP examinations. For detailed information please contact the Office of Academic Programs.

Credit by Advanced Standing
Neumont University encourages students to seek advanced standing credit for knowledge they may have acquired in a variety of ways. Students enrolled at the University and former students eligible to re-enroll may take advanced standing examinations for credit provided that they have not been enrolled in an equivalent course at Neumont and received a grade other than W.

A student enrolled in and attending a course may earn credit in that course by advanced standing examination up to the end of the second week of class. If a student earns credit in the course by examination, the student may drop the course enrollment.

Successful completion of an advanced standing examination will earn the student credit equivalent to the course being challenged. No letter grade is assigned to the course for that student.

Should a student fail an advanced standing examination, no grade will be recorded. In addition, a student may not receive credit for a repeat of an exam previously failed.

Neumont University offers a number of advanced standing examinations. The fee for each examination is $10.00 per credit hour. Interested students should consult with the Office of Academic Programs.

Military Credit
Neumont University is approved for veterans training.

Neumont University will evaluate 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 and officers, reserve component personnel, and separated or retired Sailors and Marines.

Only courses, training, or military experience that fulfills Neumont University General Education requirement categories will be evaluated from official AARTS or SMART transcripts.

As with any request for transfer credits at Neumont University, the official, mailed transcript must be received by the Registrar's Office by the end of your first quarter at Neumont University.

SCHOLARSHIPS

Neumont University offers several scholarship opportunities to qualified applicants. Applications for these scholarships should be submitted with other admissions application materials.

Applicants for all Neumont scholarships will be reviewed based on academic records from high school and college (if applicable), standardized test scores, financial need, or other relevant factors. Based on the review of this criteria, the Scholarship Committee may award any of the scholarships described below. Based on the type of award, a minimum cumulative GPA must be maintained for continued eligibility for the awarded scholarship.

Neumont University has set the following application deadlines:

For 2006 high school graduates entering the University during July or October 2006, scholarship applications will be reviewed on December 1, 2005, March 1, 2006 and May 15, 2006. Once notification of a scholarship award has been communicated, the student must inform the University of their decision to attend by signing an enrollment agreement to hold the award for the term for which they have applied, at least sixty days prior to the term start date. Any changes in the start date or term could result in the loss of the scholarship award.

Scholarship applicants who are not 2006 High School graduates and who may be starting class at Neumont University during any of the 2006 term start dates must have applications submitted before the anticipated term start date. These applications will be reviewed by the Scholarship Committee on December 1, 2005, March 1, May 15 and August 15, 2006. Once notification of award has been sent, the student will have two weeks to accept the award and notify the University of their intent to start class during the term for which they have applied by signing an enrollment agreeement. Any changes in the start date or term could result in the loss of the scholarship award.

Additional information regarding all scholarships, including selection criteria considered by the Scholarship Committee, can be obtained by contacting the Admissions Department.

Technology TrendSetter Scholarship
The Technology TrendSetter Scholarships may be awarded at a level to cover 100%, 50% or 25% of tuition costs on a quarterly basis while the student is in attendance. Based on the level of award, a minimum cumulative GPA of 3.5 must be maintained for continued eligibility for the awarded scholarship. Students awarded the Technology TrendSetter Scholarship may not be eligible for other institutional scholarships awarded by the University.

David P. Gardner Scholarship
The David P. Gardner scholarship awards $10,000 toward tuition, applied $1,000 per quarter over the course of the 10-quarter BSCS program.

Community Service Award
This is a $2,500 award to be applied toward tuition, at a rate of $250 per quarter, for individuals who have served at least 18 months in an organized full-time community service or military capacity based upon the recommendation of an official from the organization that sponsored them.

High School Technology Scholarship
The High School Technology Scholarship is for high school seniors graduating in the current year with an interest and experience in Computer Science and high academic achievement. One student per high school may be selected for this

award of $5,000 to be applied toward tuition at a rate of $500 per quarter, based on the recommendation of a faculty member and the high school guidance counselor.

Zion's Bank Scholarship
Zion's Bank Corporation offers an annual $5,000 scholarship to a Utah high school senior with a minimum 3.0 GPA to attend Neumont University.

The total dollars available to be applied to a student's account my not exceed, on a cumulative basis, more than 100% of charges for tuition

QUARTERLY SCHOLARSHIPS FOR CONTINUING STUDENTS
The Founders' Scholarship for Top Performers
Those students who have achieved an academic standing within the top 10% of the current student population or have achieved a 4.0 GPA during the preceding quarter will be awarded the Founders' Scholarship.

The Founders' Scholarship Award in the amount of $500 will be applied toward tuition and is valid only for the quarter following the quarter in which the award was achieved. The student must be in attendance during the following quarter to receive this scholarship.

The total dollars available to be applied to a student's account my not exceed, on a cumulative basis, more than 100% of charges for tuition

STUDENT SERVICES

LIBRARY
The goal of the Neumont University Library is twofold:

1. Serve the information needs of students and faculty members of the Neumont University community.
2. 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 on-line 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 library is overseen by the Office of Academic Programs which works with faculty to ensure that the library collection remains current.

STUDENT ADVISING
Advising encompasses several important areas of student life. The Office of Academic Programs and the Office of Student Services serve as advisors and assist students in course selection and registration, dropping and adding courses, and meeting graduation requirements. Academic advising is coordinated by the Office of Academic Programs and includes Satisfactory Academic Progress, attendance, and personal matters.

HOUSING
Neumont University does not provide on-campus housing; however, the University does coordinate housing through local apartments. Housing information and policies are available through the Office of Student Services.

PLACEMENT SERVICES
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 future employers. We will continue to foster these relationships as they help us to know what the industry considers to be the necessary technology and value skills for the success of our graduates. The Office of Placement Services will assist graduates in identifying potential career paths, in the graduates' development of a positive self-image, and in assessing competencies, strengths, and career expectations.

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.

UNIVERSITY POLICIES

FAMILIARITY WITH UNIVERSITY REGULATIONS

Each student is given the University catalog, which sets forth the policies and regulations under which the institution operates. It is the responsibility of the student to become familiar 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 Academic Program Council upon written request and for reasonable cause. Course substitutions may be made only by the Academic Program Council. The total hours 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 Services.

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
- 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
- Violation of the Acceptable Use Agreement for school-issued equipment.

The University reserves the right to suspend or dismiss any student at any time for misconduct or when such action is deemed to be in the best interest of the student and the student body.

ALCOHOL AND SUBSTANCE ABUSE STATEMENT

The University does not permit or condone the use or possession of marijuana, alcohol, or any other illegal drug, narcotic, or controlled substance by students or employees while on school premises.

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 Services. 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 Human Resources is responsible for receiving and investigating complaints of sexual harassment. Any employee, student, or administrator who is aware of an alleged incident of sexual harassment should take immediate action by bringing the matter to the attention of the Office of Human Resources.

STUDENT COMPLAINTS

Complaints should be directed to the Office of Students Services.

If Student Services is not able to address the student's complaint, the student may also seek the assistance of the Director of Operations, the Campus President or call the toll-free Student Hotline at (866) 801-1300.

JUDICIAL PROCEDURES

Students who violate school policies and regulations or the Acceptable Use policy will be subject to judicial sanctions which may include suspension or dismissal from the University. Judicial procedures will be handled through Student Services. Students have the right to appeal any judicial decisions. Details of the appeal process can be found in the Student Handbook.

Students who are unable to achieve resolution of their appeal may also seek the assistance of the Campus President or call the toll-free Student Hotline at (866) 801-1300.

Schools accredited by the Accrediting Council for Independent Colleges and Schools must have a procedure and operational plan for handling student complaints. 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.

FAMILY EDUCATIONAL RIGHTS AND PRIVACY ACT OF 1974

The confidentiality and security of student educational records are of primary importance to Neumont University. The Family Educational Rights and Privacy Act of 1974, as amended, prohibits access to or the release of educational records or other personal, identifiable information without the written consent of the student.

Exceptions to this include:

- authorized government officials
- employees having authorized access
- accrediting agencies engaged in accrediting functions
- parents of a student whose status as a dependent has been established in accordance with the Internal Revenue Code of 1954, Section 15
- an ex parte judicial order investigating a crime of terrorism
- a subpoena from a federal grand jury
- a subpoena issued for law enforcement purposes
- authorized officials in connection with an emergency, if knowledge of the information is necessary to protect the health or safety of a student or other persons
- proper written consent that is signed, dated, and includes the birth date of the student, and specifies the educational records to be disclosed, the purpose of the disclosure, and the party to whom the disclosure may be made
- Bureau of Homeland Security for foreign students for whom the school has issued an I-20

The Family Educational Rights and Privacy Act (FERPA) affords students certain rights with respect to their educational records. They are:

- The right to inspect and review the student's educational records within 45 days of the day the University receives a request for access. Students should submit written requests to the Registrar's office that identify the record(s) they wish 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.
- The right to request an amendment to the student's educational records if the student believes portions of the record is inaccurate or misleading. Students may ask the University to amend a record that they believe is inaccurate or misleading. They should write the University official responsible for the record, clearly identify the part of the record they want amended, and specify why it is inaccurate or misleading. If the University decides not to amend the record as requested by the student, the University will notify the student of the decision and advise the student of his or her 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.
- The right to consent to disclosures of personally identifiable information contained in the student's educational records, except to the extent that FERPA authorizes disclosure without consent. One exception that permits disclosure without consent is disclosure to institution officials with legitimate educational interests. An institution official is a person employed by the institution in an administrative, supervisory, academic or research, or support staff position; a person or company with whom the institution has contracted (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 institution official in performing his or her tasks. An institution official has a legitimate educational interest if the official needs to review an educational record in order to fulfill his or her professional responsibility. Upon request, the institution discloses educational records without consent to officials of another institution in which a student seeks or intends to enroll.
- Directory information is information that may be unconditionally released to third parties by the school without the consent of the student unless the student specifically requests that the information not be released. The school requires students to present such requests in writing within 10 days of the date of enrollment. Directory information includes the student's name, address(es), telephone number(s), date and place of birth, dates of attendance, and degree awarded.
- 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 The Family Policy Compliance Office, Department of Education, 600 Independence Avenue, SW, Washington, DC 20202-4605.

Additional FERPA information is available from the Office of Student Services.

FINANCIAL INFORMATION

FINANCIAL OBLIGATION

A student who has applied, is accepted, and has begun classes 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 may 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 Financial Aid Office 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 Financial Aid Office.

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.

TUITION AND FEES

Tuition is charged per quarter based on the full-time rate for the academic year in effect at the time of enrollment. This rate will remain in effect throughout the student's first academic year. The academic year rate in effect at the time the student moves into subsequent academic years will determine the rate charged during those terms.

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

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

Technology fees and a library fee (outlined below) are assessed each quarter.

TUITION AND FEE TABLE

Application fee	$35	Required of all applicants
Enrollment fee	$100	Required of all first time students.
Tuition for first Academic Year, assessed on a per quarter basis	$21,000	Per Academic Year, assessed quarterly during the first academic year at a rate of $7,000 per quarter
Per unit charge (applies to part-time students only)	$385	Per unit, assessed in place of the quarterly charge, only when the student is carrying less than 12 units per term
Technology fees	$300	Per quarter
Library fee	$25	Per quarter
Security deposit on computer hardware issued to student	$1500	Refundable under terms of Laptop Usage Policy; See student handbook
Re-entry fee	$50	Nonrefundable fee required of all applicants for re-enrollment after withdrawal has occurred
Graduation fee	$75	
Transcript fee	$10	Students are provided one official transcript upon graduation without charge, subsequent transcript requests will incur this fee
Duplicate diploma	$25	
Returned check penalty	$25	Per item

FINANCIAL ASSISTANCE INFORMATION

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 Financial Aid Office personnel 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 and 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 by the Higher Education Amendments of 1998 have been satisfied within the University catalog. However, Financial Aid Office personnel are available to discuss consumer information in more detail with current and prospective students.

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.

Application
To apply for financial aid, a student must complete the Free Application for Federal Student Aid (FAFSA). The application must be completed with extreme care and accuracy. Financial Aid Office personnel are available to assist students in the completion of this form and to answer any questions.

The FAFSA is used to determine eligibility for all types of financial aid programs. Once processed, the application will produce an Expected Family Contribution (EFC), which determines eligibility.

Financial aid from federal programs is not guaranteed from one year to the next. Each student must reapply every academic year.

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 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

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 FASFA. 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 Family Educational Loan be notified concerning their 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.

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's 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.

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 applicants Expected Family Contribution (EFC).

Federal Family Educational Loan Program (FFELP)
Subsidized Federal Stafford Loans, Unsubsidized Federal Stafford Loans, and Federal PLUS Loans comprise the Federal Family Educational Loan Program (FFELP) and are discussed individually below.

Subsidized Federal Stafford Loans
Federal Stafford loans are low interest loans that are insured by a guaranty agency and made to the student by a lender such as a bank, credit union, or savings and loan association. The subsidized Stafford loan is awarded based on financial need.

For loans first disbursed on or after July 1, 1994, a Stafford loan made to any Stafford borrower, regardless of whether the borrower had FFELP loans outstanding, will have a variable interest rate not to exceed 8.25 percent. This interest rate is determined on July 1 each year.

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

- $2,625 if he or she is a first-year student enrolled in a program of study that is at least a full academic year.
- $3,500 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.

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.

The subsidized Stafford loan is deferred while the student is enrolled 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. Deferments after the student drops below half-time status are not automatic and the student must contact the lender concerning his or her loan. Applications for deferment can be obtained from the Financial Aid Office or from the lender. For additional deferment information, contact the Financial Aid Office.

Unsubsidized Federal Stafford Loans
The unsubsidized Stafford 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 Stafford loans. An unsubsidized Stafford 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 Stafford loan are the same as those for a subsidized Stafford loan with the exceptions of the following: the government does not pay interest on the student's behalf on an unsubsidized Stafford 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 to the lender, or; (2) the student and the lender may agree to capitalization of 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:

- $6,625 if he or she is a first-year student enrolled in a program of study that is at least a full academic year. (At least $4,000 of this amount must be in unsubsidized loans.)
- $7,500 if he or she completed two years of study and the remainder of the program is at least a full academic year. (At least $4,000 of this amount must be in unsubsidized loans.)
- $10,500 a year if he or she completed two years of study and the remainder of the program is at least a full academic year. (At least $5,000 of this amount must be in unsubsidized 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 $46,000. (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 Stafford 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 3 percent origination fee on a PLUS loan made on or after July 1, 1994, and up to 1 percent insurance premium may be deducted proportionately from the loan principal after each payment. The interest rate is variable and is set on July 1 of each year but has a maximum of 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 (but no more than 10 years) of repayment, the actual payment and schedule is determined by the total amount borrowed. Applications can be obtained from the Financial Aid Office or from the lender.

For deferment information, contact the Financial Aid Office.

Alternative Financing Programs
The University offers alternative financing programs as a supplement to Title IV Federal Family Education Loans. These loans are not guaranteed by the federal government and are 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. Students qualify for the alternative financing program on the basis of need for financial aid, the expected family contribution toward the educational costs, and the other types of financial aid for which the student has qualified or may qualify. Students interested in the alternative financing program should see the Financial Aid Office for a complete information package.

SCHOLARSHIPS
The University offers many scholarship opportunites for both new and continuing students. For information on scholarships for new students please see the Scholarship Section of this catalog for a full description of scholarships available and application deadlines.

The University has quarterly scholarship opportunities for continuing students as described below:

QUARTERLY SCHOLARSHIPS FOR CONTINUING STUDENTS
The Founders' Scholarship for Top Performers
Those students who have achieved an academic standing within the top 10% of the current student population or have achieved a 4.0 GPA during the preceding quarter will be awarded the Founders' Scholarship.

The Founders' Scholarship Award in the amount of $500 will be applied toward tuition and is valid only for the quarter following the quarter in which the award was achieved. The student must be in attendance during the following quarter to receive this scholarship.

The total dollars available to be applied to a student's account my not exceed, on a cumulative basis, more than 100% of charges for tuition.

VETERAN'S ASSISTANCE PROGRAMS
Neumont University is 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
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.

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 in writing within three days after signing the agreement and receive a full refund of all monies paid. The refund will be made within 30 days of receipt of such notice. First time students who withdraw within three calendar days after classes 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 begin the process of withdrawal a student must give written notice to the Registrar's Office. Written notice may be hand delivered or mailed to Neumont University, Attention Registrar, 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 provides to the school official notification of his or her intent to withdraw. Notification should be provided in writing to the Office of Academic Programs or to 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 mid-point of the quarter. Alternatively, the institution may use 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.

When a student withdraws, the institution must consider two separate calculations: the return to Title IV and the instititutional refund.

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.

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 is 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 the return of federal funds to the appropriate programs and will delay returning 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 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 Stafford Loan Program;
2. Subsidized Stafford Loan Program;
3. Federal PLUS Loan Program;
4. Federal Pell Grant Program; and
5. Any other grant or loan assistance authorized by Title IV of the HEA.
6. 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

DEFINITION OF CREDIT

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.

ATTENDANCE POLICY

The purpose of the Attendance 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 classes. When protracted absence has been caused by illness, or other serious unforeseen circumstances, students may be given the privilege of making up lost work by arrangement with the instructor. The burden of making up missed work rests with the student. A student may be assigned a zero for any assignment or exam missed because of excessive absences. Grades may be lowered because of excessive absences. Students should contact their instructors and a Student Services representative before or during any absence rather than after the fact.

Students are expected to be in class on time and remain for the entire session. Grades may be lowered because of violations.

Students with poor attendance may be subject to advising. Students who have been advised of poor attendance may be subject to dismissal. Neumont University reserves the right to dismiss a student based upon poor attendance.

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

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 2.0 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 RATE OF PROGRESS	INCLUDED IN GPA
A	4.0	Y	Y
A-	3.7	Y	Y
B+	3.3	Y	Y
B	3.0	Y	Y
B-	2.7	Y	Y
C+	2.3	Y	Y
C	2.0	Y	Y
C-	1.7	Y	Y
D+	1.3	Y	Y
D	1.0	Y	Y
D-	0.7	Y	Y
F (FAIL)	0.0	Y	Y
P(PASS)	N/A	Y	N
W	N/A	Y	N
WU	0.0	Y	Y
WS	N/A	Y	N
AUD	N/A	N	N
INC	N/A	Y	N

GPA AND CGPA CALCULATIONS

The grade point average (GPA) for each term and cumulative grade point average (CGPA) are calculated on courses taken in residence at the University. The GPA for each term 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.

W/WU/WS Course Withdrawal

Students who officially withdraw from a course after the add/drop period but before the completion of the first 30% of the term will be given a W (withdraw) grade for that course. An official course withdrawal is initiated with the Office of Academic Programs. After the 30% point, students will be given a WS (withdraw satisfactory) or WU (withdraw unsatisfactory), depending on the status of class work accomplished as of the withdrawal date. A W or a WS grade does not apply to a student's grade point average but does apply to a student's course completion ratio. A WU grade is applicable to both a student's grade point average and course completion ratio.

Final grades are reported at the completion of each grading term and are provided to each student. If mailed, they are sent to the student's home address.

AUDITING COURSES

Students may register to audit any lecture-based courses, subject to class size, advisor, and instructor authorization. Courses that are entered on a student's record as audited (AUD) do not earn academic credit nor fulfill any other academic requirements. Standard tuition fees are required for audited classes. Graduates may audit previously taken lecture-based courses, with instructor authorization, at no additional charge as a brush-up privilege given by the University.

Incomplete (INC)

An Incomplete (INC) is a temporary designation given at the professor's discretion to a student whose course work has been of acceptable quality but, 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. All class assignments must be completed within ten weeks of the due date. An Incomplete (INC) that has not been resolved in ten weeks 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.

Add/Drop Period
The Add/Drop Period is defined as the first calendar week of the term. Students may drop or add classes without penalty during this period.

GRADUATION

Commencement exercises will be held at least once a 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.

Graduation with Honors
Undergraduate students who have earned the requisite credits for graduation with the following grade point averages are entitled to the appropriate honors: 3.50-3.75, 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 or more quarter hours toward the Bachelor's degree will be classified as a full-time student for that term.

REPEATING COURSES

An undergraduate student may repeat a course taken at the University in order to improve the 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 will be recomputed to count the last attempt only. All repeats will be charged at the current tuition rate.

LEAVE OF ABSENCE

The University does not permit leaves of absence. Students experiencing circumstances that may make it necessary to interrupt their attendance temporarily or briefly should see the Office of Academic Programs.

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.

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.

When academic dishonesty is suspected, the student may receive a failing grade for that particular assignment. The Office of Academic Programs will notify the student immediately of the infraction and of the resulting punitive action.

If the student appeals the action, he or she must do so by following the Academic Appeal Procedures. Statements will be taken from the student, the instructor, and from any witness to the suspected act. After review of all statements and evidence, the student will be notified in writing of the decision to support or rescind the punitive action, or to impose additional academic punitive action. Any student who commits two infractions involving dishonesty may be subject to suspension or dismissal.

ACADEMIC DEFICIENCIES

Following the conclusion of each grading period, the grades of each student will be audited by the Office of Academic Programs. As a result of this audit, it may be necessary to reschedule the student or to place the student on a status of academic probation or academic dismissal.

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. Additionally, SAP must be maintained in order to remain eligible to continue receiving federal financial assistance.

Satisfactory academic progress is determined by measuring the student's cumulative grade point average (CGPA) and the student's rate of progress toward completion of the academic program. If a student fails to meet the required standards of SAP, he or she will be placed on academic probation. Standards of SAP apply to all regular students.

The elements of Satisfactory Academic Progress are as follows:

- Cumulative grade point average
- Rate of progress
- Maximum time frame

Cumulative Grade Point Average (CGPA) Requirements
Students must meet specific cumulative grade point average requirements at specific points during their enrollment in order to be considered to be making SAP. Satisfactory Academic Progress is defined as a CGPA equal to or exceeding 2.0. The quarterly and cumulative GPA will be evaluated at the end of every term, after grades have been posted, to determine if the student's CGPA is in compliance.

Rate of Progress
In addition to the CGPA requirements, a student must successfully complete a certain percentage of the credits attempted. Credits attempted are defined as those credits for which students are enrolled at the end of the add/drop period of each academic term. These percentage requirements are noted in the tables below, along with the CGPA requirements. As with the determination of CGPA, the percentage completion requirements will be reviewed at the end of each academic term, after grades have been posted, to determine if the student is progressing satisfactorily.

Maximum Time Frame
A student must complete all of the requirements for graduation without exceeding 150 percent of the required quarter credit hours for the program in which they are enrolled. Therefore, the total credits that may be attempted (maximum time frame) is 270 quarter credits (150 percent of 180).

	CGPA	Rate of Progress: % of attempted credits completed
End of each quarter of the first academic year	2.0	60%
End of each quarter after the first academic year	2.0	66%

Cumulative Grade Point Average at Midpoint
At the end of the second academic year and at the end of each subsequent academic year(s), the University will evaluate each student's CGPA. A student receiving federal financial aid must meet the CGPA minimum requirement of 2.0 or they will no longer be eligible for financial aid, may not be placed on probation, and must be dismissed, unless the student wishes to continue without being eligible for federal financial aid. However, a student not meeting the CGPA standards at the end of the second year may remain as an enrolled student who is eligible for federal financial aid if there are documented mitigating circumstances (i.e., death in the family, sickness of the student, etc.).

Probation and Dismissal
If a student falls below the requirements of SAP at the end of any quarter, the student will be notified by the Office of Academic Programs and placed on academic probation. The student will be notified by letter sent to the current address in the student file as well as by email. Students placed on academic probation may continue as regular students and be eligible to receive financial aid. A student will be removed from probation only when he or she fully meets the standards for SAP for the academic program. If the student does not meet SAP requirements by the end of the following quarter, he or she will be notified that they have 10 calendar days from the date on the notification letter to appeal or will be dismissed from the university. A student may be dismised if it becomes impossible to earn a CGPA within the maximum time frame or after attempting 150% of the required number of quarter credits.

Students that have been notified that they will be dismissed will have the opportunity to appeal the dismissal for mitigating circumstances (i.e. death in the family, sickness of the student, etc.). The student must contact the Office of Academic Programs to appeal the dismissal within 10 calendar days from the date on the notification letter. During the appeal process and until a decision is reached on the appeal, the student remains enrolled in the school and is eligible for financial aid.

If the Academic Dismissal Appeal is accepted, then the student is allowed one additional quarter to meet SAP requirements. The appeals acceptance and conditions for reinstatement are recorded by the committee and communicated to Student Services and the Office of Academic Programs. Student Services then communicates the appeal decision and the conditions to the student.

If a student does not appeal within 10 days of notification, or the appeal is denied, the student will be dismissed from the school. Students on dismissal will lose their eligibility to receive federal financial aid. The lender will be notified of the student status change within 30 days from the last date of attendance.

No student on probation will be allowed to graduate.

Academic Appeal Procedures
Academic policies exist to ensure that each student's performance is graded fairly and by equal standards. If a student believes he or she has received a grade that is not reflective of the quality of their course work, he or she may appeal the grade through a formal process as follows:

- The student is expected to meet with the faculty member assigning the grade to inform them that he or she believes the grade is unjust. The student must bring appropriate documentation to demonstrate how he or she has met course objectives and expectations.
- If the student is unable to resolve the dispute directly, the student then informs the Office of Academic Programs of the dispute in writing, and the dispute must be received no later than 20 days after the grade in question was assigned. The Office of Academic Programs will notify the student of a meeting date and time within three business days of the complaint. The Office of Academic Programs will facilitate the discussion between faculty and student in an effort to resolve the dispute.
- Unresolved disputes may be taken to the Grievance Committee. This committee is composed of administration, student peers, and academic faculty of the University.

Application of Grades and Credits
Transfer credits are not included in the calculation of CGPA but are included in the "Total Number of Credits Attempted.". Transfer credits are included as credits attempted and successfully completed in calculating the rate of progress.

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, microfiche, or microfilm. The University maintains complete records for each student that includes grades, prior education and training, and awards received.

Student academic transcripts, which include grades, are available upon written request by the student. 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.

Transcript requests must be made in writing to the Office of the Registrar. 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).

Students are provided an official transcript free of charge upon completing graduation requirements. There is a fee for each additional official transcript requested.

BACHELOR OF SCIENCE IN COMPUTER SCIENCE

INTRODUCTION

The Neumont University Bachelor of Science in Computer Science (BSCS) distinguishes itself with an integrated, project-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 Computer Science 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 instructional and project hours, the Neumont University graduate has a baccalaureate degree in Computer Science and a portfolio of project work.

PROGRAM OVERVIEW

The BSCS program is a ten-quarter program. While the calendar year contains four quarters, the academic year is three quarters.

Students attend classes and work on projects generally between 8:00 a.m. and 5:00 p.m., Monday through Friday. Many assignments are performed in groups as part of lab and project work.

PROGRAM OBJECTIVES

- 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
- Model and develop information systems
- 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

Computer Science Project Courses

Neumont University believes the key to a useful and applicable degree in Computer Science is team-based, hands-on experience with real software projects. In support of this, students spend the majority of their time working in teams on pertinent, real-world software development projects.

Projects are developed in leading-edge technologies highly sought after by today's employers. Currently these selected technologies include C# and Java programming languages, Microsoft Visual Studio Enterprise Architect (VSEA), IBM WebSphere Studio Application Developer (WSAD), and other languages, platforms, standards, and methodologies.

There are a variety of project environments in which students work, including internal projects and external projects. Students work on internal projects while they are learning the intricacies of the programming languages and development environments. Internal software projects are controlled, designed, and structured by Neumont University instructors to ensure that students master the required competencies.

Students may 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.

Course Naming Conventions

The following naming conventions are used to identify all the categories of courses:

BU:	Business	MA:	Math
CS:	Computer Science	PE:	Physical Education
FC:	Fine Arts and Communication	PS:	Physical Science
HU:	Humanities	SS:	Social Science

GRADUATION REQUIREMENTS

To qualify for graduation with a Bachelor of Science Degree in Computer Science, 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 at least 90 credit hours in Computer Science
- No more than 10 credit hours of Industry Standard Product and Technology labs may be counted toward BSCS degree
- Must have at least 45 credit hours of upper level courses
- Must take a minimum of 38 credit hours in Project courses, 22 of which must be in upper division Project courses..
- Complete a minimum of 54 quarter credit hours in General Education
- Maximum of 12 credits in any one General Education Category (ex. PS, SS, HU, FC, PE, MA, BU)
- Abide by all University rules and regulations
- All courses with numbers between 100 and 299 are lower level courses. Numbers between 300 and 499 are upper level courses.

Bachelor of Science in Computer Science Tracks

Within the first quarter of enrollment in the BSCS program, the student will meet with a student advisor to discuss the different track options available. There are currently five tracks available. They are:

- Basic Microsoft Track
- Comprehensive Microsoft Track
- Comprehensive IBM Track
- Basic Microsoft and IBM Track
- Comprehensive Microsoft and IBM Track

The details for these tracks are listed in the following pages.

The student and advisor will also plan the timing of elective courses as well as make a plan for the Industry Standard Certification exams the student may choose to take. Industry Standard Certification Exams such as the Microsoft MCSD exams or the Java/IBM exams are recommended as part of the student's track, but are not required.

Basic Microsoft Track

Minimum General Education Credits Required		**54**
Required General Education Courses	20	
Elective General Education Courses	34	
Minimum Computer Science Credits Required		**90**
Required Core Computer Science Courses	43	
Required Computer Science Project Courses	38	
Minimum Elective Computer Science Courses	9	
Minimum Additional Elective Credits Required		**36**
Total Required for BS in Computer Science		**180**

Required General Education Courses — 20 credits

FC120	Spoken Communications	3
FC125	Collaborative and Interpersonal Communications I	2
HU110	Logic I	3
HU121	English Composition	3
MA110	Sets, Probability, and Number Systems	3
MA310	Trigonometry	3
MA320	Calculus	3

Elective General Education Courses — 34 credits min.

Select a minimum of 34 credit hours from this list:

BU201	Introduction to Economics	3
BU290	Business Fundamentals	4.5
BU350	Entrepreneurship and Venture Capital	2
FC101	Art Appreciation	2
FC110	Introduction to Digital Photography	2
FC126	Collaborative and Interpersonal Communications II	2
FC127	Virtual Team Collaboration	4
FC200	Theater	2
FC201	Music Appreciation	2
FC327	Coordinating Virtual Teams	4
HU120	Modern Literature	3
HU210	Logic II	3
HU220	Introduction to Philosophy	2
HU221	Intermediate English Composition	2
HU230	Linguistics	3
HU310	Critical Thinking	2
HU321	Technical Writing	3
MA095	Algebra Review	0
MA210	Linear Algebra	3
MA410	Numeric Analysis	3
PE170	Healthy Living	2
PS115	Introduction to Biology	3
PS210	Environmental Engineering	2
PS220	Introduction to Physics	3
PS301	Astronomy	2
SS110	Career Development and Work Ethic	2
SS120	Mapping and Geospatial Information I	3
SS140	Introduction to Social History	2
SS215	Globalization and Intern'l Relations in the Internet Age	2
SS220	Mapping and Geospatial Information II	3
SS230	World Cultures I	3
SS240	Social Psychology	3
SS315	Culture, Knowledge and Society	3
SS320	Group Dynamics	3
SS330	World Cultures II	3

Required Core Computer Science Courses — 43 credits

CS120	Topics in Software Development	5.5
CS130	Relational Databases I	3.5
CS140	Information Modeling I	3.5
CS150	Introduction to Object Oriented Programming in C#	11
CS160	Development in the .NET Environment I	3
CS230	Relational Databases II	3.5
CS240	Information Modeling II	3.5
CS250	Algorithms and Data Structures	3.5
CS260	Development in the .NET Environment II	3
CS360	Development in the .NET Environment III	3

Industry Standard Certification Exams recommended

3 MCSD Exams

Required Computer Science Project Courses — 38 credits min.

Select a minimum of 38 credit hours from this list (22 must be upper division):

CS190	Projects I	6.5
CS192	Projects II	6.5
CS194	Projects III	6.5
CS290	Projects IV	6.5
CS390	Projects V	6.5
CS392	Projects VI	6.5
CS490-3	Enterprise Projects I -10 hours/week	3
CS490-6	Enterprise Projects I -20 hours/week	6
CS490-9	Enterprise Projects I -30 hours/week	9
CS491-3	Enterprise Projects II - 10 hours/week	3
CS491-6	Enterprise Projects II - 20 hours/week	6
CS491-9	Enterprise Projects II - 30 hours/week	9
CS491-12	Enterprise Projects II - 40 hours/week	12
CS493-3	Enterprise Projects III - 10 hours/week	3
CS493-6	Enterprise Projects III - 20 hours/week	6
CS493-9	Enterprise Projects III - 30 hours/week	9
CS493-12	Enterprise Projects III - 40 hours/week	12
CS499	Projects VII	6.5

*Once a minimum of 38 credit hours of project courses have been completed, then additional project courses can be used towards Elective Computer Science Credits.

Elective Computer Science Courses — 9 credits min.

Select a minimum of 9* credits from this list:

CS100	Introduction to Computers	1.5
CS115	Introduction to Object Oriented Programming in Java	11
CS125	Informatics I	9
CS180	Development in the J2EE Environment I	3.5
CS225	Informatics II	3
CS235	Model Driven Development I	3.5
CS270L	Industry Standard Product and Technology Lab I	2
CS271L	Industry Standard Product and Technology Lab II	2
CS272L	Industry Standard Product and Technology Lab III	2
CS273L	Industry Standard Product and Technology Lab IV	2
CS274L	Industry Standard Product and Technology Lab V	2
CS280	Development in the J2EE Environment II	3.5
CS285	Roles-Based Software Development	3.5
CS310	Software Project Management	4.5
CS311	Career Development as an Informatics Professional	2
CS312	Multimedia, Game and Entertainment Systems	3.5
CS315	Software Quality Standards and Assurance	4.5
CS320	Software Engineering Methodologies	3.5
CS322	Software Design in UML	3.5
CS324	XML and XSLT	3.5
CS325	Human Computer Interface Design	3.5
CS330	Relational Databases III	3.5
CS335	Model Driven Development II	3.5
CS350	Systems Design	6.5
CS352	Systems Design in the Knowledge Economy II	6.5
CS370L	Industry Standard Product and Technology Lab VI	2
CS371L	Industry Standard Product and Technology Lab VII	2
CS372L	Industry Standard Product and Technology Lab VIII	2
CS373L	Industry Standard Product and Technology Lab IX	2
CS374L	Industry Standard Product and Technology Lab X	1
CS380	Development in the J2EE Environment III	3.5
CS410	Software Architectures	3.5
CS415	Patterns	4.5
CS420	Internationalization	4.5
CS422	Financial and E-commerce Systems	4.5
CS424	Advanced Topics in Security	3.5
CS430	Advanced Databases	3.5
CS435	Model Driven Development III	3.5
CS440	Advanced Information Modeling	3.5
CS445	Research and Development	3.5
CS450	Systems Design in the Knowledge Economy III	6.5
CS460	Advanced Web Services	4.5
CS484	Consultancy and Entrepreneurship	4.5

*A maximum of 10 credit hours of Industry Standard and Technology Lab may be applied to degree.

Additional Elective Courses (CS/GenEd/Other) — 36 credits min.

Must have a minimum of 36 additional elective credits. These can be selected from either the Computer Science Project Courses, Elective Computer Science, Elective General Education, or Other Elective Courses.

Comprehensive Microsoft Track

Minimum General Education Credits Required		**54**
Required General Education Courses	20	
Elective General Education Courses	34	
Minimum Computer Science Credits Required		**90**
Required Core Computer Science Courses	46.5	
Required Computer Science Project Courses	38	
Minimum Elective Computer Science Courses	5.5	
Minimum Additional Elective Credits Required		**36**
Total Required for BS in Computer Science		**180**

Required General Education Courses — 20 credits

FC120	Spoken Communications	3
FC125	Collaborative and Interpersonal Communications I	2
HU110	Logic I	3
HU121	English Composition	3
MA110	Sets, Probability, and Number Systems	3
MA310	Trigonometry	3
MA320	Calculus	3

Elective General Education Courses — 34 credits min.

Select a minimum of 34 credit hours from this list:

BU201	Introduction to Economics	3
BU290	Business Fundamentals	4.5
BU350	Entrerpreneurship and Venture Capital	2
FC101	Art Appreciation	2
FC110	Introduction to Digital Photography	2
FC126	Collaborative and Interpersonal Communications II	2
FC127	Virtual Team Collaboration	4
FC200	Theater	2
FC201	Music Appreciation	2
FC327	Coordinating Virtual Teams	4
HU120	Modern Literature	3
HU210	Logic II	3
HU220	Introduction to Philosophy	2
HU221	Intermediate English Composition	2
HU230	Linguistics	3
HU310	Critical Thinking	2
HU321	Technical Writing	3
MA095	Algebra Review	0
MA210	Linear Algebra	3
MA410	Numeric Analysis	3
PE170	Healthy Living	2
PS115	Introduction to Biology	3
PS210	Environmental Engineering	2
PS220	Introduction to Physics	3
PS301	Astronomy	2
SS110	Career Development and Work Ethic	2
SS120	Mapping and Geospatial Information I	3
SS140	Introduction to Social History	2
SS215	Globalization and Intern'l Relations in the Internet Age	2
SS220	Mapping and Geospatial Information II	3
SS230	World Cultures I	3
SS240	Social Psychology	3
SS315	Culture, Knowledge and Society	3
SS320	Group Dynamics	3
SS330	World Cultures II	3

Required Core Computer Science Courses — 46.5 credits

CS120	Topics in Software Development	5.5
CS130	Relational Databases I	3.5
CS140	Information Modeling I	3.5
CS150	Introduction to Object Oriented Programming in C#	11
CS160	Development in the .NET Environment I	3
CS180	Development in the J2EE Environment I	3.5
CS230	Relational Databases II	3.5
CS240	Information Modeling II	3.5
CS250	Algorithms and Data Structures	3.5
CS260	Development in the .NET Environment II	3
CS360	Development in the .NET Environment III	3

Industry Standard Certification Exams recommended

5 MCSD Exams

Required Computer Science Project Courses — 38 credits min.

Select a minimum of 38 credit hours from this list (22 must be Upper Division):

CS190	Projects I	6.5
CS192	Projects II	6.5
CS194	Projects III	6.5
CS290	Projects IV	6.5
CS390	Projects V (required)	6.5
CS392	Projects VI (required)	6.5
CS499	Projects VII	6.5
CS490-3	Enterprise Projects I -10 hours/week	3
CS490-6	Enterprise Projects I -20 hours/week	6
CS490-9	Enterprise Projects I -30 hours/week	9
CS491-3	Enterprise Projects II - 10 hours/week	3
CS491-6	Enterprise Projects II - 20 hours/week	6
CS491-9	Enterprise Projects II - 30 hours/week	9
CS491-12	Enterprise Projects II - 40 hours/week	12
CS493-3	Enterprise Projects III - 10 hours/week	3
CS493-6	Enterprise Projects III - 20 hours/week	6
CS493-9	Enterprise Projects III - 30 hours/week	9
CS493-12	Enterprise Projects III - 40 hours/week	12

*Once a minimum of 38 credit hours of project courses have been completed, then additional project courses can be used towards Elective Computer Science Credits.

Elective Computer Science Courses — 5.5 credits min.

Select a minimum of 5.5* credits from this list:

CS100	Introduction to Computers	1.5
CS115	Introduction to Object Oriented Programming in Java	11
CS125	Informatics I	9
CS225	Informatics II	3
CS235	Model Driven Development I	3.5
CS270L	Industry Standard Product and Technology Lab I	2
CS271L	Industry Standard Product and Technology Lab II	2
CS272L	Industry Standard Product and Technology Lab III	2
CS273L	Industry Standard Product and Technology Lab IV	2
CS274L	Industry Standard Product and Technology Lab V	2
CS280	Development in the J2EE Environment II	3.5
CS285	Role-Based Software Development	3.5
CS310	Software Project Management	4.5
CS311	Career Development as an Informatics Professional	2
CS312	Multimedia, Game and Entertainment Systems	3.5
CS315	Software Quality Standards and Assurance	4.5
CS320	Software Engineering Methodologies	3.5
CS322	Software Design in UML	3.5
CS324	XML and XSLT	3.5
CS325	Human Computer Interface Design	3.5
CS330	Relational Databases III	3.5
CS335	Model Driven Development II	3.5
CS350	Systems Design in the Knowledge Economy I	6.5
CS352	Systems Design in the Knowledge Economy II	6.5
CS370L	Industry Standard Product and Technology Lab VI	2
CS371L	Industry Standard Product and Technology Lab VII	2
CS372L	Industry Standard Product and Technology Lab VIII	2
CS373L	Industry Standard Product and Technology Lab IX	2
CS374L	Industry Standard Product and Technology Lab X	1
CS380	Development in the J2EE Environment III	3.5
CS410	Software Architectures	3.5
CS415	Patterns	4.5
CS420	Internationalization	4.5
CS422	Financial and E-commerce Systems	4.5
CS424	Advanced Topics in Security	3.5
CS430	Advanced Databases	3.5
CS435	Model Driven Development III	3.5
CS440	Advanced Information Modeling	3.5
CS445	Research and Development	3.5
CS450	Systems Design in the Knowledge Economy III	6.5
CS460	Advanced Web Services	4.5
CS484	Consultancy and Entrepreneurship	4.5

*A maximum of 10 credit hours of Industry Standard and Technology Lab may be applied to degree.

Additional Elective Courses (CS/GenEd/Other) — 36 credits min.

Must have a minimum of 36 additional elective credits. These can be selected from either the Computer Science Project Courses, Elective Computer Science, Elective General Education, or Other Elective Courses.

Comprehensive IBM Track

Minimum General Education Credits Required		**54**
Required General Education Courses	20	
Elective General Education Courses	34	
Minimum Computer Science Credits Required		**90**
Required Core Computer Science Courses	47.5	
Required Computer Science Project Courses	38	
Minimum Elective Computer Science Courses	4.5	
Minimum Additional Elective Credits Required		**36**
Total Required for BS in Computer Science		**180**

Required General Education Courses — 20 credits

FC120	Spoken Communications	3
FC125	Collaborative and Interpersonal Communications I	2
HU110	Logic I	3
HU121	English Composition	3
MA110	Sets, Probability, and Number Systems	3
MA310	Trigonometry	3
MA320	Calculus	3

Elective General Education Courses — 34 credits min.

Select a minimum of 34 credit hours from this list:

BU201	Introduction to Economics	3
BU290	Business Fundamentals	4.5
BU350	Entrepreneurship and Venture Capital	2
FC101	Art Appreciation	2
FC110	Introduction to Digital Photography	2
FC126	Collaborative and Interpersonal Communications II	2
FC127	Virtual Team Collaboration	4
FC200	Theater	2
FC201	Music Appreciation	2
FC327	Coordinating Virtual Teams	4
HU120	Modern Literature	3
HU210	Logic II	3
HU220	Introduction to Philosophy	2
HU221	Intermediate English Composition	2
HU230	Linguistics	3
HU310	Critical Thinking	2
HU321	Technical Writing	3
MA095	Algebra Review	0
MA210	Linear Algebra	3
MA410	Numeric Analysis	3
PE170	Healthy Living	2
PS115	Introduction to Biology	3
PS210	Environmental Engineering	2
PS220	Introduction to Physics	3
PS301	Astronomy	2
SS110	Career Development and Work Ethic	2
SS120	Mapping and Geospatial Information I	3
SS140	Introduction to Social History	2
SS215	Globalization and Intern'l Relations in the Internet Age	2
SS220	Mapping and Geospatial Information II	3
SS230	World Cultures I	3
SS240	Social Psychology	3
SS315	Culture, Knowledge and Society	3
SS320	Group Dynamics	3
SS330	World Cultures II	3

Required Core Computer Science Courses — 47.5 credits

CS115	Introduction to Object Oriented Programming in Java	11
or		
CS150	Introduction to Object Oriented Programming in C#	11
CS120	Topics in Software Development	5.5
CS130	Relational Databases I	3.5
CS140	Information Modeling I	3.5
CS160	Development in the .NET Environment I	3
CS180	Development in the J2EE Environment I	3.5
CS230	Relational Databases II	3.5
CS240	Information Modeling II	3.5
CS250	Algorithms and Data Structures	3.5
CS280	Development in the J2EE Environment II	3.5
CS380	Development in the J2EE Environment III	3.5

Industry Standard Certification Exams recommended

4 Java/IBM Exams

Required Computer Science Project Courses — 38 credits min.

Select a minimum of 38 credit hours from this list (22 must be upper division):

CS190	Projects I	6.5
CS192	Projects II	6.5
CS194	Projects III	6.5
CS290	Projects IV	6.5
CS390	Projects V (required)	6.5
CS392	Projects VI (required)	6.5
CS499	Projects VII	6.5
CS490-3	Enterprise Projects I -10 hours/week	3
CS490-6	Enterprise Projects I -20 hours/week	6
CS490-9	Enterprise Projects I -30 hours/week	9
CS491-3	Enterprise Projects II - 10 hours/week	3
CS491-6	Enterprise Projects II - 20 hours/week	6
CS491-9	Enterprise Projects II - 30 hours/week	9
CS491-12	Enterprise Projects II - 40 hours/week	12
CS493-3	Enterprise Projects III - 10 hours/week	3
CS493-6	Enterprise Projects III - 20 hours/week	6
CS493-9	Enterprise Projects III - 30 hours/week	9
CS493-12	Enterprise Projects III - 40 hours/week	12

*Once a minimum of 38 credit hours of project courses have been completed, then additional project courses can be used towards Elective Computer Science Credits.

Elective Computer Science Courses — 4.5 credits min.

Select a minimum of 4.5* credits from this list:

CS100	Introduction to Computers	1.5
CS125	Informatics I	9
CS150	Introduction to Object Oriented Programming in C#	11
CS225	Informatics II	3
CS235	Model Driven Development I	3.5
CS260	Development in the .NET Environment II	3
CS270L	Industry Standard Product and Technology Lab I	2
CS271L	Industry Standard Product and Technology Lab II	2
CS272L	Industry Standard Product and Technology Lab III	2
CS273L	Industry Standard Product and Technology Lab IV	2
CS274L	Industry Standard Product and Technology Lab V	2
CS285	Role-Based Software Development	3.5
CS310	Software Project Management	4.5
CS311	Career Development as an Informatics Professional	2
CS312	Multimedia, Game and Entertainment Systems	3.5
CS315	Software Quality Standards and Assurance	4.5
CS320	Software Engineering Methodologies	3.5
CS322	Software Design in UML	3.5
CS324	XML and XSLT	3.5
CS325	Human Computer Interface Design	3.5
CS330	Relational Databases III	3.5
CS335	Model Driven Development II	3.5
CS350	Systems Design in the Knowledge Economy I	6.5
CS352	Systems Design in the Knowledge Economy II	6.5
CS360	Development in the .NET Environment III	3
CS370L	Industry Standard Product and Technology Lab VI	2
CS371L	Industry Standard Product and Technology Lab VII	2
CS372L	Industry Standard Product and Technology Lab VIII	2
CS373L	Industry Standard Product and Technology Lab IX	2
CS374L	Industry Standard Product and Technology Lab X	1
CS410	Software Architectures	3.5
CS415	Patterns	4.5
CS420	Internationalization	4.5
CS422	Financial and E-commerce Systems	4.5
CS424	Advanced Topics in Security	3.5
CS430	Advanced Databases	3.5
CS435	Model Driven Development III	3.5
CS440	Advanced Information Modeling	3.5
CS445	Research and Development	3.5
CS450	Systems Design in the Knowledge Economy III	6.5
CS460	Advanced Web Services	4.5
CS484	Consultancy and Entrepreneurship	4.5

*A maximum of 10 credit hours of Industry Standard and Technology Lab may be applied to degree.

Additional Elective Courses (CS/GenEd/Other) — 36 credits min.

Must have a minimum of 36 additional elective credits. These can be selected from either the Computer Science Project Courses, Elective Computer Science, Elective General Education, or Other Elective Courses.

Basic Microsoft and IBM Track

Minimum General Education Credits Required		**54**
Required General Education Courses	20	
Elective General Education Courses	34	
Minimum Computer Science Credits Required		**90**
Required Core Computer Science Courses	47	
Required Computer Science Project Courses	38	
Minimum Elective Computer Science Courses	5	
Minimum Additional Elective Credits Required		**36**
Total Required for BS in Computer Science		**180**

Required General Education Courses — 20 credits

FC120	Spoken Communications	3
FC125	Collaborative and Interpersonal Communications I	2
HU110	Logic I	3
HU121	English Composition	3
MA110	Sets, Probability, and Number Systems	3
MA310	Trigonometry	3
MA320	Calculus	3

Elective General Education Courses — 34 credits min.

Select a minimum of 34 credit hours from this list:

BU201	Introduction to Economics	3
BU290	Business Fundamentals	4.5
BU350	Entrepreneurship and Venture Capital	2
FC101	Art Appreciation	2
FC110	Introduction to Digital Photography	2
FC126	Collaborative and Interpersonal Communications II	2
FC127	Virtual Team Collaboration	4
FC200	Theater	2
FC201	Music Appreciation	2
FC327	Coordinating Virtual Teams	4
HU120	Modern Literature	3
HU210	Logic II	3
HU220	Introduction to Philosophy	2
HU221	Intermediate English Composition	2
HU230	Linguistics	3
HU310	Critical Thinking	2
HU321	Technical Writing	3
MA095	Algebra Review	0
MA210	Linear Algebra	3
MA410	Numeric Analysis	3
PE170	Healthy Living	2
PS115	Introduction to Biology	3
PS210	Environmental Engineering	2
PS220	Introduction to Physics	3
PS301	Astronomy	2
SS110	Career Development and Work Ethic	2
SS120	Mapping and Geospatial Information I	3
SS140	Introduction to Social History	2
SS215	Globalization and Intern'l Relations in the Internet Age	2
SS220	Mapping and Geospatial Information II	3
SS230	World Cultures I	3
SS240	Social Psychology	3
SS315	Culture, Knowledge and Society	3
SS320	Group Dynamics	3
SS330	World Cultures II	3

Required Core Computer Science Courses — 47 credits

CS115	Introduction to Object Oriented Programming in Java	11
or		
CS150	Introduction to Object Oriented Programming in C#	11
CS120	Topics in Software Development	5.5
CS130	Relational Databases I	3.5
CS140	Information Modeling I	3.5
CS160	Development in the .NET Environment I	3
CS180	Development in the J2EE Environment I	3.5
CS230	Relational Databases II	3.5
CS240	Information Modeling II	3.5
CS250	Algorithms and Data Structures	3.5
CS260	Development in the .NET Environment II	3
CS280	Development in the J2EE Environment II	3.5
CS360	Development in the .NET Environment III	3

Industry Standard Certification Exams recommended

3 MCSD and 2 Java/IBM Exams

Required Computer Science Project Courses — 38 credits min.

Select a minimum of 38 credit hours from this list (22 must be upper division):

CS190	Projects I	6.5
CS192	Projects II	6.5
CS194	Projects III	6.5
CS290	Projects IV	6.5
CS390	Projects V	6.5
CS392	Projects VI	6.5
CS499	Projects VII	6.5
CS490-3	Enterprise Projects I -10 hours/week	3
CS490-6	Enterprise Projects I -20 hours/week	6
CS490-9	Enterprise Projects I -30 hours/week	9
CS491-3	Enterprise Projects II - 10 hours/week	3
CS491-6	Enterprise Projects II - 20 hours/week	6
CS491-9	Enterprise Projects II - 30 hours/week	9
CS491-12	Enterprise Projects II - 40 hours/week	12
CS493-3	Enterprise Projects III - 10 hours/week	3
CS493-6	Enterprise Projects III - 20 hours/week	6
CS493-9	Enterprise Projects III - 30 hours/week	9
CS493-12	Enterprise Projects III - 40 hours/week	12

*Once a minimum of 38 credit hours of project courses have been completed, then additional project courses can be used towards Elective Computer Science Credits.

Elective Computer Science Courses — 5 credits min.

Select a minimum of 5* credits from this list:

CS100	Introduction to Computer	1.5
CS115	Introduction to Object Oriented Programming in Java	11
CS125	Informatics I	9
CS150	Introduction to Object Oriented Programming in C#	11
CS225	Informatics II	3
CS235	Model Driven Development I	3.5
CS270L	Industry Standard Product and Technology Lab I	2
CS271L	Industry Standard Product and Technology Lab II	2
CS272L	Industry Standard Product and Technology Lab III	2
CS273L	Industry Standard Product and Technology Lab IV	2
CS274L	Industry Standard Product and Technology Lab V	2
CS285	Role-Based Software Development	3.5
CS310	Software Project Management	4.5
CS311	Career Development as an Informatics Professional	2
CS312	Multimedia, Game and Entertainment Systems	3.5
CS315	Software Quality Standards and Assurance	4.5
CS320	Software Engineering Methodologies	3.5
CS322	Software Design in UML	3.5
CS324	XML and XSLT	3.5
CS325	Human Computer Interface Design	3.5
CS330	Relational Databases III	3.5
CS335	Model Driven Development II	3.5
CS350	Systems Design in the Knowledge Economy I	6.5
CS352	Systems Design in the Knowledge Economy II	6.5
CS370L	Industry Standard Product and Technology Lab VI	2
CS371L	Industry Standard Product and Technology Lab VII	2
CS372L	Industry Standard Product and Technology Lab VIII	2
CS373L	Industry Standard Product and Technology Lab IX	2
CS374L	Industry Standard Product and Technology Lab X	1
CS380	Development in the J2EE Environment III	3.5
CS410	Software Architectures	3.5
CS415	Patterns	4.5
CS420	Internationalization	4.5
CS422	Financial and E-commerce Systems	4.5
CS424	Advanced Topics in Security	3.5
CS430	Advanced Databases	3.5
CS435	Model Driven Development III	3.5
CS440	Advanced Information Modeling	3.5
CS445	Research and Development	3.5
CS450	Systems Design in the Knowledge Economy III	6.5
CS460	Advanced Web Services	4.5
CS484	Consultancy and Entrepreneurship	4.5

*A maximum of 10 credit hours of Industry Standard and Technology Lab may be applied to degree.

Additional Elective Courses (CS/GenEd/Other) — 36 credits min.

Must have a minimum of 36 additional elective credits. These can be selected from either the Computer Science Project Courses, Elective Computer Science, Elective General Education, or Other Elective Courses.

Comprehensive IBM and Microsoft Track

Minimum General Education Credits Required		**54**
Required General Education Courses	20	
Elective General Education Courses	34	
Minimum Computer Science Credits Required		**90**
Required Core Computer Science Courses	50	
Required Computer Science Project Courses	38	
Minimum Elective Computer Science Courses	2	
Minimum Additional Elective Credits Required		**36**
Total Required for BS in Computer Science		**180**

Required General Education Courses — 20 credits

FC120	Spoken Communications	3
FC125	Collaborative and Interpersonal Communications I	2
HU110	Logic I	3
HU121	English Composition	3
MA110	Sets, Probability, and Number Systems	3
MA310	Trigonometry	3
MA320	Calculus	3

Elective General Education Courses — 34 credits min.

Select a minimum of 34 credit hours from this list:

BU201	Introduction to Economics	3
BU290	Business Fundamentals	4.5
BU350	Entrepreneurship and Venture Capital	2
FC101	Art Appreciation	2
FC110	Introduction to Digital Photography	2
FC126	Collaborative and Interpersonal Communications II	2
FC127	Virtual Team Collaboration	4
FC200	Theater	2
FC201	Music Appreciation	2
HU120	Modern Literature	3
HU210	Logic II	3
HU220	Introduction to Philosophy	2
HU221	Intermediate English Composition	2
HU230	Linguistics	3
HU310	Critical Thinking	2
HU321	Technical Writing	3
MA095	Algebra Review	0
MA210	Linear Algebra	3
MA410	Numeric Analysis	3
PE170	Healthy Living	2
PS115	Introduction to Biology	3
PS210	Environmental Engineering	2
PS220	Introduction to Physics	3
PS301	Astronomy	2
SS110	Career Development and Work Ethic	2
SS120	Mapping and Geospatial Information I	3
SS140	Introduction to Social History	2
SS215	Globalization and Intern'l Relations in the Internet Age	2
SS220	Mapping and Geospatial Information II	3
SS230	World Cultures I	3
SS240	Social Psychology	3
SS315	Culture, Knowledge and Society	3
SS320	Group Dynamics	3
SS330	World Cultures II	3

Required Core Computer Science Courses — 50 credits

CS115	Introduction to Object Oriented Programming in Java	11
or		
CS150	Introduction to Object Oriented Programming in C#	11
CS120	Topics in Software Development	5.5
CS130	Relational Databases I	3.5
CS140	Information Modeling I	3.5
CS160	Development in the .NET Environment I	3
CS180	Development in the J2EE Environment I	3.5
CS230	Relational Databases II	3.5
CS240	Information Modeling II	3.5
CS250	Algorithms and Data Structures	3.5
CS260	Development in the .NET Environment II	3
CS280	Development in the J2EE Environment II	3.5
CS360	Development in the .NET Environment III	3

Industry Standard Certification Exams recommended

5 MCSD and 4 Java/IBM Exams

Required Computer Science Project Courses — 38 credits min.

Select a minimum of 38 credit hours from this list (22 must be upper division):

CS190	Projects I	6.5
CS192	Projects II	6.5
CS194	Projects III	6.5
CS290	Projects IV	6.5
CS390	Projects V (required)	6.5
CS392	Projects VI (required)	6.5
CS499	Projects VII	6.5
CS490-3	Enterprise Projects I -10 hours/week	3
CS490-6	Enterprise Projects I -20 hours/week	6
CS490-9	Enterprise Projects I -30 hours/week	9
CS491-3	Enterprise Projects II - 10 hours/week	3
CS491-6	Enterprise Projects II - 20 hours/week	6
CS491-9	Enterprise Projects II - 30 hours/week	9
CS491-12	Enterprise Projects II - 40 hours/week	12
CS493-3	Enterprise Projects III - 10 hours/week	3
CS493-6	Enterprise Projects III - 20 hours/week	6
CS493-9	Enterprise Projects III - 30 hours/week	9
CS493-12	Enterprise Projects III - 40 hours/week	12

*Once a minimum of 38 credit hours of project courses have been completed, then additional project courses can be used towards Elective Computer Science Credits.

Elective Computer Science Courses — 2 credits min.

Select a minimum of 2* credits from this list:

CS100	Introduction to Computers	1.5
CS102	Fundamentals of Software Development	5.5
CS115	Introduction to Object Oriented Programming in Java	11
CS125	Informatics I	9
CS150	Introduction to Object Oriented Programming in C#	11
CS225	Informatics II	3
CS235	Model Driven Development I	3.5
CS270L	Industry Standard Product and Technology Lab I	2
CS271L	Industry Standard Product and Technology Lab II	2
CS272L	Industry Standard Product and Technology Lab III	2
CS273L	Industry Standard Product and Technology Lab IV	2
CS274L	Industry Standard Product and Technology Lab V	2
CS285	Role-Based Software Development	3.5
CS310	Software Project Management	4.5
CS311	Career Development as an Informatics Professional	2
CS312	Multimedia, Game and Entertainment Systems	3.5
CS315	Software Quality Standards and Assurance	4.5
CS320	Software Engineering Methodologies	3.5
CS322	Software Design in UML	3.5
CS324	XML and XSLT	3.5
CS325	Human Computer Interface Design	3.5
CS330	Relational Databases III	3.5
CS335	Model Driven Development II	3.5
CS350	Systems Design	6.5
CS352	Systems Design in the Knowledge Economy II	6.5
CS370L	Industry Standard Product and Technology Lab VI	2
CS371L	Industry Standard Product and Technology Lab VII	2
CS372L	Industry Standard Product and Technology Lab VIII	2
CS373L	Industry Standard Product and Technology Lab IX	2
CS374L	Industry Standard Product and Technology Lab X	1
CS380	Development in the J2EE Environment III	3.5
CS410	Software Architectures	3.5
CS415	Patterns	4.5
CS420	Internationalization	4.5
CS422	Financial and E-commerce Systems	4.5
CS424	Advanced Topics in Security	3.5
CS430	Advanced Databases	3.5
CS435	Model Driven Development III	3.5
CS440	Advanced Information Modeling	3.5
CS445	Research and Development	3.5
CS450	Systems Design in the Knowledge Economy III	6.5
CS460	Advanced Web Services	4.5
CS484	Consultancy and Entrepreneurship	4.5

*A maximum of 10 credit hours of Industry Standard and Technology Lab may be applied to degree.

Additional Elective Courses (CS/GenEd/Other) — 36 credits min.

Must have a minimum of 36 additional elective credits. These can be selected from either the Computer Science Project Courses, Elective Computer Science, Elective General Education, or Other Elective Courses.

COURSE LISTING

COMPUTER SCIENCE

CS100 Introduction to Computing. 1.5

CS115 Introduction to Object Oriented Programming in Java 11

CS120* Topics in Software Development 5.5

CS130* Relational Databases I 3.5
Prerequisite: CS140 (may be taken concurrently)

CS140* Information Modeling I 3.5

CS150 Introduction to Object Oriented Programming in C# 11

CS160* Development in the .NET Environment I 3
Prerequisite: CS130 (may be taken concurrently); CS150

CS180 Development in the J2EE Environment I 3.5
Prerequisite: CS150 or CS115

CS190 Projects I 6.5
Prerequisite: CS120; CS160 or CS180 (may take concurrently)

CS192 Projects II 6.5
Prerequisite: CS260 or CS280 (may be taken concurrently)

CS194 Projects III 6.5
Prerequisite: CS360 or CS380 (may be taken concurrently)

CS230* Relational Databases II 3.5
Prerequisite: CS130

CS235 Model Driven Development I 3.5

CS240* Information Modeling II 3.5
Prerequisite: CS140

CS250* Algorithms and Data Structures 3.5
Prerequisite: MA110 (may take concurrently); CS150 or CS115

CS260 Development in the .NET Environment II 3
Prerequisite: CS160

CS270L Industry Standard Product and Technology Lab I 2
Prerequisite: CS150 or CS115

CS271L Industry Standard Product and Technology Lab II 2
Prerequisite: CS150 or CS115

CS272L Industry Standard Product and Technology Lab III 2
Prerequisite: CS150 or CS115

CS273L Industry Standard Product and Technology Lab IV 2
Prerequisite: CS150 or CS115

CS274L Industry Standard Product and Technology Lab V 2
Prerequisite: CS150 or CS115

CS280 Development in the J2EE Environment II 3.5
Prerequisite: CS180

CS285 Roles-Based Software Development 3.5
Prerequisite: CS260 or CS280

CS290 Projects IV 6.5
Prerequisite: CS360 or CS380 (may be taken concurrently)

CS310 Software Project Management 4.5
Prerequisite: CS190, CS285

CS312 Multimedia, Game and Entertainment Systems 3.5
Prerequisite: CS260 or CS280

CS315 Software Quality Standards and Assurance 4.5
Prerequisite: CS190, CS285

CS320 Software Engineering Methodologies 3.5
Prerequisite: CS192

CS322 Software Design in UML 3.5
Prerequisite: CS192 (may be taken concurrently)

CS324 XML and XSLT 3.5
Prerequisite: CS160 or C180

CS325 Human Computer Interface Design 3.5
Prerequisite: CS160 or CS180

CS330 Relational Databases III 3.5
Prerequisite: CS230

CS335 Model Driven Development II 3.5
Prerequisite: CS235

CS352 Systems Design 6.5
Prerequisite: CS285

CS360 Development in the .NET Environment III 3
Prerequisite: CS260

CS370L Industry Standard Product and Technology Lab VI 2
Prerequisite: CS150 or CS115

CS371L Industry Standard Product and Technology Lab VII 2
Prerequisite: CS150 or CS115

CS372L Industry Standard Product and Technology Lab VIII 2
Prerequisite: CS150 or CS115

CS373L Industry Standard Product and Technology Lab IX 2
Prerequisite: CS150 or CS115

CS374L Industry Standard Product and Technology Lab X 1
Prerequisite: CS150 or CS115

CS380 Development in the J2EE Environment III 3.5
Prerequisite: CS280

CS390 Projects V 6.5
Prerequisite: CS360 or CS380 (may be taken concurrently)

CS392 Projects VI 6.5
Prerequisite: CS360 or CS380 (may be taken concurrently)

CS410 Software Architectures 3.5
Prerequisite: CS360 or CS380 (may be taken concurrently)

CS415 Patterns 4.5
Prerequisite: CS410 (may be taken concurrently)

CS420 Internationalization 4.5
Prerequisite: CS360 or CS380 (may be taken concurrently)

CS422 Financial and E-commerce Systems 4.5
Prerequisite: CS360 or CS380 (may be taken concurrently)

CS424 Advanced Topics in Security 3.5
Prerequisite: CS360 or CS380 (may be taken concurrently)

CS430 Advanced Databases 3.5
Prerequisite: CS230

CS435 Model Driven Development III 3.5
Prerequisite: CS335

CS440 Advanced Information Modeling 3.5
Prerequisite: CS240

CS445 Research and Development 3.5
Prerequisite: CS240, plus approval by the instructor

CS450 Systems Design in the Knowledge Economy III 6.5
Prerequisite: CS260

CS460 Advanced Web Services 4.5
Prerequisite: CS360 or CS380 (may be taken concurrently)

CS484 Consultancy and Entrepreneurship 4.5
Prerequisite: BU290

CS490-3 Enterprise Projects I – 10 hours/week 3
Enrollment requires instructor permission

CS490-6 Enterprise Projects I – 20 hours/week 6
Enrollment requires instructor permission

CS490-9 Enterprise Projects I – 30 hours/week 9
Enrollment requires instructor permission

CS491-3 Enterprise Projects II – 10 hours/week 3
Enrollment requires instructor permission
CS491-6 Enterprise Projects II – 20 hours/week 6
Enrollment requires instructor permission
CS491-9 Enterprise Projects II – 30 hours/week 9
Enrollment requires instructor permission
CS491-12 Enterprise Projects II – 40 hours/week 12
Enrollment requires instructor permission
CS493-3 Enterprise Projects III – 10 hours/week 3
Enrollment requires instructor permission
CS493-6 Enterprise Projects III – 20 hours/week 6
Enrollment requires instructor permission
CS493-9 Enterprise Projects III – 30 hours/week 9
Enrollment requires instructor permission
CS493-12 Enterprise Projects III – 40 hours/week 12
Enrollment requires instructor permission
CS499 Projects VII 6.5
Enrollment requires instructor permission

GENERAL EDUCATION

BUSINESS

BU201 Introduction to Economics 3
BU290 Business Fundamentals 4.5
BU350 Entrepreneurship and Venture Capital 2
Prerequisite: BU290 or instructor approval

FINE ARTS AND COMMUNICATION

FC101 Art Appreciation 2
FC110 Introduction to Digital Photography 2
FC120* Spoken Communications 3
FC125* Collaborative and Interpersonal Communications I 2
FC126 Collaborative and Interpersonal Communications II 2
Prerequisite: FC125
FC200 Theater 2
FC201 Music Appreciation 2

HUMANITIES

HU110* Logic I 3
HU120 Modern Literature 3
HU121* English Composition 3
HU210 Logic II 3
Prerequisite: HU110
HU220 Introduction to Philosophy 2
HU 221 Intermediate English 2
Prerequisite: HU121
HU230 Linguistics 3
HU310 Critical Thinking 2
HU 321 Technical Writing 3
Prerequisite: HU221

MATH

MA110* Sets, Probability, and Number Systems 3
MA210 Linear Algebra 3
Prerequisite: MA110
MA310* Trigonometry 3
MA320* Calculus 3
Prerequisite: MA310
MA410 Numerical Analysis 3
Prerequisite: MA210

PHYSICAL EDUCATION

PE170 Healthy Living 2

PHYSICAL SCIENCE

PS115 Introduction to Biology 3
PS210 Environmental Engineering 2
PS220 Introduction to Physics 3
PS301 Astronomy 2

SOCIAL SCIENCE

SS110 Career Development and Work Ethic 2
SS120 Mapping and Geospatial Information I 3
SS140 Introduction to Social History 2
SS215 Globalization and Intern'l Relations in the Internet Age 2
SS220 Mapping and Geospatial Information II 3
Prerequisite: SS120
SS230 World Cultures I 3
SS240 Social Psychology 3
SS315 Culture, Knowledge and Society 3
SS320 Group Dynamics 3
Prerequisite: FC125 and SS240
SS330 World Cultures II 3
Prerequisite: SS230

*Required Courses for all Tracks

COURSE DESCRIPTIONS

COMPUTER SCIENCE

CS100 Introduction to Computing (1.5 credits)
Introduces the modern Personal Computer (PC), the proper use, maintenance and organization of the PC, and how modern software is generally structured. This is to help students who have little or no experience with their computer

CS115 Introduction to Object Oriented Programming in Java (11 credits)
This course provides a thorough introduction to object oriented programming, implemented in Java. Topics include fundamentals of programming, classes and objects, inheritance, polymorphism, interfaces, events, and exception handling, with an emphasis on writing quality code. No prior programming experience is required, though course material is covered at a fairly rapid pace.

CS120 Topics in Software Development (5.5 credits)
Students gain exposure to a wide variety of topics in software development. While building real applications in the lab portion of this course, students also learn fundamental concepts about such topics as software development lifecycles, system architectures, user interface design, and methods for the design, development, and testing of software.

CS130 Relational Databases I (3.5 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.
Prerequisite: CS140 Information Modeling I (May be taken concurrently)

CS140 Information Modeling I (3.5 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.

CS150 Introduction to Object Oriented Programming in C# (11 credits)
This course provides a thorough introduction to object oriented programming, implemented in C#. Topics include fundamentals of programming, classes and objects, inheritance, polymorphism, interfaces, delegates and events, and exception handling, with an emphasis on writing quality code. No prior programming experience is required, though course material is covered at a fairly rapid pace.

CS160 Development in the .NET Environment I (3 credits)
This course introduces students to various concepts in 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.
Prerequisite: CS130 Databases I (may be taken concurrently); CS150 Introduction to Object Oriented Programming in C#(grade of C or better)

CS180 Development in the J2EE Environment I (3.5 credits)
Students are introduced to the Java programming language the J2SE 5.0 Java Development Kit. Topics include Java command line tools, Java language usage and syntax, object oriented programming, threads, I/O, collections, generics, JavaBeans, Swing, JDBC, and network programming. Students are also exposed to additional topics such as industry standard coding conventions, testing and debugging practices, and code maintenance.
Prerequisite: CS150 Introduction to Object Oriented Programming in C# OR CS115 Introduction to Object Oriented Programming in Java

CS190 Projects I (6.5 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 inline with their knowledge base and growth focus.
Prerequisite: CS120 Topics in Software Development; CS160 Dev in the .NET Env I or CS180 Dev in the J2EE Env I (CS160/CS180 may be taken concurrently)

CS192 Projects II (6.5 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 inline with their knowledge base and growth focus. Projects may include interaction and/or collaboration with external clients and other stakeholders.
Prerequisite: CS260 Dev in the .NET Env II or CS280 Dev in the J2EE Env II (may be taken concurrently)

CS194 Projects III (6.5 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 inline with their knowledge base and growth focus. Projects may include interaction and/or collaboration with external clients and other stakeholders.
Prerequisite: CS360 Dev in the .NET Environment III or CS380 Dev in the J2EE Env III (may be taken concurrently)

CS230 Relational Databases II (3.5 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).
Prerequisite: CS130 Databases I

CS235 Model Driven Development I (3.5 credits)
Students learn how to model business information needs and resources in the context of a business modeling framework. The course describes common business model elements including business rules, business objects, business processes, business narratives, business messages, business events and organizational units, and shows how these can form the basis for building software systems, using languages such as UML.

CS240 Information Modeling II (3.5 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.
Prerequisite: CS140 Information Modeling I

CS250 Algorithms and Data Structures (3.5 credits)
This course is designed to enhance a student's problem solving ability and enhance his/her skill set in developing solutions to common software problems using general algorithms and abstract data types. Students will utilize various structures such as stacks, queues, hashtables, linked lists, and trees to store data, understand and apply various searching and sorting algorithms to software, and make analyses of algorithm use and design.
Prerequisite: MA110 Sets, Probabilities and Number Systems (may be taken concurrently); CS150 Introduction to Object Oriented Programming in C# OR CS115 Introduction to Object Oriented Programming in Java (grade of C or better)

CS260 Development in the .NET Environment II (3 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.
Prerequisite: CS160 Development in the .NET Environment I

CS270L Industry Standard Product and Technology Lab I (2 credits)
Students work in a self-paced manner towards being able to pass one or more of the industry certifications. Instructor guidance and support is provided on an individual basis. Course is graded Pass/Fail.
Prerequisite: CS150 Introduction to Object Oriented Programming in C# OR CS115 Introduction to Object Oriented Programming in Java

CS271L Industry Standard Product and Technology Lab II (2 credits)
Students work in a self-paced manner towards being able to pass one or more of the industry certifications. Instructor guidance and support is provided on an individual basis. Course is graded Pass/Fail.
Prerequisite: CS150 Introduction to Object Oriented Programming in C# OR CS115 Introduction to Object Oriented Programming in Java

CS272L Industry Standard Product and Technology Lab III (2 credits)
Students work in a self-paced manner towards being able to pass one or more of the industry certifications. Instructor guidance and support is provided on an individual basis. Course is graded Pass/Fail.
Prerequisite: CS150 Introduction to Object Oriented Programming in C# OR CS115 Introduction to Object Oriented Programming in Java

CS273L Industry Standard Product and Technology Lab IV (2 credits)
Students work in a self-paced manner towards being able to pass one or more of the industry certifications. Instructor guidance and support is provided on an individual basis. Course is graded Pass/Fail.
Prerequisite: CS150 Introduction to Object Oriented Programming in C# OR CS115 Introduction to Object Oriented Programming in Java

CS274L Industry Standard Product and Technology Lab V (2 credits)
Students work in a self-paced manner towards being able to pass one or more of the industry certifications. Instructor guidance and support is provided on an individual basis. Course is graded Pass/Fail.
Prerequisite: CS150 Introduction to Object Oriented Programming in C# OR CS115 Introduction to Object Oriented Programming in Java

CS280 Development in the J2EE Environment II (3.5 credits)
Students build upon the knowledge gained from Development in the J2EE Environment I and broaden their knowledge base by learning new APIs. Students are also introduced to the EJB technology and other enterprise services provided by the J2EE platform. J2EE XML technologies may also be introduced. Patterns applicable to the business tier will be discussed.

The student continues to increase their knowledge of WAS and the Eclipse environments.

The course will also look at one or more relevant, viable open source projects.
Prerequisite: CS180 Development in the J2EE Environment I

CS285 Role-Based Software Development (3.5 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
Prerequisite: CS260 Development in the .NET Environment II OR CS280 Development in the J2EE Environment II

CS290 Projects IV (6.5 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 inline with their knowledge base and growth focus. Projects may include interaction and/or collaboration with external clients and other stakeholders.
Prerequisite: CS360 Development in the .NET Environment III OR CS380 Development in the J2EE Environment III (may be taken concurrently)

CS310 Software Project Management (4.5 credits)
This course explores project management techniques with a specific emphasis on software projects. Planning, estimating, scheduling, risk analysis, communication, roles, resource utilization, people management, configuration management, and related topics are covered. Students will learn to evaluate the resources an organization has at hand and to apply software development processes which will best fit the needs of the software project and the goals of the organization in question.
Prerequisite: CS190 Projects I, CS285 Role-based Sofware Development

CS312 Multimedia, Game and Entertainment Systems (3.5 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 life cycle will be discussed.
Prerequisite: CS260 Development in the .NET Environment II OR CS280 Development in the J2EE Environment II

CS315 Software Quality Standards and Assurance (4.5 credits)
This course explores definition of software quality, quality standards such as ISO 9000 and the CMM, how software quality assurance fits into software development processes, and quality improvement. Students will explore the necessity of quality assurance at design time, and throughout the development and testing cycles of an

application. The benefits of benchmarking goals and evaluations, global and unit test plans, and different quality assurance methodologies will be evaluated.
Prerequisite: CS190 Projects I, CS285 Role-based Sofware Development

CS320 Software Engineering Methodologies (3.5 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.
Prerequisite: CS192 Projects II

CS322 Software Design in UML (3.5 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.
Prerequisite: CS192 Projects II (may be taken concurrently)

CS324 XML and XSLT (3.5 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.
Prerequisite: CS160 Development in the .NET Environment I or CS180 Development in the J2EE Environment I

CS325 Human Computer Interface Design (3.5 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.
Prerequisite: CS160 Development in the .NET Environment I OR CS180 Development in the J2EE Environment I

CS330 Relational Databases III (3.5 credits)
This course considers a number of intermediate topics in relational database management systems, such as stored procedure programming, user-defined functions, transactions, concurrency, performance tuning, security, and transforming data between the persistent and transient stores to develop a complete application. Students apply their knowledge using modern relational DBMSs (SQL Server and DB2).
Prerequisite: CS230 Databases II

CS335 Model Driven Development II (3.5 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.
Prerequisite: CS235 Model Driven Development I

CS352 Systems Design (6.5 credits)
This course will expose students to detailed information systems design. Students will be exposed to design concepts and methodologies that can control complexity and lead to better usability engineering. Students will also gain an understanding of systems design analysis and evaluation.
Prerequisite: CS285 Role-based Sofware Development

CS360 Development in the .NET Environment III (3 credits)
This course introduces students to advanced topics 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.
Prerequisite: CS260 Development in the .NET Environment II

CS370L Industry Standard Product and Technology Lab VI (2 credits)
Students work in a self-paced manner towards being able to pass one or more of the industry certifications. Instructor guidance and support is provided on an individual basis. Course is graded Pass/Fail.
Prerequisite: CS150 Introduction to Object Oriented Programming in C# OR CS115 Introduction to Object Oriented Programming in Java

CS371L Industry Standard Product and Technology Lab VII (2 credits)
Students work in a self-paced manner towards being able to pass one or more of the industry certifications. Instructor guidance and support is provided on an individual basis. Course is graded Pass/Fail.
Prerequisite: CS150 Introduction to Object Oriented Programming in C# OR CS115 Introduction to Object Oriented Programming in Java

CS372L Industry Standard Product and Technology Lab VIII (2 credits)
Students work in a self-paced manner towards being able to pass one or more of the industry certifications. Instructor guidance and support is provided on an individual basis. Course is graded Pass/Fail.
Prerequisite: CS150 Introduction to Object Oriented Programming in C# OR CS115 Introduction to Object Oriented Programming in Java

CS373L Industry Standard Product and Technology Lab IX (2 credits)
Students work in a self-paced manner towards being able to pass one or more of the industry certifications. Instructor guidance and support is provided on an individual basis. Course is graded Pass/Fail.
Prerequisite: CS150 Introduction to Object Oriented Programming in C# OR CS115 Introduction to Object Oriented Programming in Java

CS374L Industry Standard Product and Technology Lab X (1 credit)
Students work in a self-paced manner towards being able to pass one or more of the industry certifications. Instructor guidance and support is provided on an individual basis. Course is graded Pass/Fail.
Prerequisite: CS150 Introduction to Object Oriented Programming in C# OR CS115 Introduction to Object Oriented Programming in Java

CS380 Development in the J2EE Environment III (3.5 credits)
The student will learn about J2EE data access frameworks, J2EE XML and Web Services technologies and APIs, as well as the Eclipse tools and facilities for Web Services development. Emphasis will be on how to implement Web Services. Various patterns applicable to the data access layer as well as data transfer among layers will be discussed.

The student will learn common J2EE patterns and architecture principles and may also utilize IBM's modeling framework
Prerequisite: CS280 Development in the J2EE Environment II

CS390 Projects V (6.5 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 inline with their knowledge base and growth focus. Projects may include interaction and/or collaboration with external clients and other stakeholders.
Prerequisite: CS360 Development in the .NET Environment III or CS380 Development in the J2EE Environment III (may be taken concurrently)

CS392 Projects VI (6.5 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 inline with their knowledge base and growth focus. Projects may include interaction and/or collaboration with external clients and other stakeholders.
Prerequisite: CS360 Development in the .NET Environment III or CS380 Development in the J2EE Environment III (may be taken concurrently)

CS410 Software Architectures (3.5 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. Topics may include service oriented architectures, component based architectures, producer-consumer architectures, and application layering, with a focus on reusable architecture patterns.
Prerequisite: CS360 Development in the .NET Environment III or CS380 Development in the J2EE Environment III (may be taken concurrently)

CS415 Patterns (4.5 credits)
Students learn to recognize and implement patterns that occur frequently in software application development. These may include design patterns, architectural patterns, Gang of Four patterns, and other enterprise software patterns.
Prerequisite: CS410 Software Architectures (may be taken concurrently)

CS420 Internationalization (4.5 credits)
Students explore and design solutions for issues that occur in the internationalization of software products and services. Topics may include character sets and encoding, maintaining multiple versions of content, time zones, cultural issues, and common international industry standards.
Prerequisite: CS360 Development in the .NET Environment III or CS380 Development in the J2EE Environment III (may be taken concurrently)

CS422 Financial and E-commerce Systems (4.5 credits)
Students gain domain knowledge in the areas of financial software applications and electronic commerce, and apply this knowledge to evaluating and designing related systems. Students will analyze and evaluate the needs of specific e-commerce solutions and to apply the architectures, UI designs, and software technologies which fit the solution most effectively.
Prerequisite: CS360 Development in the .NET Environment III or CS380 Development in the J2EE Environment III (may be taken concurrently)

CS424 Advanced Topics in Security (3.5 credits)
Students learn about and evaluate different cryptography methods, algorithms and theories, vulnerabilities in networked applications, intrusion detection, and techniques for making software more resistant to hacking attempts.
Prerequisite: CS360 Development in the .NET Environment III or CS380 Development in the J2EE Environment III (may be taken concurrently)

CS430 Advanced Databases (3.5 credits)
Students learn advanced concepts in database design and management. A selection will be made from topics such as post-relational databases, SQL-XML mappings, XQuery, augmenting SQL with 3GL code, transaction processing, concurrency, database tuning and administration, and data warehousing. Students apply their knowledge using modern relational DBMSs (SQL Server and DB2).
Prerequisite: CS230 Databases II

CS435 Model Driven Development III (3.5 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.
Prerequisite: CS335 Model Driven Development II

CS440 Advanced Information Modeling (3.5 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.
Prerequisite: CS240 Information Modeling II

CS445 Research and Development (3.5 credits)
This course provides an opportunity for students to engage in focused research and development on the state-of-the-art in a selected area of computer science, usually an area in which the instructor has special expertise. Students 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, students will co-author a detailed specification for these extensions, implement parts of the specification in code, and co-author a technical paper suitable for submission as publication in a respected workshop proceedings, conference proceedings, or journal.
Prerequisite(s): CS240, plus approval by the instructor.

CS460 Advanced Web Services (4.5 credits)
Students learn about and employ up-to-date web services standards in software applications. This may include developing service oriented architectures, learning about enterprise integration, and exposure to standards such as WS-I and BPEL.
Prerequisite: CS360 Development in the .NET Environment III or CS380 Development in the J2EE Environment III (may be taken concurrently)

CS484 Consultancy and Entrepreneurship (4.5 credits)
Starting and operating a new business and the enterpreneurial process; managing, financing, and developing a business plan. Also, concepts related to consulting work: time management and billing, the bidding process and customer relations.
Prerequisite: BU290 Business Fundamentals

CS490-3 Enterprise Projects I – 10 hours/week (3 credits)

Students work as part of a software development 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.
Enrollment requires instructor permission.

CS490-6 Enterprise Projects I – 20 hours/week (6 credits)
Students work as part of a software development 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.
Enrollment requires instructor permission.

CS490-9 Enterprise Projects I – 30 hours/week (9 credits)
Students work as part of a software development 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.
Enrollment requires instructor permission.

CS491-3 Enterprise Projects II – 10 hours/week (3 credits)
Students work as part of a software development 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.
Enrollment requires instructor permission.

CS491-6 Enterprise Projects II – 20 hours/week (6 credits)
Students work as part of a software development 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.
Enrollment requires instructor permission.

CS491-9 Enterprise Projects II – 30 hours/week (9 credits)
Students work as part of a software development 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.
Enrollment requires instructor permission.

CS491-12 Enterprise Projects II – 40 hours/week (12 credits)
Students work as part of a software development 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.
Enrollment requires instructor permission.

CS493-3 Enterprise Projects III – 10 hours/week (3 credits)
Students work as part of a software development 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.
Enrollment requires instructor permission.

CS493-6 Enterprise Projects III – 20 hours/week (6 credits)
Students work as part of a software development 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.
Enrollment requires instructor permission.

CS493-9 Enterprise Projects III – 30 hours/week (9 credits)
Students work as part of a software development 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.
Enrollment requires instructor permission.

CS493-12 Enterprise Projects III – 40 hours/week (12 credits)
Students work as part of a software development 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.
Enrollment requires instructor permission.

CS499 Projects VII (6.5 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 inline with their knowledge base and growth focus. Projects may include interaction and/or collaboration with external clients and other stakeholders.
Enrollment requires instructor permission

GENERAL EDUCATION

BUSINESS

BU201 Introduction to Economics (3 credits)
This course 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.

BU290 Business Fundamentals (4.5 credits)
This course is a survey of the various aspects of business including human resources, finance, client relations, and production. The student will be able to identify the type of information that is critical to each aspect of the business. The student will also learn about various organizational structures and some aspects of business law.

BU350 Entrepreneurship and Venture Capital (2 credits)
This course examines the funding relationship from both the entrepreneur's and the VC perspective, thereby providing students with the knowledge and acumen to understand how technologies and business opportunities are brought to market and funded. From the perspective of the venture capitalist, the course examines the criteria and motivation of VCs, how individual deals are structured and managed. Finally, students are exposed to the culture and environment of early stage companies in order to gain a better understanding of the management and interpersonal dynamics inherent in young companies.
Prerequisite BU290 Business Fundamentals or instructor approval

FINE ARTS AND COMMUNICATION

FC101 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.

FC110 Introduction to Digital Photography (2 credits)
This course provides an introduction to digital photography including graphic design and photographic editing.

FC120 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.

FC125 Collaborative and Interpersonal Communications I (2 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.

FC126 Collaborative and Interpersonal Communications II (2 credits)
Students advance their collaborative skills in order to effectively and efficiently work in collaborative groups. Building on the foundations established in the Collaborative and Interpersonal Communications I, students will learn and apply, in greater depth, effective interpersonal and group management skills. Students will focus on areas that relate to communications, decision-making, leadership, and conflict management.
Prerequisite: FC125 Collaborative and Interpersonal Communications I

FC200 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.

FC201 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.

HUMANITIES

HU110 Logic I (3 credits)
This course provides an overview of logic Emphasizing propositions, arguments, and definitions. Propositional logic including truth tables, truth trees, and natural deduction are discussed. Emphasis will be placed on analysis of arguments in natural language.

HU120 Modern Literature (3 credits)
This course explores information architecture, formulaic patterns, plot and story in fantasy and science fiction literature.

HU121 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.

HU210 Logic II (3 credits)
This course extends the propositional logic studied in Logic I to 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. The course includes an overview of other logics.
.Prerequisite: HU110 Logic I

HU220 Introduction to Philosophy (2 credits)
This course provides an overview of philosophy. Topics discussed include an introduction to metaphysics, epistemology, philosophy of pcience, and ethics (including ethics for software professionals).

HU221 Intermediate English Composition (2 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.
Prerequisite: HU121 English Composition

HU230 Linguistics (3 credits)

Students learn basic components of language in this introductory linquistics course. Students study human language and explore the grammatical structure and social function of language.

HU310 Critical Thinking (2 credits)
Rational dialog and debating. Logical fallacies. Deduction vs Induction. Scientific method. Realistic analysis of arguments.

HU321 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.
Prerequisite: HU221 Intermediate English Composition

MATH
MA110 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.

MA210 Linear Algebra (3 credits)
This course gives students an opportunity to examine Linear Algebra and Geometry, Calculus and Planar/Solid Analytic Geometry.
Prerequisite: MA110 Sets, Probability, and Number Systems

MA310 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.

MA320 Calculus (3 credits)
This course examines several Calculus techniques including differentiation and integration.
Prerequisite: MA310 Trigonometry

MA410 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.
Prerequisite: MA210 Linear Algebra

PHYSICAL EDUCATION
PE170 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 which maximize mental, spiritual, physical and social well-being. Students write and engage in a personalized health plan.

PHYSICAL SCIENCE
PS115 Introduction to Biology (3 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.

PS210 Environmental Engineering (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.

PS220 Introduction to Physics (3 credits)
This course is a gentle introduction of basic physics concepts and laboratory techniques. Students examine and test the fundamental laws of mechanics and waves, including light, heat, and sound.

PS301 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.

SOCIAL SCIENCE
SS110 Career Development and Work Ethic (2 credits)
Students will be exposed to the fundamental skills of building a successful career. The practice of self motivation, self growth and ownership of their own success or failure. Students will have presentations from successful professionals to help them recognize patterns of behavior that generate success and to provide motivation for the students to develop good work ethics to help themselves be successful.

SS120 Mapping and Geospatial Information I (3 credits)
Students examine in a hands-on approach spatial analysis related to physical and cultural geography.

SS140 Introduction to Social History (2 credits)
Students investigate the principles, concepts, and methods of analysis used in the study of the social history of persons and places, first through the history of the American family from Native Americans and European colonists to the present. Students examine historical perspectives on the relationships within families, the history of childhood, and the changing role of the family over time. Study will include all relevant ethnic and cultural groups. For projects, students learn to research individual families (their own or "adopted" for this course), using the internationally renowned resources in Salt Lake City. Projects will require placing stories of individual families into the context of social history.

SS215 Globalization and International Relations in the Internet Age (2 credits)
How do people, goods and services flow across national boundaries? Students examine the history, theory and policy of globalization and international relations during the internet age. Macro and micro (enterprise) viewpoints are explored and discussed.

SS220 Mapping and Geospatial Information II (3 credits)
This course builds on the foundations established in SS120 Mapping and Geospatial Information I. Students continue to explore in more depth spatial analysis related to physical and cultural geography.
Prerequisite: SS120 Mapping and Geospatial Information I

SS230 World Cultures I (3 credits)

This course gives students an introductory view of the diversity of world cultures. Students will examine in depth selected world cultures.

SS240 Social Psychology (3 credits)
Social behavior by the individual in the group. Action, interaction, dependency and interdependency. Sensations, anticipation and adaptation.

SS315 Culture, Knowledge and Society (3 credits)
All societies have been "knowledge societies" and the culture of a society predicated the transmission of knowledge in accordance with procedures prescribed by tradition, often belonged to the realm of privilege. The Information Society we live has seen an explosive and unprecedented growth in the codification of theoretical knowledge. Based on several historical and current trends, this course will explain and exemplify the interdependence between culture, society and knowledge.

SS320 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 stucture and lifecyle, influence and power, constructive conflict, productivity, decision making, leadership, intergroup relations, and large group behavior. Students will learn best practices for participating and leading groups.
Prerequisite: FC125 Collaborative and Interpersonal Communications I, SS240 Social Psychology

SS330 World Cultures II (3 credits)
This course builds on foundations established in SS230 World Cultures I. Students examine at an advanced level selected world cultures.
Prerequisite: SS230 World Cultures I

2005-2006 ACADEMIC CALENDAR

Fall Quarter 2005

October 10-11	New Student Orientation
October 12	First Day of Class
October 14	Registration Deadline
October 18	Add/Drop Deadline
November 2	Withdrawal Deadline
November 11	Veteran's Day (no class)
November 21-25	Thanksgiving break (no class)
December 22	Last Day of Class

Winter Quarter 2006

January 9-10	New Student Orientation
January 11	First Day of Class
January 13	Registration Deadline
January 16	Human Rights Day (no class)
January 18	Add/Drop Deadline
February 20	President's Day (no class)
March 17	Last Day of Class

Spring Quarter 2006

April 10-11	New Student Orientation
April 12	First Day of Class
April 14	Registration Deadline
April 18	Add/Drop Deadline
May 25	Spring Graduation
May 29	Memorial Day (no class)
June 16	Last Day of Class

Summer Quarter 2006

July 10-11	New Student Orientation
July 12	First Day of Class
July 14	Registration Deadline
July 18	Add/Drop Deadline
July 24	Pioneer Day (no class)
September 4	Labor Day (no class)
September 15	Last Day of Class

Fall Quarter 2006

October 9-10	New Student Orientation
October 11	First Day of Class
October 13	Registration Deadline
October 17	Add/Drop Deadline
November 10	Veteran's Day (no class)
November 16	Fall Graduation
November 23-24	Thanksgiving Break (no class)
December 18	Last Day of Class

CAMPUS ADMINISTRATION

Graham Y. Doxey	President	Eve Andersson	Senior Vice President, Academics
Maurine Findley	Executive Vice President	Ruth Hackford-Peer	Director of Student Services
Scott Doxey	Director of Operations	Jerusha Harding	Business Manager
Jeme Deviny	Director of Financial Services	Lisa Lindsay	Registrar
Scott Sainsbury	Director of Admissions	Larry Crandall	Academic Programs Coordinator

FACULTY

Name	Degrees held	Area of specialization
Andersson, Eve	B.S. Engineering and Applied Science, California Institute of Technology M.S. Mechanical Engineering, University of California at Berkley	Computer Science, Collaborative Web Applications
Arthur, Richard	B.S. Computer Science, Brigham Young University M.S. Computer Science, Brigham Young University	Computer Science, Embedded Computing
Carver, Andy	B.S.E.E. Electric Engineering, University of Oklahoma M.Div., Westminster Theological Seminary Ph.D. New Testament, University of Durham	Computer Science, Conceptual Modeling
Christensen, Brian	B.A. Accounting	Computer Science, .NET Technology
Crandall, Larry	B.S. Speech, Utah State University	Oral And Collaborative Communications
Curland, Matthew	B.S. Mathematics, University of Washington	Computer Science, .NET Architecture
Doxey, Scott	B.A. Administrative Systems, Utah State University M.S. Business Info. Systems and Education, Utah State University	Business Administration and Information Systems Management
Dykman, Nathan	B.S. Computer Science, University of Utah M.S. Computer Science, University of Utah	Computer Science
Ensign, Mark	B.S. Mathematics, University of Utah M.S. Mathematics, University of Utah	Computer Science, Object Oriented Development
Gonzales, Abby	B.A. Linguistics, Brigham Young University M.S. Instructional Systems Technology, Indiana University	Instructional Technology, Collaboration and Interpersonal Communications
Hadley, Laurie	B.S. Elementary Education, Brigham Young University Ph.D. Instructional Systems Technology, Indiana University	Instructional Technology, Collaborative and Interpersonal Communications
Halpin, Terence	B.S. Physics, University Queensland Dip. Ed. Science Education, University of Queensland B.A. Philosophy, University of Queensland M. Litstud. Logic, University of Queensland Ph.D. Computer Science, University of Queensland	Computer Science, Conceptual Modeling and Databases
Hull, Dale	B.A. History, Brigham Young University (Minor German)	Computer Science, .NET Technology
Kane, John	B.A. Mathematics, Caroll College M.S. Mathematics, Montana State University	Mathematics
King, Jamie	B.S. Computer Science, Utah Valley State College	Computer Science, .NET Technologies
Liska, Pedro	B.S. Electronics, Francisco Marroquin University	Computer Science, Collaborative Web Applications
Morgan, Tony	B.A. Earth Sciences, Open University B.S. Computer Systems Engineering, Coventry University M.S. Control Engineering, Coventry University Ph.D. Computer Science, University of Cambridge	Computer Science, Model Driven Development, Business Rules
Powell, Jackie	B.S. Mathematics, Imperial College, London University	Computer Science, Systems Design
Puich, Samuel	B.S. Computer Science, Montana Tech B.S. Secondary Education, Western Montana College M.S. Computer Information Systems, University of Phoenix	Computer Science, Algorithms and Data Structures
Reed, Aaron	B.S. Computer Science, Weber State University	Computer Science, Enterprise Software Practices
Sorensen, Carolyn	B.S. Computer Science, Linkoping University M.S. Computer Science, Linkoping University	Computer Science, Distributed Computing
Walkenhorst, Jacob	B.S. Computer Science, Brigham Young University	Computer Science, User Interface Technologies

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