

Graduate Academic Catalog 2011-2012

Southern Polytechnic State University in the University System of Georgia

1100 South Marietta Parkway
Marietta, Georgia 30060-2896

Southern Polytechnic State University is proud to be Georgia's Technology University. Our academic, professional, outreach and service programs embrace *all* aspects of technology, including the practical applied skills (*techne*) needed to solve today's real-world problems and the theoretical knowledge (*logos*) necessary to meet tomorrow's challenges. SPSU graduates are well prepared to lead the scientific and economic development of an increasingly complex state, nation, and world.

Our mission is to serve both traditional and non-traditional students at the undergraduate, graduate, and continuing education levels; in engineering and engineering technology, the sciences, applied liberal arts, business and professional programs. We work to develop the broader community's intellectual, cultural, economic, and human resources. Facilitated by our innovative faculty, dedicated staff, and supportive campus environment, our learning community empowers SPSU students with the ability and vision to transform the future.

Southern Polytechnic State University offers the following graduate programs of study:

Masters Degree Programs

(See the Graduate Catalog)

Accounting (Master of Science)

Master of Business Administration (MBA)

Computer Science (Master of Science)

Construction Management (Master of Science)

Engineering Technology (Electrical Concentration) (Master of Science)

Information Design and Communication (Master of Science)

Information Technology (Master of Science)

Instructional Design and Communication (Master of Science)

Quality Assurance (Master of Science)

Software Engineering (Master of Science)

Systems Engineering (Master of Science)

Construction Engineering (Bachelor of Science)

Construction Management (Bachelor of Science)

Electrical Engineering (Bachelor of Electrical Engineering)

Electrical Engineering Technology (Bachelor of Science)

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In addition to the above, SPSU also offers the following undergraduate programs:

Associates Degree Programs

General Studies (Associate of Science Transfer Program)

Bachelors Degree Programs

Apparel and Textiles (Bachelor of Apparel and Textiles)

Applied Science (Bachelor of Applied Science)

Accounting (Bachelor of Science)

Architecture (Bachelor of Architecture)

Biology (Bachelor of Science)

Biotechnology (Bachelor of Science)

Business Administration (Bachelor of Arts)

Business Administration (Bachelor of Science)

Chemistry (Bachelor of Science)

Civil Engineering (Bachelor of Civil Engineering)

Civil Engineering Technology (Bachelor of Science)

Computer Science (Bachelor of Arts)

Computer Science (Bachelor of Science)

Computer Engineering Technology (Bachelor of Science)

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About This Catalog

The statements set forth in this catalog are for informational purposes only and should not be construed as the basis of a contract between a student and this institution.

While the provisions of this catalog will ordinarily be applied as stated, Southern Polytechnic State University reserves the right to change any provision listed in this catalog, including but not limited to academic requirements for graduation and various fees and charges without actual notice to individual students.

Every effort will be made to keep students advised of such

21202-4012, Telephone: 410-347-7700; email
accreditation@abet.org, website: <http://www.abet.org>.

Certificates

In addition to the above degree programs, SPSU also offers certificates in the following areas:

Graduate

- Graduate Certificate in Business Continuity (Information Technology)
- Graduate Transition Certificate in Computer Science (Computer Science)
- Graduate Certificate in Information Security and Assurance (Information Technology)
- Graduate Certificate in Information Technology (Information Technology)
- Graduate Transition Certificate in Information Technology (Information Technology)
- Graduate Certificate in Quality Assurance (Industrial Engineering Technology)
- Graduate Certificate in Software Engineering (Software Engineering)
- Certificate in Systems Engineering
- Advanced Certificate in Systems Engineering
- Graduate Certificate in Technical Communication (English, Technical Communication and Media Arts)
- Advanced Certificate in Visual Communication and Graphics
- Advanced Certificate in Content Development
- Advanced Certificate in Instructional Design
- Advanced Certificate in Communications Management

Undergraduate

- Certificate in Apparel Product Development (Industrial Engineering Technology)
- Professional Certificate in Land Development (Construction Management)
- Certificate in Engineering Sales (ETM)
- Certificate in Land Surveying (Civil Engineering Technology)

What documents should I submit in order to be considered for admission?

In order for an application to be complete, all required documents must be submitted and evaluated.

- An application for admission to a graduate program
- An official transcript from each college previously attended
- Three letters of recommendation from faculty, work supervisors, clients, or professional colleagues
- A description of relevant work experience, if applicable
-

Graduate Admissions

General Information

This section contains information that pertains to all graduate programs.

Admission Information ... All applicants require:

- A completed application form
- A \$20 non-refundable application fee
- Three letters of reference
- An official transcript from each previous college attended
- Some departments require the GRE or GMAT. See admissions requirements for the specific major you are interested in for details.

All admission materials must be received by the dates in the following schedule:

Term	Deadline for Admission
Fall	July 1
Spring	November 1
Summer	April 1

Materials received after the deadline dates will be processed, but may not be processed in time to allow students to begin that term.

Admission to Southern Polytechnic State University is made without regard to race, nationality, sex, or religion.

For any information regarding admission to Southern Polytechnic State University, write:

Director of Graduate Studies
Southern Polytechnic State University
1100 South Marietta Parkway
Marietta, Georgia 30060-2896.

The university reserves the right to withdraw admission prior to or following enrollment if the student becomes ineligible as determined by the standards of the University or Board of Regents.

Each program has unique entrance requirements. For details, see the admissions requirements for the program you are interested in the pages that follow.

International Students

Students whose native language is not English must submit minimum official TOEFL scores of a total of 550 paper-based, 213 computer-based, 79 Internet-based to the Graduate Admissions Office. Also, graduates of foreign schools of higher education must be able to document that their degree is equivalent to a four year bachelor's degree awarded by an accredited United States college or university. Note: Southern Polytechnic State University reserves the right to require applicants to send their international educational credentials to an approved SPSU professional evaluation service before being considered for admission.

All international students must purchase medical insurance made available through Southern Polytechnic State University or provide proof of alternate coverage through a comparable policy.

International students applying from outside the United States must submit all admissions documents, including immunization certificates, at least 60 days prior to the above deadlines.

Admission of Students with Non-U.S. Academic Credentials

Students whose secondary education was completed outside of the United States system of education may be considered for admission with:

Acceptable foreign credentials

Graduates of foreign schools of higher education must be able to document that their degree is equivalent of a four year bachelor's degree awarded by an accredited United States college or university. Note: Southern Polytechnic State University reserves the right to require applicants to send their international educational credentials to an approved SPSU professional evaluation service before being considered for admission.

English language proficiency

Students whose native language is not English must submit minimum official TOEFL scores of a total of 550 paper-based, 213 computer-based, 79 internet-based to the Graduate Admissions Office.

Additional Requirements for International Applicants

In addition to meeting the regular admission requirements, international applicants needing a student visa (F-1 or J-1) must complete a Financial Affidavit. The Financial Affidavit must show ability to meet the financial obligations of tuition, fees and living expenses before an I-20 or acceptance letter will be issued.

Current (less than one year old) letters of financial support must accompany the Financial Affidavit. Financial Affidavit forms are available in the Admissions Office.

All international students must purchase medical insurance made available through Southern Polytechnic State University or provide proof of alternate coverage through a comparable policy.

Readmission

Students who have an absence of two or more consecutive terms of matriculation at Southern Polytechnic State University and who are not academically dismissed must be approved by the appropriate graduate academic program for readmission before being eligible for registration. An application for readmission, together with any pertinent supporting information, must be submitted to the appropriate graduate academic program at least 20 working days before the

Satisfactory Academic Progress

Federal law requires students receiving federal student aid to maintain satisfactory academic progress as defined by the institution. The Satisfactory Academic Progress (SAP) requirements are separate from the regulations governing academic probation and suspension.

Southern Polytechnic State University's SAP requirements include:

- a maximum time frame requirement,
- a completion rate requirement, and
- a cumulative grade point average requirement.

Aid recipients must meet each of the three in order to be considered to be making SAP and to continue to receive financial aid.

Maximum Time Frame Requirement

Financial aid recipients must complete their program within 150% of the published length of the program. To figure the maximum time frame:

- First check the catalog to determine the number of credit hours required for graduation in a particular major.
- Second, multiply the required number of credit hours by 150%.
- Third subtract the number of credits transferred in toward the major.

Example: A student majoring in Construction transfers in 50 semester credit hours. It takes 128 semester hours to earn a degree; therefore, the student's maximum time frame is $(128 \times 150\%) - 50 = 142$. This student's financial aid eligibility is exhausted once he or she has attempted 142 semester hours at SPSU.

Completion Rate Requirement

In order to complete a program of study within the required time frame, the aid recipient must complete 66.7% of the hours attempted to date at SPSU. Credit hours attempted will be cumulative and will include all hours in which the student was enrolled at the end of the official drop/add period each academic term and received a grade of A, B, C, D, F, W, WF, I, IP, S, and U.

Cumulative Grade Point Average Requirement

Graduate students receiving financial aid must maintain a cumulative grade point average at or above the 3.00 minimum required for graduation. The cumulative grade point average will be computed by dividing the number of quality points earned by the total credit hours attempted for which the student received grades of A, B, C, D, F, WF, or I. No quality points are earned for an F, WF, or I.

How Often Will SAP Be Checked?

Percentage completion rates and cumulative GPA requirements will be monitored at the end of each spring semester. If a student is not making SAP at the end of any term they will be placed in one of two categories:

Financial Aid Probation

Students with a GPA of less than the required 3.00 And/or Students with a completion rate less than the required 66.7%.

Financial Aid Suspension

Any student on financial aid probation and still not making SAP Students on Financial Aid Probation may receive financial aid. If the student does not achieve the required completion rate and cumulative GPA requirement by the end of the probationary term, he/she will be placed on Financial Aid Suspension until the requirements are met. Students on Financial Aid Suspension may not receive financial aid.

Steps to Apply for Financial Aid

Usually, step one in applying for financial aid is to fill out the Free Application for Federal Student Aid (FAFSA), which is available online at www.fafsa.ed.gov

Although applications are processed until all federal funds are expended, students who apply by the March 1st deadline have a greater chance of receiving financial aid than those who apply late.

Aid awarded to a student one year does not mean that he or she is eligible to receive aid in a subsequent year, unless the student

encourage you to only borrow what is needed for educational related expenses.

After the student is awarded these loans, the offer must be accepted electronically via the SPSU email account. At that time instructions will be provided about completing the Master Promissory Note (MPN) and on line counseling. Once all of these requirements are completed, loan proceeds can be disbursed to the students account.

Student Fees

The Board of Regents of the University System of Georgia establishes matriculation and Non- Resident fees. All fees and charges are subject to change without notice; however, Southern Polytechnic will make every effort to communicate changes as they occur.

Fee Payment

Registration and fee payment dates are published in the registration bulletin. Payment of fees and other charges may be made with:

- Cash
- Checks
- Approved financial aid
- Certain Credit cards

Registration fees may be paid on the SPSU web site using credit cards. On-line transactions are fully encrypted for the safety of both the student and the university. SPSU does not accept VISA.

Students who register for courses and pay appropriate fees using any acceptable method of payment shall be considered enrolled and space shall be reserved in the class(es) for the duration of the term.

Students are encouraged to register and pay fees as early as possible to avoid potential problems.

All payments returned to the University due to insufficient funds are subject to a returned check fee. Any outstanding returned check payments will be turned over to either a collection agency or the State Attorney General's Office for further legal collection action. All accounts turned over to a third party for legal collections will be subject to an additional collection cost of twenty five percent in addition to the original debt owed to the University.

Cancellation of Registration

Failure to pay tuition and fees by the published deadline date can cause the cancellation of registration.

Delinquent Accounts

All delinquent debts and/or obligations to the University will be turned over to either a collection agency or the State Attorney General's Office for further legal collection action. All accounts turned over to a third party for legal collections will be subject to an additional collection cost of twenty five percent in addition to the original debt owed to the University.

Refund of Fees and Charges

Refunds of fees and charges will be made only upon official withdrawal from all classes through the Registrar's Office. A student who partially withdraws (withdraws from some classes, but is still registered in other classes) after the official drop/add period *does not receive a refund*.

The Board of Regents of the University System of Georgia and the Department of Education establishes the refund policy for the university. The refund schedule is published on the Registrar's web site.

Residence hall charges are refunded on a pro-rata basis, only by separate application to the Director of Housing and Residence Life. Refunds are subject to the rules and regulations regarding student responsibilities in the residence halls, as outlined in the Student Handbook.

Where applicable, any refunds resulting from unearned financial aid will first be returned to the Title IV program.

international students on F-1 and J-1 visas to purchase the endorsed SPSU International Student Insurance policy. Payment of this fee is mandatory and should be paid directly to the Office of Business and Finance along with payment of tuition and miscellaneous fees. Purchase of this insurance policy is mandatory each semester.

Students Sixty-two Years of Age or Older

Citizens of the State of Georgia who are 62 years of age or older may attend Southern Polytechnic State University without payment of matriculation and fees (except for supplies and laboratory or

The student affairs areas at Southern Polytechnic State University include:

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The student center is the focal point for the majority of entertainment activities provided by the Campus Activities Board including concerts, dances, and videos. Also, the student government, newspaper, radio station, fraternity/sorority and other student organization offices are located here. The Student Center is where the Southern Polytechnic State University community comes together to eat, meet, relax, and be entertained.

Bookstore

The Southern Polytechnic State University bookstore is located on the lower level of the Student Center. In addition to new and used textbooks, you can also purchase software, reference books, school supplies, engineering supplies, calculators, SPSU apparel, greeting cards, health and beauty aids, drinks, and snacks.

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Speakers of Other Languages). Tutoring is conducted in J210 from 9:00-2:00 Monday-Friday and 5:00-8:30 Monday-Thursday.

Disability Services

The Disability Services/Testing Advisor coordinates academic support services for students who have a permanent or temporary disability. Individuals eligible for services include, but are not limited to, those with mobility, hearing, learning, visual, speech, or specific neurological disabilities

Academic Affairs for review. The Vice President may approve or refuse the appeal.

- If the Vice President for Academic Affairs denies the appeal, upon written request to the Vice President for Academic Affairs, the student may appeal to the President. All related information will at that time be forwarded to the President for review.
- The President may approve or deny the appeal. The President is the final level of appeal.

Certificate Programs

Students admitted to a certificate program may apply the courses completed for the certificate toward a degree program if they are accepted to a degree program. Students admitted to a degree program may be awarded a related certificate based on completion of the courses in the certificate program provided they also apply for the certificate.

Changing Your Student Record

Changing your major

If any student decides to pursue a different program of study than the one originally listed on the admissions application, the student must officially change majors by applying as a new student to the desired program and meet all admissions requirements.

Changing your demographic information

Most demographic information such as address or phone number can be changed by the student using the student information system on the World Wide Web. To change your name or social security number, you must visit the registrar's office with appropriate documentation.

Note that the official means of communication between the university and students is email. It is the responsibility of the student to check their SPSU email daily for notices posted to them.

Classification of Students

Credit Hour

Definition of a Credit Hour - One credit hour corresponds to one hour per week of classroom work for a semester, or to three clock hours or its equivalent of laboratory work per week for a semester. Some exceptions exist.

Full-time Students

Graduate students enrolled for 8 or more credit hours are considered full-time students. Graduate students enrolled for 6 or more hours are considered full-time during summer term.

Note that the federal government and some other agencies have different definitions of student status.

Classroom Attendance

There are no formal institutional regulations regarding class attendance. Each classroom or laboratory instructor sets his or

her own attendance policy. However, professors are required to report students who are on the class roll and do not attend. Within the first calendar week of classes, or the first laboratory meeting, of the term the instructor will notify the students in writing of the attendance policy for that class. It is the prerogative of the instructor to determine and impose grade penalties for absences. Students are responsible for all course material covered and any academic consequence of their absences. In some cases, federal and state laws require that attendance be recorded and reported. Professors are required to report students who are registered and do not attend, or who stop attending to the registrar's office.

Credit for Courses Completed More than Eight Years Prior to Graduation

Graduate work completed more than eight years prior to the date of graduation may be credited toward degree program requirements with the approval of the student's major Department Chair, or if the student's enrollment at Southern Polytechnic State University has been continuous since the course was taken.

Credit for Duplicate Courses or Dual Credit

Credit may not be awarded for the same course twice, or for courses deemed so similar as to be considered the same. For example, if a student completes PHYS 1111K (Trigonometry based Physics I) and then takes PHYS 2111K (Calculus based Physics I), only one may be counted as hours earned, and only one may be used for graduation purposes.

Credit by Examination

SPSU does not Award Credit by Examination for Graduate Students

Credit by examination is not awarded for graduate students.

Continuous Enrollment

To remain continuously enrolled, a student must not have an absence of two or more consecutive terms of matriculation at Southern Polytechnic State University, summer semester included.

Cross Registration

Students may not attend Southern Polytechnic State University and another institution concurrently

Academic Regulations

(1) Courses for which the student has met the prerequisites
and

(2) Courses not offered at the home institution for the given
term.

Applications and additional information about cross registration
can be obtained from the Registrar's Office.

Grading System

General Requirements

In all graduate programs, a minimum of a 3.0 G.P.A. is required. No grades below 'C' may be applied to a graduate program's requirements, and a maximum of 2 'C' grades at the level of 6000 or above may be applied to a graduate program's requirements.

A graduate student is eligible for graduation when he or she:

- Has satisfactorily completed the required number of hours for the degree
- Has passed all required courses for the degree
- Has achieved the necessary scholastic average (3.00 for graduate students)
- Has paid all required fees, fines, and other financial obligations
- Has filed an official "Petition of Admission to Candidacy for a Degree" through the Department Chair to the Registrar's Office.
- Has satisfied any program related requirements
- Has merited the recommendation for the degree by the faculty and the President of the university
- Has earned 75% of the total hours required for the degree in residence at SPSU

Graduation Petitions

A student must submit a formal petition for "Admission to Candidacy for a Degree" to their academic department in accordance with the deadline published in the academic bulletin.

All fall semester petitions for students not in school summer should be made in the spring semester of that year, and co-op students should petition the term before a work term if the work term immediately precedes the term of anticipated graduation.

Students are encouraged to petition early.

Late Instructor

Should the instructor be late in meeting a class or a laboratory period, students will wait a minimum of fifteen minutes. If during the fifteen-minute waiting period no notification to remain is given, students may leave without penalty.

Maximum Credit Hours

Graduate students may register for a maximum of 12 hours each term. Academic department chairs may authorize additional hours under unusual circumstances. The maximum number of hours during summer term is 8.

Progress Reports

"All faculty members shall make available to each student in their classes each semester, an evaluation of the student's academic progress in the class on or before the mid-date of the term. The evaluation must be in the form of graded/evaluated class assignments, examinations, papers or essays, or projects returned to the students on or before the deadline stated above."

Instructors will make every effort to be available during their office hours for discussion of the student's progress in the course prior to the midpoint of the total grading period.

Attendance or participation in a class for which a student has not registered and paid is strictly prohibited without express permission from the office of the registrar.

Removal of Previous Major Courses

Students may request deletion of previous major courses for graduation scholastic average and hours purposes by completing a Petition to the Faculty. Students should discuss this action with their program advisor first to determine its benefit potential. All courses that were unique to the excluded program will be excluded under this rule. For example, if a non-core mathematics course is part of the degree requirements for a management degree, and the student requests exclusion, the mathematics course would be excluded along with all management and related courses. Courses included in the University System of Georgia core are not excluded.

Student Activity Absence

Students who are absent because of participation in approved university activities such as field trips and athletic events will be permitted to make up the work missed during their absences. The student is responsible for reporting such absences to the instructor and for arranging with the instructor for make-up work. This policy is not to be construed as blanket permission to miss classes and any excessive absence may result in failure of the class.

Student Records

In accordance with the policy of the Board of Regents of the State of Georgia and under the provisions of the Family Education Rights and Privacy Act of 1974, Southern Polytechnic State University maintains various educational records for each matriculating student.

These records are considered confidential and will not be released for use outside the institution without the written consent of the student. Exceptions as authorized by the Act are noted.

Directory Information

Southern Polytechnic maintains student information in various forms. Students who desire that "directory information" not be released without consent should so notify the Registrar's Office in writing. The following may be included as "directory information" unless notification is received to the contrary:

- Student's name
- Place of birth
- Class schedule
- Current enrollment status
- Dates of attendance
- Major field of study
- Participation in officially recognized activities and sports
- Degrees and awards received
- Hometown
- Weight and height of members of athletic teams

Prior college(s) attended

Policies and Procedures

Specific policies and procedures for the maintenance of student records according to the Board

Transient Authorization

Southern Polytechnic State University students planning to attend another institution for one semester and then return to Southern Polytechnic State University should complete a transient letter authorization form, available in the Registrar's Office.

Withdrawal from Classes

Students desiring to withdraw from one or more classes before

Graduate Degree Programs

MSA Degree Cur Course

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An undergraduate degree in accounting with a minimum GPA of 2.75 on a scale of 4.0. Special consideration will be given to applicants with GPAs below 2.75 who have obtained the CPA or CMA designations and/or who have substantial relevant experience.

An undergraduate degree in any field with a minimum GPA of 2.75 on a scale of 4.0; at least 18 hours in general business courses; and completion of the following four courses (or equivalent) with a minimum passing grade of "C":

- Intermediate Accounting I
- Intermediate Accounting II
- Advanced Financial Accounting
- Cost Accounting/Management

Those with a CPA and/or 5 years of experience in the accounting field will receive special consideration.

Provisional admission will be given to students who do not have all of the four required transitional accounting courses listed under number 2 above. These four courses are offered as transition courses. Students who earn a B average in the transitional courses will be fully admitted into the program; otherwise a student will be placed on probation or dismissed from the program.

International Student Admission Requirements:

All of the above requirements

Official TOEFL scores (if English is not your native language) 213 computer based score or 79 Internet based score or IELTS score of 6.5.

International students are required to submit an International Student Affidavit of Financial Support

SPSU reserves the right to request a transcript evaluation from a credible evaluation agency. SPSU approved agencies:

- WES www.wes.org
- Silny & Associates www.jsilny.com
- Education Credential Evaluators www.ece.org

These requirements are subject to change. For current requirements go to:

<http://www.spsu.edu/business/webx/curriculum/msaadd.htm>

Admission Procedure

An applicant may begin the MSA program in August, October, January, or March. Once an application packet is complete and submitted, an admission decision will be issued from the Graduate Admissions Office within 10 business days. All applications must be made online through the SPSU Graduate Admissions Office.

To apply, please go to:

[https://www.ap.0001app.q1appcie.2958 TD -.0014.0493 0 TD .- 1 Tf 5 Tw \[i9.3\(mit\(bx\(r\)-\(n Cr\(i\)5.5cur\[i9pt i\)6eivei\)6eih\)-4.4\(ould \[\(wm\)-8.5\(ns\)3.3\(il 0 TD](https://www.ap.0001app.q1appcie.2958 TD -.0014.0493 0 TD .- 1 Tf 5 Tw [i9.3(mit(bx(r)-(n Cr(i)5.5cur[i9pt i)6eivei)6eih)-4.4(ould [(wm)-8.5(ns)3.3(il 0 TD)

Graduate Degree Programs

ACCT 6013	Emerging Auditing Technology	3
ACCT 6021	Professional Judgment	3
ACCT 6030	Taxation of Entities	3
MGNT 6059	Legal Environment	3
ACCT 6078	Fund Accounting	3
ACCT 6058	Financial Statement Analysis	3
Electives (Select three from the following list:		3
ACCT 6068	International Accounting	3
ACCT 6053	Business Valuation & Performance	3
ACCT 6045	Forensic Accounting	3
ACCT 6075	Tax Planning & Research	3

Transition Courses

ACCT 5002	Survey of Financial Accounting	1.5
ACCT 5004	Survey of Managerial Accounting	1.5
ACCT 5007	Intermediate Accounting I	3
ACCT 5009	Intermediate Accounting II	3
ACCT 5011	Advanced Accounting	3
ACCT 5013	Cost Accounting	3

Transition courses are not included in the 30 hour degree requirement. Admission will be provisional if any transition courses are required. A grade average of "B" or better is required for the transition courses.

MSA Sequence

The MSA course offerings are sequenced, however with the exception of one course, there are no prerequisites. This allows students to be admitted at any point during an academic year. ACCT 6021, "Professional Judgment", is the only course that has prerequisites, and is only offered in the summer session. Students may take any other courses in any order.

MSA students can complete the degree in one year by taking two courses per session or in two years by taking one course per session. The fall and spring semesters are divided into 2 seven-week sessions, with two courses being offered in each session, while in summer we offer a single seven-week session. Note a student must take a minimum of 2 courses per semester to receive financial aid for a semester.

Course sequence

MSA Course Sequence (May be completed in one or more years):

Semester/Sessions:	Course
Fall Semester	
1st Session	ACCT 6003 Accounting Theory
	MGNT 6059 Legal Environment
2nd Session	ACCT 6006 Advanced Cost Management
	ACCT 6030 Taxation of Entities

Spring Semester	
1st Session	ACCT 6007 Advanced Accounting Information Systems
	ACCT 6078 Fund Accounting
2nd Session	ACCT 6013 Emerging Auditing Technology
	ACCT 6058 Financial Statement Analysis
Summer Session	
Required	ACCT 6021 Professional Judgment
Electives	ACCT 6068 International Accounting
	ACCT 6058 Business Valuation and Performance
	ACCT 6045 Forensic Accounting
	ACCT 6075 Tax Planning & Research

Business Administration

Offering the Master of Business Administration Degree

Admission to the MBA program is open to persons holding the bachelor or higher degree from an accredited college.

Admission Procedure

Applicants to the MBA program must submit the following to the Admissions Office no later than the semester deadline date before the beginning of the semester in which they plan to enroll:

- An application for admission to the MBA program
- An official copy of scores from the GMAT (within the past five years)
- An official transcript from each college the applicant has attended,
- Certificate of immunization
- At least three recommendation forms which have been completed by former or current supervisor, professors, or professional colleagues.
- Statement of purpose
- A resume, while not required, is suggested.

International students should refer to the *International Students* sub-section for additional admission requirements.

Admission Criteria

Applicants for admission to the MBA program are excepted to take the GMAT exam prior to being accepted into the MBA program.

Applicants must meet the following criteria:

1. Regular admission index: $\text{GMAT} + (200 * \text{undergraduate GPA}) = 900$
2. Transition Certificate: $\text{GMAT} + (200 * \text{Transition Certificate GPA}) = 1000$

In order to have scores forwarded to SPSU you must provide our reference code number (5626) on your test application.

Advanced Admission Criteria

A candidate for admission who has already earned a recognized Masters or doctorate degree in another field of study is NOT required to take the GMAT if

Admission Status

The MBA coordinator in conjunction with the department head determines the student's admission status.

Regular admission status applies to students who have met all of the admission requirements of the MBA program. Fully admitted students who have not taken courses in the common professional core (CPC) will be required to take the 5000-level transition courses or equivalent undergraduate courses to fulfill this requirement.

Provisional admission status is offered on an exception basis only. With provisional admission, students are limited to designated courses during a specified time period while they work to fulfill the full admission requirements. Student

Computer Science

Offering the Master of Science Degree

What field of study has seen more technological developments that have become part of our daily lives in just a matter of the past few decades than any other? Developments such as the Internet and email, search engines, Wi-Fi, etc., virtually unknown a few decades ago, make computer science one of the strong contenders for this distinction!

Whether you have a degree in computer science, no background in computer science, some academic experience in the field to your credit, or years of work as a computer professional under your belt, a Master of Science in Computer Science from Southern Polytechnic will enhance your career options. We provide the background necessary to analyze problems from multiple angles, and the resources to conduct research and complete projects while you are learning. Classes are available in the evenings to accommodate the needs of

Master of Science Program in Computer Science Degree Requirements

CS 6123	Theory and Implementation of Programming Languages	3
CS 6223	Advanced Computer System Architecture	3
CS 6413	Theory of Computation	3
CS 6423	Algorithmic Processes	3
Electives		24
Total For The Program		36

Students need to take a total of 12 courses (36 credit hours) at the 6000 level or higher to graduate. This includes 4 required courses (see above). The remaining 8 elective courses must be from 6000-level courses as follows: 5 or more must be from CS, between 0 and 3 from SWE, and 0 or 1 from IT. (With departmental approval, courses from other departments, or up to 2 IT courses, may be included, but 5 or more courses must be CS courses.) Among the elective courses, students must include at least TWO courses from at least ONE of the following tracks. Courses in each track are given below; note that there are some 6000-level CS electives that do not appear in any of these tracks:

Research Track:

- CS 6023 Research Methods and Presentations
- CS 7803 Masters' Thesis (6 hours)

Software Engineering Track:

- SWE 6623 Software Engineering
- All other SWE 6000-level courses which have SWE 6623 as prerequisite

Systems and Architecture Track:

- CS 6243: Adv. Concepts in Operating Systems
- CS 6263: Computer Networks
- CS 6453: Simulation and Modeling
- CS 6273: Parallel and Distributed Processing
- SWE 6823: Embedded Systems Analysis & Design
- SWE 6843: Embedded Systems Construction & Testing
- SWE 6653: Software Architecture

Media & Visualization Track:

- CS 6563: Digital Image Processing and Analysis
- CS 6353: Computer Graphics and Multimedia
- CS 6323: Human Factors

Knowledge Engineering Track:

- CS 6163: Advanced Database Systems
- CS 6533: Artificial Intelligence
- CS 6163: Information Retrieval and Search Engine
- CS 6293: Information Security: Implementation and Application
- CS 6563: Digital Image Processing and Analysis

equivalent to 2 courses, students who are interested in the thesis option are encouraged to start their thesis research at least two semesters before they intend to graduate.

**** Note that a maximum of 9 total semester hours of "approved" transfer or credit may be counted toward the MSCS degree.*

An overall GPA of 3.0 ("B") or better is required over all graduate coursework attempted.

In all graduate programs, a minimum of a 3.0 G.P.A. is required. No grades below 'C' may be applied to a graduate program's requirements, and a maximum of 2 'C' grades at the level of 6000 or above may be applied to a graduate program's requirements.

Transition Courses

*** Note that, although a thesis is NOT required, a thesis option is available, which requires a student to take six credits of CS 7803 ... Master's Thesis as part of his/her electives. Since a thesis is*

Courses (undergraduate or baccalaureate) taken to show competency in these areas will not count toward the 36 hours required for the Graduate degree. Competency can be shown by:

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Engineering Technology--Electrical

Offering the Master of Science Degree

Admission to the Master of Science program with a major in Engineering Technology, Electrical Concentration, is open to persons holding the bachelor or higher degree in engineering, engineering technology, or a related degree from an accredited college.

Preference in admission will be given to applicants having professional experience in a technical work environment. The admission procedure is competitive in that students will be admitted only if their academic accomplishments and work experience demonstrate that they can successfully complete the program.

Admission Procedure

Applicants for admission to the Master of Science program with a major in Engineering Technology, Electrical Concentration must submit the following to the Admissions Office no later than the semester deadline date before the beginning of the semester in which the applicant plans to enroll:

- An application for admission to the program,
- An official copy of scores from the "General Test" of the Graduate Record Examination,
- An official transcript from each college the applicant has attended,
- A certificate of immunization,
- A 1 ... 2 page Statement of Purposes describing your career and educational goals,
- At least three recommendation forms which have been completed by former or current supervisors, professors, or professional colleagues.

International students should refer to the International Students sub-section for additional admission requirements.

Admission Criteria

Applicants should have an undergraduate degree in Electrical, Computer, or Telecommunications Engineering Technology or Electrical, Computer, or Telecommunications Engineering from an accredited college or university.

Applicants must have at least a 2.75 (on the 4.00 scale) undergraduate grade point average. Applicants must score a minimum of 500 on either the quantitative or analytic components of the General Test of the Graduate Record Examination (GRE).

Admission Status

The program coordinator in conjunction with the graduate admissions committee determines the student admission status.

Full Graduate Status students have met all the criteria shown

permission of the program where the degree is housed. Ordinarily, no more than 8 hours of graduate course-work completed in this provisional status may be applied to the degree.

Engineering Technology--Electrical Concentration

The scope of electrical engineering technology has become very broad as the knowledge base and applications associated with this discipline continue to expand at an accelerating pace.

The Master of Science degree is offered to meet the needs of individuals who wish to pursue advanced studies in modern electrical, electronic or computer technologies in order to fulfill their personal or career goals.

There are four principal objectives to the graduate program in Engineering Technology:

- To provide continuing in-depth technical education to individuals who hold an ABET-accredited baccalaureate degree in Electrical or Computer Engineering or Engineering Technology.
- To provide advanced studies in electrical, electronic or computer technologies to help individuals advance in their chosen careers. These individuals may work as engineers, engineer/technologists, technical managers, independent consultants, or in similar professions.
- To provide additional technical education to those individuals who desire to teach at the college, technical school, or high school level.
- To provide an opportunity for practicing professionals, who possess an accredited baccalaureate degree in a related discipline, to shift their career path into the electrical, electronic or computer fields.

Each graduate student will pursue an individualized course of study within the guidelines of one of the programs listed below.

The student and his/her academic advisor will identify the graduate courses that will comprise that student's course of study. The courses will be chosen to:

- Meet the student's career goals
- Provide a high-quality educational experience for that student
- Satisfy the requirements of one of the programs

Master of Science Program in Engineering Technology ... Electrical Concentration Degree Requirements

Project-Based Program

Select a minimum of 34 credit hours of courses including:

- At least 22 credit hours must be graduate-level ECET courses.
- One of the ECET courses must be ECET 6704: Project Proposal (4 credit hours).
- One of the ECET courses must be ECET 7704: Project (4 credit hours).

Information Design and Communication

The MS program in Information Design and Communication has been developed in response to a growing need for professionals in the expanding field of information design, information architecture, content development, communications management, and visual communication.

The basic objectives of the program are

€ To educate those persons with diverse academic and work backgrounds who seek to begin their careers in the field of information design and communication, and

€ To provide a useful credential for current information designers and technical communicators who need advanced training to move ahead in their careers, either as employees or managers of a company or as independent consultants.

The Information Design and Communication program offers students the choice of three program options ... an Internship Option, a Thesis Option, and an all Course Work Option.

Master of Science Program in Information Design and Communication Degree Requirements

Admission Requirements for the Graduate Certificate in Technical Communication, the Master of Science in Information Design and Communication, and Advanced Certificates in Technical Communication:

Applicants admitted into the MS in Information Design and Communication degree program, the Technical Communication Certificate program, or the Advanced Certificate program must demonstrate strong written communication skills, a solid academic record, a good understanding of how their career goals fit within the field of technical communication, and a clear potential to contribute to the profession. All degree and certificate applicants must complete the following in order to be considered for admission:

- Completed application, including a \$20 non-refundable application fee.
- One official transcript from each college attended. These must be in sealed envelopes sent directly from the school.
- Students with a GPA less than 2.75 will be required to take IDC 5001 and IDC 5002, as preconditions for acceptance into the program. A "B" or better will be required in both courses for full admission to the MSIDC.
- Immunization certification or immunization waiver.
- Three academic or professional references on letterhead, placed in a sealed envelope, with the writer's signature placed over the seal.
- Professional resume showing current and past work experience.

In addition, students must submit the following materials depending on their program:

Graduate Certificate in Technical Communication

- An application essay focusing on why the applicant has chosen an online learning environment for a graduate certificate in Technical Communication. The essay should also include a list of elective courses the applicant is most interested in taking and why these courses support the applicant's professional/academic goals. Essay should be at least 2 pages, double-spaced, and typed.
-

submit a portfolio reflective of your work with a description of the audience, purpose, and your role in creating each product, along with an application, in order to apply for one of the advanced certificates.

IDC 6001	Professional Practices of Communication	3
IDC 6002	Information Design	3
IDC 6030	Foundations of Graphics	3
IDC Electives	Select 7 elective courses with an IDC prefix	21
IDC Option	(Select one of the options listed below)	6
Total For The Program		36

Internship Option

Internship (IDC 7601-7603)

While taking the internship, students may enroll in a maximum of 9 hours per semester:

3 hours of internship plus two courses or 6 hours of internship plus one course.

Thesis Option

Thesis (IDC 7801-7803 six-hour minimum)

When taking the thesis, students may enroll in a maximum of 9 hours per semester--to include no more than 3 hours of thesis per semester.

All Coursework Option

Select an additional 2 elective courses (6 hours) with an IDC prefix.

NOTE: IDC 6001 must be taken the first semester of work in the program, and IDC 6002 and IDC 6030 should be taken as soon as possible after admission.

Elective Courses for IDC Options

IDC 6004	Research Methods	3
IDC 6005	Visual Thinking	3
IDC 6010	Writing Across Media	3
IDC 6035	Information Graphics	3
IDC 6040	Applied Graphics I	3
IDC 6041	Applied Graphics II	3
IDC 6045	Foundations of Multimedia	3
IDC 6050	Applied Multimedia	3
IDC 6060	International Technical Communication	3
IDC 6071	User Assistance	3
IDC 6080	Professional Oral Presentations	3
IDC 6090	Medical Communication	3
IDC 6110	Communications Project Management	3
IDC 6120	Usability Testing	3
IDC 6135	Website Design	3
IDC 6140	Instructional Systems Design	3
IDC 6155	Online Instructional Development	3
IDC 6145	Performance Technology	3
IDCDigit8	Tm 8	

Graduate Degree Programs

Adobe Illustrator CS3 (or higher)	Applied Graphics II, Info Graphics
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Graduate Certificates in Technical Communication

The Graduate Certificates in Technical Communication are online programs that prepare students for a variety of positions in technical communication.

Information Technology

Offering the Master of Science Degree

The Master of Science in Information Technology (MSIT) program is designed for those students interested in pursuing a career as a senior information technology (IT) professional who can apply accepted standards and best practices to effectively plan, design, implement and manage the various aspects of an IT organization. Although no specific undergraduate major is required, applicants must have a baccalaureate degree from an accredited school. Students will be evaluated on an individual basis and will be admitted only if their academic accomplishments, recommendations, and motivation predict the ability to complete the program successfully.

Admission Procedure

Applicants for admission to the Master of Science program in Information Technology should submit the following to the Admissions Office:

- An application for admission to the program
- An official transcript from each college the applicant has attended
- A certificate of immunization
- A statement of purpose in seeking this degree
- Three recommendation letters completed by former or current supervisors, professors, or professional colleagues.

International students should refer to the International Students section for additional admission requirements.

To be fully admitted to the MSIT requires a) a baccalaureate degree from an accredited college or university, b) an overall GPA of at least 2.75 on a 4.0 scale.

If the Undergraduate GPA is less than 2.75 (out of a possible 4.0), the IT Department Chair may waive the requirement for a 2.75 GPA for an individual applic

Master of Science Program in Information Technology Degree Requirements

Required Core	All five courses are required	15
IT 6203	IT Design Studio	3
IT 6413	IT Service Delivery	3
IT 6423	IT System Acquisition and Integration	3
IT 6823	Information Security Concepts and Administration	3
IT 7833	IT Strategy, Policy and Governance	3
Elective Courses	ONE of the courses marked with ** is REQUIRED.	21
IT 6103	IT and the Law	3
IT 6473	Multimedia Applications	3
IT 6503	Foundations of HIT	3
IT 6513	EHR Systems	3
IT 6523	Clinical Processes and Workflows	3
IT 6533	Health Info. Security and Privacy	3
IT 6583	Business Cont. Planning & Implem.	3
IT 6643	Issues in Information Management	3
IT 6663	Data Center Management	3
IT 6683	Management of Information Technology	3
** IT 6723	Managing Operating & Network Sys.	3
** IT 6733	Database Administration	3
** IT 6753	Advanced Web Development	3
IT 6763	Electronic Commerce	3
IT 6833	Wireless Security	3
IT 6843	Ethical Hacking: Network Security and Penetration Testing	3
IT 6853	Computer Forensics	3
IT 6863	Database Security and Auditing	3
**IT 6873	Information Security Seminar	3
CSE 6983	CSE Graduate Internship	3
IT 6903	Special Topics in Information Technology	3
IT 7803	Master's Thesis (Term 1)	3
IT 7803	Master's Thesis (Term 2)	3

Total For The Program 36

A maximum of 3 APPROVED electives might be outside of IT.

Transition Courses

The following transition courses might be required if the Undergraduate degree is outside of IT or a closely related discipline to IT, or for provisionally admitted students. Specific assignment of the transition courses is completed during orientation and advisement. Students with no background in IT or computing might benefit from self-study prior to starting this certificate using a reading list available from the IT Department. These courses may not be used to satisfy degree requirements.

IT 5101	Intro. to Database Systems	1.5
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IT 5102	Intro. to Security	1.5
IT 5200	Intro. to Platforms	1.5
IT 5201	Intro. to Networks	1.5
IT 5301	Intro. to Programming	1.5
IT 5302	Intro. to Web Development	1.5

Graduate Certificate in Health Information Technology

The Graduate Certificate in Health Information Technology prepares individuals who hold an accredited bachelor's degree and have taken the Graduate Transition Certificate in Information Technology (or the equivalent through other course work) to advance their knowledge in the field of health information technology.

There are five required courses and two electives.

Required Courses (15 Hours):

IT 6423	IT Systems Acquisition and Integration	3
IT 6503	Foundations of Health Information Technology	3
IT 6513	EHR Systems	3
IT 6523	Clinical Processes and Workflows: Analysis and Design	3
IT 6533	Health Information Security and Privacy	3

Graduate Certificate in Information Technology Fundamentals

The Graduate Transition Certificate in Information Technology prepares individuals who have an accredited bachelor's degree unrelated to information technology and who have an interest in either:

- Transitioning to a Master's program in Information Technology
- Or in obtaining an entry-level position in industry

Students with no background in IT or computing might benefit from self-study prior to starting this certificate using a reading list available from the IT Department. These courses may not be used to satisfy degree requirements.

Required Courses (9 Hours):

IT 5101	Intro to Database Systems	1.5
IT 5102	Intro. to Security	1.5
IT 5200	Intro. to Platforms	1.5
IT 5201	Intro. to Networks	1.5
IT 5301	Intro. to Programming	1.5
IT 5302	Intro. to Web Development	1.5

Graduate Certificate in Information Technology

The Graduate Certificate in Information Technology prepares individuals who hold an accredited bachelor's degree and have

taken the Graduate Transition Certificate in Information Technology (or the equivalent through other course work) to advance their knowledge in the field of information technology.

Participants enroll in two classes per semester for three semesters. There are four required courses and two electives.

Required Courses:

IT 6203	IT Design Studio	3
IT 6423	IT System Acquisition and Integration	3

Ethling Hernandez Part Time Faculty

Degree Requirements for the Master of Science program in Quality Assurance

Required Core Courses (Six Courses)

QA 6602	Total Quality	3
QA 6610	Statistics for Quality Assurance	3
QA 6611	Statistical Process Control	3
QA 6613	Linear Regression Analysis	3
QA 6650	Quality Systems Design	3
QA 7403	Graduate Seminar	3
SYE 6010	Project Management	3
	Total Required Hours	21

Elective Courses (Students choose 5 courses)

QA 6600	Methods of Analysis	3
QA 6612	Design of Experiments	3
QA 6615	Applied Systems Reliability	3
QA 6620	Inspection Systems Design	3
QA 6640	Quality Cost & Supplier Evaluation	3
QA 6660	Six Sigma Black Belt Concepts	3
QA 6712	Quality Systems Simulation	3
QA 6722	Human Factors in Quality Assurance	3
QA 6725	Quality Assessment-Organization	3
QA 6763	Software Quality	3
	Total Elective Hours	15
	Total Degree Program Hours	36

Grades

1. A grade of "C" or better is required for each course.
2. Graduate students must maintain a 3.0 grade point average to be in good standing. Should a student drop below the minimum level of 3.0 for any semester, the student is placed on academic probation. A student whose cumulative grade point average remains below 3.0 for two or more consecutive terms of enrollment, but whose term average is 3.0 or higher, may continue enrollment on probation. However, if a student on probation fails to achieve a term grade point average of at least 3.00 the student will be placed on dismissal.

In all graduate programs, a minimum of a 3.0 G.P.A. is required. No grades below 'C' may be applied to a graduate program's requirements, and a maximum of 2 'C' grades at the level of 6000 or above may be applied to a graduate program's requirements.

Students with an insufficient undergraduate statistics background may be asked to complete QA 5000, Statistical Concepts in Quality Assurance before beginning the statistical requirements.

Graduate Green Belt Certificate

The Department also offers a Graduate Green Belt Certificate for those individuals with an undergraduate degree from an accredited institution. Course work completed in the certificate program will be credited to the student's official transcript as regular academic course work counting for graduate credit. Admission in the Certificate program does not in any way qualify a student for admission to a graduate program. Should a certificate seeking student decide to apply to the MSQA program, that student would need to apply as outlined above. It should be noted that no more than nine semester hours can be transferred into any SPSU graduate program including those taken as a certificate student.

Admission Requirements for the Graduate Green Belt Certificate

At least a 2.75 (on the 4.00 scale) undergraduate grade point average
 Undergraduate degree from an accredited college or university in: Engineering, Engineering Technology, Business, Social Science, Physical Sciences or Education. Other technical and non-technical majors may be acceptable

Admissions Procedure for the Graduate Green Belt Certificate:

Applicants for the Certificate Program must submit the following to the Graduate Admissions Office in accordance with the deadlines outlined on the Graduate Admissions Web site.

- € An application for admission to the program
- € One official transcript from each college the applicant has attended
- € A certificate of immunization (d

Total Required Hours 12

In addition, students must pass a Green Belt qualifying exam at the end of their course work to earn the Graduate Green Belt Certificate.

Note: A grade of "C" or better is required for each course

Software Engineering

Offering the Master of Science Degree

Software engineering is a strategy for designing and developing high-quality software systems that meet the needs of the user in an efficient and predictable manner. Software engineers apply the principles of computer science and mathematical analysis to solve the problems and complex issues associated with developing and maintaining software systems to meet the needs of business and industry. It uses the life-cycle concept from traditional engineering with an emphasis on requirements, design, testing, development and evaluation but calls on the focused application of computer science concepts rather than those of traditional engineering.

Software engineering represents the fastest growing segment of software professionals, and the U.S. Bureau of Labor Statistics cites in its Occupational Outlook Handbook for 2008-2009 that software engineer is expected to be among the fastest-growing occupations in the decade from 2006 to 2016 with an increase in employment by 38 percent. In a survey taken by Money Magazine in May 2007, software engineer was ranked the best job in America.

The Master of Science in Software Engineering Program is designed both for full-time students and for working professionals who want to earn a professional degree part-time in the evening. We are also offering an increasing number of courses online, and it will be possible to complete the degree fully online. Students must have at least a bachelor's degree to apply.

The program is primarily designed to prepare students for leadership positions in the software and computing related industry in two to five years horizon after graduation. These leadership positions may be in one or more of the following areas

1. *Project and Process Management*
2. *Business and Requirements Analysis*
3. *Applications and Systems Design*
4. *Applications Implementation and Development*
5. *Testing and Quality Management*
6. *Systems Maintenance and Support Services*

At least some of the graduates of the Software Engineering Graduate program are also prepared to further their graduate education. Examples of further degrees that the graduates are prepared for are a doctoral education in a computing related field, an MBA with IT or IS track, or a Law degree with Intellectual Property concentration in software and computing.

In order to prepare students for these careers, students will, at the time that they graduate from the program, be able to

1. *Apply basic knowledge of discrete mathematics and formal methods in the modeling and analysis of software systems*
2. *Apply quality principles and quantitative analysis to the definition and evaluation of software systems and processes.*
3. *Independently explore new topics in software engineering or related application domains and effectively present the research in written and oral reports.*

4. Work effectively as a part of a team, including teams that may be geographically distributed, to develop a software system and to lead in one area of project development, such as project management, requirements analysis, architecture, construction, or quality assurance.

5. Perform the major project and process management activities

If you are interested in finding out more about our MS in Software Engineering, please contact the Chair of the Department of Computer Science and Software Engineering, Dr Venu Dasigi, vdasigi@spsu.edu or the program coordinator for the MSSWE, Dr. Sheryl Duggins, sduggins@spsu.edu.

The Master of Science in Software Engineering program at Southern Polytechnic State University has the primary objective of meeting the high demand for a professional degree in Software Engineering, and our classes are conveniently offered in the evenings and online to accommodate the needs of the working professional. Although no specific undergraduate major is required, applicants must have a baccalaureate degree from an accredited school. A transition path is available for students with backgrounds in areas outside software engineering or computer science.

Thirty-six hours of course work are required for successful completion of the MS in Software Engineering program. Students who do not have a degree in Computer Science, Software Engineering, or a closely related field are accepted provisionally into the program, and must complete a series of prerequisite courses in addition to the 36-hour requirement.

A graduate certificate is also available to students with a bachelor's degree in software engineering, computer science or a closely related field who wish to advance into leadership positions in software engineering. Participants typically enroll in two classes per semester for three semesters. Eighteen hours of course work are required for successful completion of the graduate certificate in software engineering.

In all graduate programs, a minimum of a 3.0 G.P.A. is required. Only grades of 'C' or better may be applied to meet the degree requirements (including transition course work). An overall GPA of 3.0 ("B") or better is required over all graduate course work attempted. A maximum of 2 'C's at the level of 6000 or above may be applied if offset by the same number or more of 'A's at the level of 6000 or above.

Admission Procedure

Applicants for admission to the Master of Science program in Software Engineering should submit the following to the Graduate Admissions Office:

An application for admission to the program

A transcript from each college the applicant has attended

A certificate of immunization

A statement of purpose in seeking this degree,

Three recommendation forms completed by former or current supervisors, professors, or professional colleagues, and

Optionally: An official copy of scores from the "General Test" of the Graduate Record Examination (GRE).

Submission of the GRE score is strongly recommended to international applicants and should be considered by all applicants to strengthen the application packet. The applicant may be required to submit the GRE score after an initial review, which could delay the decision process.

International students should refer to the International Students sub-section for additional admission requirements.

Master of Science Program in Software Engineering Degree Requirements

SWE 6633	Software Project Planning and Management	3
SWE 6613	Requirements Engineering	3
SWE 6733	Software Engineering Process	3
SWE 6653	Software Architecture	3
SWE 6743	Object-Oriented Analysis and Design	3
SWE 6673	Software Quality Engineering and Assurance	3
SWE 6883	Formal Methods in Software Engineering	3
	Select one of the options listed below:	15
	Total For The Program	36

Project Option (15 hours)

12 hours of electives: Choose 6000-level Software Engineering, Computer Science, Information Technology, or

System Engineering courses (at least 2 SWE and at most 2 CS, IT, or SE) *and*

SWE 7903 Software Engineering Capstone

Electives	12 hours of 6000-level SWE, CS, IT or SE courses	12
SWE 7903	Software Engineering Capstone (Project)	3

Thesis Option

9 hours of electives (Choose 600-Level SWE, CS, IT, or SE courses (at least 2 SWE)) and

SWE 7803 Master's Thesis

Electives	9 hours of 6000-level SWE, CS, IT or SE courses	9
SWE 7803	Masters Thesis	6

*** Note that a maximum of 9 total semester hours of "approved" transfer credit may be counted toward the MSSWE degree.*

Transition Courses

Some of the following transition courses may be required for provisional acceptance students. These courses may not be used to satisfy degree requirements.

SWE 6623	Software Engineering	3
CS 5003	Accelerated Introduction to Programming	3
CS 5011	Fundamentals of Computer Architecture	1.5
CS 5021	Fundamentals of Operating Systems	1.5
CS 5031	Fundamentals of Database Systems	1.5
CS 5123	Advanced Programming and Data Structures	3
CS 5423	Discrete Mathematics	3
CSE 1301	Programming and Problem Solving I	4

The required prerequisite courses are listed on the student's provisional acceptance letter and are required to make up deficiencies in the student's academic background. Upon enrollment

Systems Engineering

Offering the Master of Science Degree

The Systems Engineering program is a multidisciplinary program that blends engineering, systems thinking, and management topics. The increasing complexity of systems, the growth of global competitiveness, the enhanced focus on cost and profitability, and ever more challenging customer expectations have led a number of premiere organizations in the defense and commercial sectors to assume the role of system integrators. These organizations are increasingly adopting an evolving business model that emphasizes the selling of functionality, solutions, or capabilities, instead of focusing on providing systems, system elements, and products.

The System Engineering Program is housed in the Division of Engineering. The program offers a Master of Science degree with a major in Systems Engineering and a Graduate Certificate in Systems Engineering. The curriculum emphasizes the development of large-scale, complex, and multifunctional systems in a number of domains. Core courses in the SyE Program have a strong case study and project orientation to facilitate understanding of the concepts discussed.

All graduate Systems Engineering courses are offered online via several technologies that allow a high degree of interaction with the faculty and fit into today's professional's busy schedule.

Admission Requirements

For more information

For further information, contact the SyE Program Director, Dr. Renee Butler at 678-915-5414.

Master of Science in Systems Engineering Degree Requirements

The program consists of five core courses and a four course concentration. Additionally, students will either complete a thesis (6 thesis hours) and one Systems Engineering Elective or a project (SYE 6055) and two Systems Engineering Electives.

Thesis Option

SYE 6005	Introduction to Systems Engineering	3
SYE 6010 or MGNT 6050	Project Management Processes Project Management	3
SYE 6020	System Architecture	3
SYE 6025	Economic Decision Analysis	3
QA 6610	Statistics	3
SYE 7803	Thesis Hours	6
	Elective (1 course)	3
	Concentration (4 courses)	12
Program Total		36

Project Option

SYE 6005	Introduction to Systems Engineering	3
SYE 6010 or MGNT 6050	Project Management Processes Project Management	3
SYE 6020	System Architecture	3
SYE 6025	Economic Decision Analysis	3
QA 6610	Statistics	3
SYE 6055	Systems Engineering Project	3
	Electives (2 courses)	6
	Concentration (4 courses)	12
Program Total		36

Electives

A candidate must take one or two elective courses in addition to the required courses listed above. A complete list of all Systems Engineering courses is listed below. Typically the electives will be Systems Engineering courses, but courses from other programs may be taken with approval of the Program Director.

Concentration

A candidate must select four courses in a concentration. The candidate may propose a customized selection of four elective courses with approval of the Program Director. Some potential concentrations include: Software Engineering, Engineering Management, Information Systems, or Transportation Systems. The program offers three suggested concentrations: Manufacturing and Logistics Systems, Integrated Process and R7 0 TD rses is tE958-6rojeted Process and

Graduate Course Descriptions

ACCT 6068 International Accounting

Prerequisite: Transitional Courses, if required

students with an opportunity to apply the theories and tools that they have learned elsewhere in the curriculum to the venture creation process.

MGNT 6065 Issues in International Management

Prerequisites: MGNT 5000 or undergraduate management principles, MGNT 5006 or undergraduate finance, MGNT 5008 or undergraduate marketing) and MGNT 6005

3-0-3

This course deals with cultural, institutional, economic, and financial environments characteristic of international markets. It will focus on strategic and operational plans that managers must undertake in formulating international business activities.

MGNT 6070 Issues in Human Resource Management

Prerequisite: MGNT 5000 or an undergraduate course in management principles

3-0-3

This course covers employment practices and employment law in unionized and non-unionized settings. The focus on decision making and administrative issues for managers.

MGNT 6090 Strategic Management CAPSTONE COURSE

Prerequisite: Students should take this course within the last two semesters of the degree program, requires instructor approval.

3-0-3

Exposes the student to the process of strategic decision-making. Emphasis is placed on the use of SWOT analyses in development of the strategic plan and the determination of the long-term character of the enterprise. Cases will be analyzed, and classroom presentations will be made by distinguished industrial executives and leaders.

MBA Elective Courses

MGNT 6091-6903 Special Topics

3-0-3

MGNT 7501-7503 Independent Research

3-0-3

Prerequisite: At least half of the MBA degree completed, requires professor approval

Course covers special topics of interest to the students. Course credit and topic are arranged between instructor and student.

Note: MBA students may take selected electives in other graduate programs subject to prerequisite requirements and faculty approval.

Computer Science Graduate Courses

CS 5123 Advanced Programming and Data Structures

Prerequisite: CSE 1302 or CS 5003

3-0-3

Transition course for graduate students with a limited background in programming. Topics include pointers, recursion, data structures such as lists, stacks, queues, trees, etc., sorting and searching, data abstraction, introduction to runtime analysis and the big-oh notation. Appropriate programming projects are also included.

CS 5153 Database Systems

Prerequisite: CSE 1302 or CS 5003 or IT 5113

3-0-3

Transition course. This course provides an overview of various database models including relational, object-oriented, hierarchical, and network. Also covered are various file structures including sequential, indexed sequential, and direct. It covers planning, analysis, design, and implementation of a database. Entity Relationship models and normalization are covered. It covers an SQL-based database system such as Oracle. A major project and/or paper required.

CS 5183 Object-Oriented Programming

Prerequisite: CS 5123 (co-requisite) or CS 3424

3-0-3

Transition course: Topics to be covered include encapsulation and abstraction, objects and classes, inheritance, polymorphism, class libraries, and messaging. The course includes major project(s) and/or paper(s).

CS 5011 Fundamentals of Computer Architecture

Prerequisites: CSE 1301 or CS 5003

1.5-0-1.5

Transition course for SWE students only. This course is designed to examine the principles and concepts of computer architecture. Topics from the principles of computer organization and

CS 5031 Fundamentals of Database Systems

Prerequisites: CSE 1301 or CS 5003

1.5-0-1.5

Transition Course for SWE students only: This course is designed to examine the principles and concepts of database systems and their application to real-world software systems. Topics include database structures and design issues, entity relationship models, relational databases, normalization, SQL and practice with an SQL-based database system such as Oracle.

CS 5223 Computer Architecture

Prerequisite: CSE 1301 or CS 5003

3-0-3

Transition Course: Topics from the principles of computer organization and architecture include number systems, digital logic, basic logic design in combinational and sequential circuits, and assembly and machine language.

CS 5243 Operating Systems

Prerequisites: (CSE 1302 or CS 5003) and CS 5223/3223

3-0-3

Transition Course: Topics from the principles of operating systems include management of resources including processes, real and virtual memory, jobs, processes, peripherals, network, and files.

CS 5423 Mathematical Structures for Computer Science

Prerequisites: An undergraduate course in Calculus and a corequisite of CSE 1301 or CS 5003

3-0-3

Transition course: Topics from discrete mathematics include set theory, relations and functions, principles of counting, introductory graph theory, formal logic, recursion, and finite state machines.

CS 6023 Research Methods and Presentations

3-0-3

Materials and methods of scholarly research in computer science. Includes study of standard research paradigms with illustrative cases of each and these of research methods and presentations in industrial and business settings.

CS 6103 Discrete -Time Signals and Systems

Prerequisite: CS 5423

3-0-3

Underlying principles of discrete -time signals and digital signal processing. Topics include mathematical representation of discrete-time signals and systems, sampling theorem and aliasing, introduction to difference equations, IIR and FIR filters, DTF, FFT, and Z-Transforms.

CS 6123 Theory and Implementation of Programming Languages

Prerequisites: CS 5123/3424 and CS 5423

3-0-3

Comparative study of programming language paradigms with emphasis on design and implementation issues. Covers formal definitions of syntax and semantics, data types, static and dynamic storage allocation, definition of operations, control of program flow, subroutine and function linkages, formal tools for characterizing program execution, and abstraction techniques.

CS 6153 Advanced Database Systems

Prerequisite: CS 5153/3153 and CS 5423

3-0-3

An advanced course in database systems emphasizing design issues and implementation tradeoffs. It covers the theory, algorithms, and methods that underlie distributed databases. Relational algebra is discussed. The client-server architecture and application development are also covered.

CS 6163 Information Retrieval and Search Engines

Prerequisites: CS 5123 and CS 5423

3-0-3

The course covers issues, models, and techniques associated with efficient storage and effective retrieval of large amounts of unstructured text information. It includes a study of classic information retrieval (IR) techniques and exposes students to more recent developments, such as search engines and text mining. Students will be exposed to relevant literature of the discipline and also implement and/or evaluate a simple information retrieval system or search engine.

CS 6223 Advanced Computer System Architecture

Prerequisites: CS 5243/3243

3-0-3

Topics include computer performance issues, instruction set architectures, RISC versus CISC, machine language, microprocessor design and implementation, performance enhancing techniques, cache memory design, and implications to operating system design.

CS 6243 Advanced Concepts in Operating Systems

Prerequisite: CS 5243/3243

3-0-3

Topics from the theory of operating systems include: memory and process management of high-performance architectures that address concurrent, parallel, and distributed processing.

CS 6263 Computer Networks

Prerequisite: CS 5243/3243

3-0-3

Issues involved in computer networks and the Internet are examined based on the layered network architecture model. Objectives and methodologies of each layer are studied with the particular emphasis on the Application, Transport, Network, and Datalink layers. Both the principles in computer networking and practical implementations (via network programming labs) are covered.

CS 6273 Parallel and Distributed Processing

Prerequisites: CS 5123 and CS 5223

3-0-3

This course covers various aspects of parallel and distributed processing and algorithm design with an emphasis on programming. Topics include: Taxonomy of parallel architectures; Shared-memory vs. message-passing architectures; Computation models and Performance metrics; Parallel/distributed algorithm design - basic techniques; Parallel/distributed programming techniques and issues: partitioning, load balancing, synchronization, task scheduling, message overheads, etc.; Parallel/distributed algorithms for sorting, matrices, etc.; Debugging, Profiling, and Performance enhancements of parallel and distributed programs. Students will gain experience in parallel and distributed programming on

Graduate Course Descriptions

construction operations. This course will provide masters students with tools that can help them to perform top-level management duties in the construction industry. The complex nature of the construction industry requires construction managers to analyze

the thesis advisor. The student is expected to submit a substantial body of research work and to defend this submittal and the course work taken in the degree program. This course may be repeated

with departmental approval but no more than 8 hours may be applied toward the requirements of graduation.

CSE Courses

CSE 6983 Graduate Internship

Prerequisite: 9 CSE graduate hours and be in good academic standing.

3-0-3

Gives students the opportunity to apply knowledge of computing in a realistic practical project. They are expected to write a research paper based on their experiences.

Engineering Technology,,Electrical Graduate Courses

ECET 6001 Circuit and System Modeling with SPICE

Prerequisite: Semiconductor Device Theory and Applications; equivalent to ECET 2210, ECET 2310

3-3-4

A detailed study of circuit modeling using SPICE. The student will learn to model circuits and systems at the device level up to the behavioral level. This includes BJT and MOS transistors, op-amps, communications systems, control systems, etc. The student will also learn how SPICE numerical algorithms function and how to maximize the speed and accuracy of simulations.

include how neural network simulations are used to solve decision-making tasks. Other topics included are machine vision and speech analysis. Practical experience and additional insight will result from students using the principles and theories studied in class to develop practical solutions to actual problems.

A seminar in research and development methods, current industrial practice and application of new technologies. Guided by the instructor, each student will choose a current topic in Electrical or Computer Engineering Technology, become informed about the principles and applications of that topic and ultimately produce a research report which is presented during the ECET Forum.

ECET 7704 Project

Prerequisites: ECET 6704 and permission of project advisor

1-8-4

Guided by his/her Project Committee, the student will complete his/her Masters Project. The student must demonstrate completion of the project to his/her committee and obtain the committee's approval. The student will prepare a final report that completely documents the project and will present this report to the department. Written acceptance by the Committee of the Final Report will constitute the completion of this course.

Information Design and Communication Graduate Courses

IDC 6002 Information Design

Prerequisite or Co-Requisites: IDC 6001, IDC 6030

3-0-3

Study of the main design elements in information products with an emphasis on rhetorical and theoretical underpinnings for design decisions. Students work on designing and redesigning products in various media. Requirements include a report on document design that demonstrates solid application of theoretical principles. Should be taken as soon as possible after admission.

Graduate Course Descriptions

Survey of the major issues that affect technical communication from a global perspective. Topics may include cultural influences on communication, challenges associated with technical translation, differing uses of graphics, communicating within multinational organizations, and theoretical issues related to international communication.

IDC 6080 Professional Oral Presentations

Prerequisite: IDC 6001 and IDC 6030, Co- or Pre-Requisite: IDC 6002

Graduate Course Descriptions

IT 5201 Introduction to Networks

Prerequisite: IT 5200

1.5-0-1.5

This course examines aspects of computer networks and data communications.

IT 5301 Introduction to Programming

Prerequisite: None.

1.5-0-1.5

This course examines aspects of computer programming. Beginning programming concepts will be covered. Students will be using JAVA as the language.

IT 5302 Introduction to Web Development

Prerequisite: IT 5301

1.5-0-1.5

This course examines aspects of beginning web development. Team web development projects will be used.

IT 6103 IT and the Law

Prerequisite: IT 6423

3-0-3

This elective course will examine aspects of how the law affects an IT operation. Topics such as contract law, internet law, privacy and security will be discussed. Graduates of the MSIT need to know how the law affects IT and understand the basic laws particularly geared toward an IT operation.

IT 6203 IT Design Studio

Prerequisite: IT 5101 and IT 5302 OR IT 5103 and IT 5303

3-0-3

This core course covers technologies and methods of designing and prototyping an IT application from multiple sub-system components. Major projects includ

This course addresses current issues relating to computers, ethics, and social values. Topics include computer ethics, computer crime, abuse, social responsibility, risk analysis, computer law and cultural impact. Library and internet research components are included, and a major research paper is required.

IT 6663 Data Center Management

Prerequisite: IT 5201 or IT 5203

3-0-3

Issues in setting up and running a multi-user computer or data system. Includes RFP generation, vendor selection, project planning and control methods, backup and disaster recovery plans, site preparation, managing help desks, end user training, IT professional development, contract negotiation, outsourcing relationships and job scheduling.

IT 6683 Management of Information Technology

Prerequisite: None.

3-0-3

A study of the use of computer and information management systems in the management of organizations. Includes formal characterization of management structures, identification of information needs, and integrated tools for providing MIS support. Major project included.

IT 6723 Managing Operating and Network Systems

Prerequisite: IT 5201 or IT 5203

3-0-3

This course covers the installation and management of operating systems and telecommunications networks, including cost-benefit analysis, and evaluation of connectivity options. Students learn to evaluate, select and implement different operating and communications options to support an organization.

IT 6733 Database Administration

Prerequisite: IT 5101 or IT 5103

3-0-3

This course covers data administration and management, backup/recovery, security, access control, performance monitoring and tuning, data warehousing, data mining, online analytical processing, centralized versus distributed environments, client server and world-wide-web database integration.

IT 6753 Advanced Web Development

Prerequisites: IT 5101 and IT 5302 OR IT 5103 and IT 5303,

3-0-3

This course covers web services and content management for advanced web applications. Students will gain familiarity with: advanced business concepts for the web; best practices and development processes for web applications; and a variety of appropriate web tools both in the proprietary and open source domains.

IT 6763 Electronic Commerce

Prerequisite: IT 5101 and IT 5302 OR IT 5103 and IT 5303,

3-0-3

This course covers tools, skills, business concepts, and social issues that surround the emergence of electronic commerce. The

student will develop an understanding of the current practices and opportunities in EDI, electronic publishing, electronic shopping, electronic distribution, electronic collaboration and database issues. Other issues include standards, security, authentication,

QA 6615 Applied Systems Reliability

Prerequisite: QA 6610

3-0-3

Analysis of appropriate probabilistic models for system reliability, including the exponential, Weibull, normal, and lognormal distributions, life prediction techniques, reliability test program plans, failure mode and effect analysis, Markov models, and maintainability concepts.

QA 6620 Inspection Systems Design

Prerequisite: QA 6610

3-0-3

This course deals with understanding inspection systems, measurement principles, and limitations. Included are acceptance sampling plans such as ANSI Z1.4, ANSI Z1.9, Dodge Romig, and stipulated risk, chain, sequential, and continuous plans.

QA 6630

3-0-3

Adult learning theory, the development and management of training programs, presentation techniques, instructional aids, and assessment will be investigated.

QA 6640 Quality Cost and Supplier Evaluation

Prerequisite: QA 6602

3-0-3

A detailed analysis of cost reductions involved in continuous improvement. Supplier evaluation, including quality audits, is reviewed to establish capability. The concept of partnerships is explored.

QA 6650 Quality Systems Design

Prerequisite: QA 6602

3-0-3

SWE 6673 Software Quality Engineering and Assurance

Prerequisite: SWE 6613 and CS 5013

3-0-3

Various definitions and metrics related to quality are introduced, along with the concept of total quality management (TQM). Development of quality/test plan and the cost/value trade-off throughout the software development cycle is demonstrated. As a crucial component of quality engineering, the notion of validation and verification is explained in the context of different testing techniques, which include black box testing, white box testing, and formal verification. The emphasis of the course is on testing

SWE 6753 Computer Game Design and Development

Prerequisite: CS 5123

3-0-3

Topics include graphics, multimedia, visualization, animation, virtual reality simulation concepts, methods, and tools of game design and developments using the software engineering life cycle are emphasized. A team project on a game prototype is required.

SWE 6763 Software Metrics and QA

Prerequisite: SWE 6623

3-0-3

This course covers the principles of software measurement such as scaling, validity, and reliability. The various software metrics on volume, effort, quality, and cost estimation are explored. The theory and principles of software verification and validation effectiveness, and reliability models are studied. The application of these measurements to software customer satisfaction and total quality management is explored.

SWE 6783 User Interaction Engineering

Prerequisites: CS 5003 and SWE 6623

3-0-3

This course follows a complete software-engineering cycle to produce software objects (classes and/or components) that support users in effective, efficient, and enjoyable interactions with computers. Class exercises and a project incorporate concepts and methods including

Systems Engineering Graduate Courses

Graduate Course Descriptions

MGNT 5014 Survey of Statistics

1.5-0-1.5

An introduction to the application of statistics to business. Provides statistical techniques needed for managerial decision making. Course content includes descriptive statistics, statistical distribution, probability theory, and hypothesis testing.

Required MBA Courses

Business Administration Faculty

Qian, Kai

Professor

Ph.D., University of Nebraska-Lincoln
M.S., East China Normal University
B.S., Harbin Engineering College

Construction Management Faculty

Abaza, Hussein

Assistant Professor

Ph.D., Virginia Polytechnic and State University
MA.Sc., Virginia Polytechnic and State University
B.A., Virginia Polytechnic State University

Banik, Gouranga C.

Professor

Ph.D., Iowa State University
M.S., University of Manchester (UK)
M.S., Bangladesh University of Engineering and Technology
B.S., Bangladesh University of Engineering and Technology

El-Itr, Zuhair

Associate Professor

Ph.D., Georgia Institute of Technology
M.S.C.E., Georgia Institute of Technology
B.S.C.E., American University-Beirut

Irizarry, Javier

Assistant Professor

Ph.D., Purdue University
M.E.M., Polytechnic University of Puerto Rico
B.S.C.E., University of Puerto Rico ... Mayaguez

Meadati, Pavan

Assistant Professor

Ph.D., University of Nebraska, Lincoln
M.S., Indian Institute of Technology, Madras
B.S., Osmania University (India)

an B.S., Osmania University (India) B.S., OsmaniadTc -.0013rQ f 4 -12.612kar3rk.r7R.l*P PavanM.S.C.E., Geond rgia l(Expected 2 -1i,ssor

M.A., University of Virginia
M.A., Columbia University
B.A., Columbia University

Oliver, Betty
Professor

Graduate Faculty Listings

M.S., University of Missouri-Columbia
B.A., University of Missouri-Kansas City

Pournaghshband, Hassan

Professor

Ph.D., University of Oklahoma
M.S., Northwestern University
B.S., University of Tehran

Salimi, Abi

Associate Professor

Ph.D., University of Central Florida
M.S., University of Iowa
B.S., The Institute of Banking Science (Iran)

Tsui, Frank

Associate Professor

Ph.D., Georgia Institute of Technology
M.S., Indiana State University
B.S., Purdue University

Southern Polytechnic State University Senior Administration

Dr. LISA A. ROSSBACHER

President

Ph.D., Princeton University
M. A., Princeton University
M. A., State University of New York at Binghamton
B. S., Dickinson College

Mr. RON DEMPSEY

Executive Director of Advancement

Ph.D., Southern Baptist Theological Seminary
M.A., University of Louisville
M. Div., Southern Baptist Theological Seminary

Mr. WILLIAM GRUSZKA

Chief Information Officer

M. S., Cleveland State University
B.I.E., Cleveland State University

Dr. RON R. KOGER

Vice President for Student and Enrollment Services

Ed.D., University of Kansas
M.Ed., University of Kansas
B.S.Ed., Pittsburg State University

Mr. PATRICK B. MCCORD

Vice President for Business and Finance

M. S., Georgia College
B. A., West Georgia College

Ms. MARY T. PHILLIPS

Executive Assistant to the President

M.B.A., Samford University
B. A., Howard College (Samford University)

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