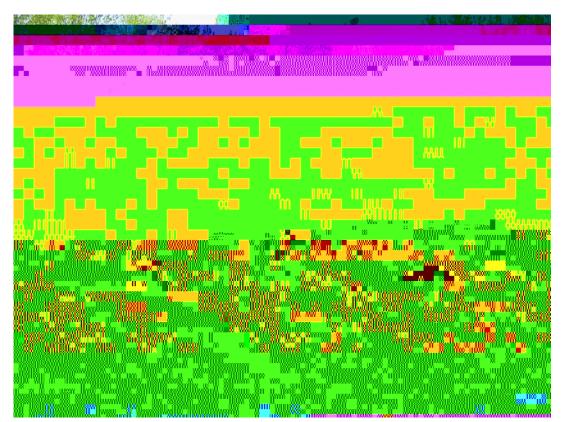
# Graduate Academic Catalog

## 2007-2008



Graduate Catalog 2007-2008

# General Information

### **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 changes. Information on changes will be available in the Office of the Registrar and major academic program offices. It is especially important to note that it is the responsibility of the student to keep apprised of current graduation requirements for a particular degree program and current academic procedures.

Southern Polytechnic State University is an equal educational and employment opportunity institution and does not discriminate on the basis of race, color, sex, religion, creed, national origin, sexual orientation, age, or disability.

### **Student Rules and Regulations**

The rules and regulations for Southern Polytechnic State University students are comprised of the catalog sections on Academic Regulations and Student Life Regulations. These regulations are intended to set forth the requirements of the faculty to the end that a large student body may live and work together harmoniously with a minimum of friction and misunderstanding. Each student is expected to be familiar with these catalog sections. The student is also expected to be a law-abiding citizen and to obey the laws of the City of Marietta, Cobb County, the State of Georgia, and the United States.

#### **Responsibility for Notices**

Students are expected to be aware of the contents of all general notices including those appearing on official campus bulletin boards and in the official school newspaper. Students are also expected to keep the university apprised of their current mailing address and email address. All official notifications are issued by way of email.

### **University Police and Crime Statistics**

Southern Polytechnic is committed to a safe, healthy environment in which our students, faculty, and staff can grow professionally and personally. The University promotes strong safety policies and prompt reporting and investigation of any actions or events that would harm the well-being of any student, employee, or faculty member.

The University Police employs police officers that comply with certification, training, and all other requirements of the Peace Officers Standards and Training Council of Georgia. Our officers have arrest powers on Southern Polytechnic property, which is under the control of the Board of Regents of the University System of Georgia, and on any public or private property within five hundreds yards of property under the control of the Board of Regents.

Our officers conduct preventive patrols on campus including the residence halls; are responsible for the security of university-owned property; investigate reported crimes at the university; conduct educational programs and workshops to promote personal safety; and actively work to prevent and detect crime throughout the Southern Polytechnic campus. **Our program complies with The Jeanne Clery Disclosure of Campus Security Policy and Crime Statistics Act. Our disclosure report can be found on the police department web page at http://police.spsu.edu** 

### Accreditation

Southern Polytechnic State University is an accredited, coeducational, residential university offering associate, bachelor, and Masters degrees.

Southern Polytechnic State University is regionally accredited by the Commission on Colleges of the Southern

### **Undergraduate Degrees**

Associate of Science transfer program in General Studies

**Bachelor of Apparel and Textiles** 

**Bachelor of Applied Science** 

**Bachelor of Architecture program** 

Bachelor of Arts programs in: Business Administration Computer Science English and Professional Communication Mathematics Physics

Bachelor of Science programs in: Biology

#### 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 ystemsT TP0(y Tdfo)] nfo Tc 0.0029 Tw -25.7093ams

# *Quick Facts for Prospective Students*

Students who wish to pursue a Masters degree, a transition certificate, or a graduate certificate at SPSU are admitted to the School of Graduate Studies. The admissions requirements are outlined below.

## What are the qualifications I must possess in order to be considered for admission into a graduate program at SPSU?

You must have:

- Graduated from a regionally accredited institution with a bachelor's degree
- Attained a 2.75 undergraduate grade point average (on a 4.0 scale) (Some degrees require higher GPA's.)

If you are an <u>international student</u>, see the special section in this catalog for additional requirements.

#### The following graduate programs have additional requirements:

#### M.S. in Electrical Engineering Technology:

Undergraduate engineering or engineering technology degree in the areas of electrical, computer, or telecommunications

#### M.S. in Information Design and Communication:

A timed, proctored, on-campus essay written in response to a given assignment

#### M.S. in Software Engineering:

Documentation of at least one year of software project-related work experience (or comparable co-op work)

#### **M.S. in Systems Engineering:**

Undergraduate engineering, engineering technology, computer science or physical science degree

Some departments require the GRE or GMAT. See admissions requirements for the specific major you are interested in for details.

#### What if I don't meet these qualifications?

If you do not meet the criteria above, you might still be admitted, but a committee will review your overall application and make a determination based on:

- Your undergraduate work,
- Your professional industry experience,
- Any other indicators that might point to your potential to succeed. You may submit anything you feel might help the committee to understand your background for consideration.

If you are admitted by the review committee, you will be admitted on probation. If you attain a 3.0 GPA at SPSU after 9 hours of graduate work (or three courses) you will be removed from probation and will be allowed to continue as a graduate student. If you do not attain a 3.0 GPA after 9 hours, your academic record will be reviewed and you may be dismissed.

## *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
- A Statement of Purpose, describing professional career goals and how completion of the graduate program will help achieve them

If you are an **<u>international student</u>**, see the special section in this catalog for additional requirements.

## Are the graduate programs at SPSU eligible for federal and other types of financial aid?

Yes.

#### Are the graduate programs at SPSU accredited?

Yes. Southern Polytechnic State University is an accredited, coeducational, residential university offering associate, bachelor, and Masters degrees.

Southern Polytechnic State University is regionally accredited by the Commission on Colleges of the Southern Association of Colleges and Schools (1866 Southern Lane, Decatur, GA 30033-4097, Telephone: 404-679-4501)

The Association of Collegiate Business Schools and Programs (ACBSP) accredits the Master of Business Administration.

#### When do I have to have my application and other documents submitted in order to be considered for the coming term?

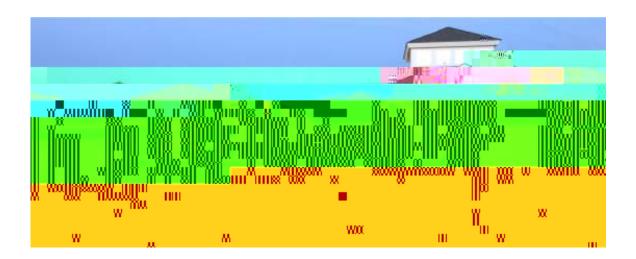
SPSU uses a rolling admission process. This means you can apply at any time up until the term has started. However, the number of seats in each program is limited and you are encouraged to apply early in order to be assured of there being sufficient space. You will dramatically decrease the chances of having problems with your admission and your application for financial aid if you will meet the following priority deadlines:

Fall Term: July 1<sup>st</sup> Spring Term: November 1<sup>st</sup> Summer Term: April 1<sup>st</sup>

## SOME DEPARTMENTS REQUIRE MUCH EARLIER APPLICATIONS IN ORDER TO MEET REVIEW BOARD REQUIREMENTS.

In order for an application to be complete, all required documents must be submitted and evaluated. If, for some reason, you cannot assemble all of your documents in time, submit the materials you have and then follow up with other documents when they become available. The earlier you have everything submitted before a term starts, the easier it will be to have a seamless and trouble-free start to your academic pursuit.

## Graduate Admissions



### General Information

This section contains information that

### 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 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.

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.

### 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

### Admission Procedures and Deadlines

#### **General Information**

All applications for admission to Southern Polytechnic State University must have all required credentials on file in the Admissions Office by the application deadline date for the semester in which the applicant plans to enroll.

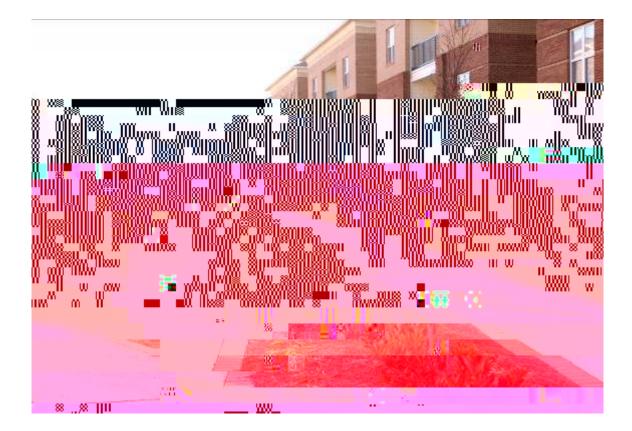
All international applicants are required to submit all admissions documents to the Office of Graduate Admissions at least **three months before** the registration date of the semester in which the student plans to enroll.

- All applications must be accompanied by a non-refundable \$20.00 application fee. Checks should be made out to Southern Polytechnic State University.
- Complete both sides of the application, sign and return with application fee, to the Graduate Admissions Office. Southern Polytechnic State University, 1100 South Marietta Parkway, Marietta, GA 30060-2896.
- Request that all colleges and universities that you have attended send an official transcript to the Admissions Office. Only official transcripts mailed directly from the colleges will be accepted. Official student copies will not be accepted. Note: If you have attended Southern Polytechnic State University, you need only the transcripts which are not already on file.
- Complete the Certificate of Immunization and return it to the Admissions Office. Note: If you attended Southern Polytechnic State University, you are not required to complete the Certificate of Immunization.
- Submit three reference forms from former college professors, employers, or other people who are familiar with your abilities. Mail the reference forms to the address listed on the front of the form. Technical and professional communication applicants are required to submit three reference letters instead of reference forms.
- Students whose native language is not English must submit minimum TOEFL scores of a total of 550, 213 computer-based, 79 internet-based to the Graduate Admissions Office. Students who are on F-1 visas will also need to provide a financial affidavit indicating financial security to the Graduate Admissions Office. 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. Students who have academic work outside of the United States will also be required to complete and submit to the Graduate Admissions Office an International Educational Summary Sheet. Note: Southern Polytechnic State University reserves the right to require applicants to send their international educational credentials to a professional evaluation service before being considered for admission.
- Submit individual graduate program requirements as indicated.

#### **Special Accommodations**

Upon acceptance and before enrollment, any student with a documented disability or special need must notify the Disability Services Coordinator in the Advising, Tutoring, Testing, and International Center (ATTIC) of any particular accommodations required.

## Financial Information



### Index to Financial Information

Financial Aid Information

### Financial Aid Information

Southern Polytechnic State University subscribes to the principle that the primary purpose of a financial assistance program is to provide aid to students who without such assistance would be unable to attend or remain in school.

The financial aid program is intended to assist students in meeting normal university expenses and to help as many students as possible. An applicant should realize, however, that the amount of financial aid granted seldom meets all the student's educational expenses.

### Applying for Financial Aid

Step one in applying for financial aid is to fill out the Free Application for Federal Student Aid (FAFSA), which is available at the Student Financial Aid Office, or on the World Wide Web at <u>www.fafsa.ed.gov</u>.

Although applications are processed until all federal funds are expended, students who apply by the March 1st deadline have a greater chance of receiving the maximum amount of federal 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

• A cumulative grade point average requirement

Aid recipients must meet each of the three (defined below) in order to be considered to be making satisfactory academic progress 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 college 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 management transfers in 50 semester credit hours. It takes 128 semester hours to earn a degree; therefore, the student's maximum time frame is (128X150%)-50 = 142. This student's financial aid eligibility is exhausted once he/she has attempted 142 semester hours at SPSU).

Students who have completed 100% of the maximum time frame will be warned by e-mail and reminded that they can receive financial aid for no more than 150% of the credit hours required for graduation.

#### Completion Rate Requirement

In order to complete a program of study within the required time frame, the aid recipient must complete 66.7% of all hours attempted at SPSU. Credit hours attempted are cumulative and include all hours for which the student was enrolled and received a grade of A, B, C, D, F, W, WF, I, IP, S, or U. Grades excluded from GPA due to multiple attempts are included in the completion rate. Excluded hours count in the student's completion rate.

#### Cumulative Grade Point Average Requirement

Graduate students receiving financial aid must maintain a cumulative grade point average of 3.00. 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 Is SAP Checked?

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

#### Financial Aid Probation

Students with a GPA of less than the required 3.00 but greater than or equal to 2.00 and/or Students with a completion rate less than the required 66.7% but greater than or equal to 25%.

#### Financial Aid Suspension

Any student earning less than a 2.00 GPA and/or earning a completion rate under 25%. 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 year, he or she will be placed on Financial Aid Suspension until the requirements are met. Students on Financial Aid Suspension may not receive financial aid.

#### Tuition and Fees

Tuition and Fees SEMESTER RATES, <u>EFFECTIVE FALL 2007</u> Georgia Residents

#### 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
- Credit cards

The registration process is not complete until payment of fees is completed. Students who have signed an official award letter, (which signifies acceptance of the financial aid) and have registered for classes, are assumed to be students who will attend classes. The fee payment deadline for regular registration is published each term in the registration bulletin.

#### **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

#### International Student Health Insurance

Based on the guidelines provided by the American College Health Association and NAFSA: the Association of International Educators, Southern Polytechnic State University requires 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.

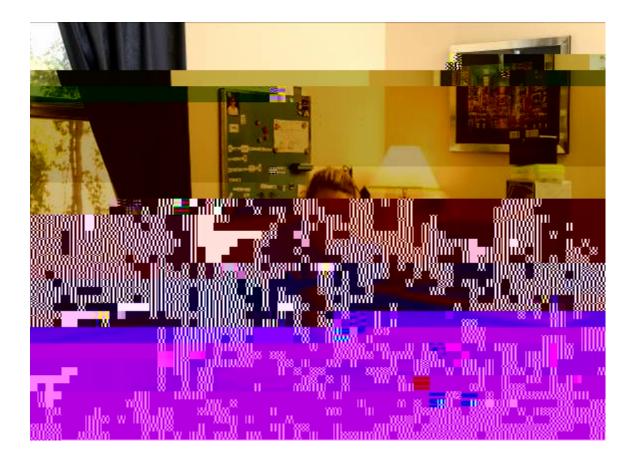
#### Students Sixty-two Years of Age or Older

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 shop fees) when space is available in a course scheduled for resident credit.

To be eligible for participation under this amendment to the Georgia Constitution, such persons:

- Must present a birth certificate or other comparable written documentation of age to the Registrar's Office at the time of registration
- Must meet all University System and Southern Polytechnic State University admission requirements
- Must meet all University System, Southern Polytechnic State University, and legislated degree requirements if they are degree-seeking students

## Student Life



#### Index to Student Life

**Emergency Locator Service** Student Housing Student Health Services The Student Center The Bookstore The Post Office Career and Counseling Center Internship Program Athletics and Recreational Sports **Recreational Facilities** Athletic Facilities The Library The ATTIC Licensure of Professional Engineers University Police Extended University

Student Life

### Student Health Services

The school nurse, who is on duty Monday through Friday in the clinic located in the Recreation and Wellness Center, provides limited outpatient services for minor illnesses. If the nurse cannot provide sufficient medical treatment, she may refer the student to a medical facility located near the campus. Due to the limits on the health services provided by Southern Polytechnic State University, each student is encouraged to have adequate health and accident insurance through either a personal or family insurance policy.

International students are required to have private health insurance protection. Southern Polytechnic State University is not responsible for any medical expenses incurred by international students beyond those that are covered for any student paying the Student Health Fee.

#### The Student Center

Southern Polytechnic State University's Student Center includes:

- Food service and dining areas
- A 467 seat theater for films, concerts, and entertainment productions
- A bookstore
- A post office
- A large recreation room featuring pool and ping-pong tables
- Additional meeting rooms, lounges, and TV/video viewing areas
- A Cyber Café offering 8 internet & e-mail computer stations

Offices for the Dean of Students, Student Activities, Student Center Operations, and Counseling & Career Services are also located in the student center.

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.

#### The 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.

On the last day of registration and the first week of classes, the bookstore is open for extended hours.

#### The Post Office

The Southern Polytechnic State University Post Office is located next to the Bookstore and is open 9:00 a.m. to 5:00 p.m. Monday through Friday. Post Office boxes are available for rental by the term.

### Career and Counseling Center

#### **Counseling Services**

The Career and Counseling Center offers a variety of counseling services to students, including help with personal, academic, and career concerns.

Personal concerns such as anxiety, depression, relationship problems, low self-esteem, low self-confidence, and communication issues can make it very difficult for students to gain the most from the university environment and from their classes. Professional counselors provide **individual sessions for students** seeking confidential assistance with these and other personal issues.

Part of the career development process involves increasing our self-understanding in such areas as our values, life goals, interests, and ski.1470 T08C3mow seco4(u)issm(an)4(u)2(cpl)6onsal asm(1T.tude)-4(nts )TJues.

### Internship Program

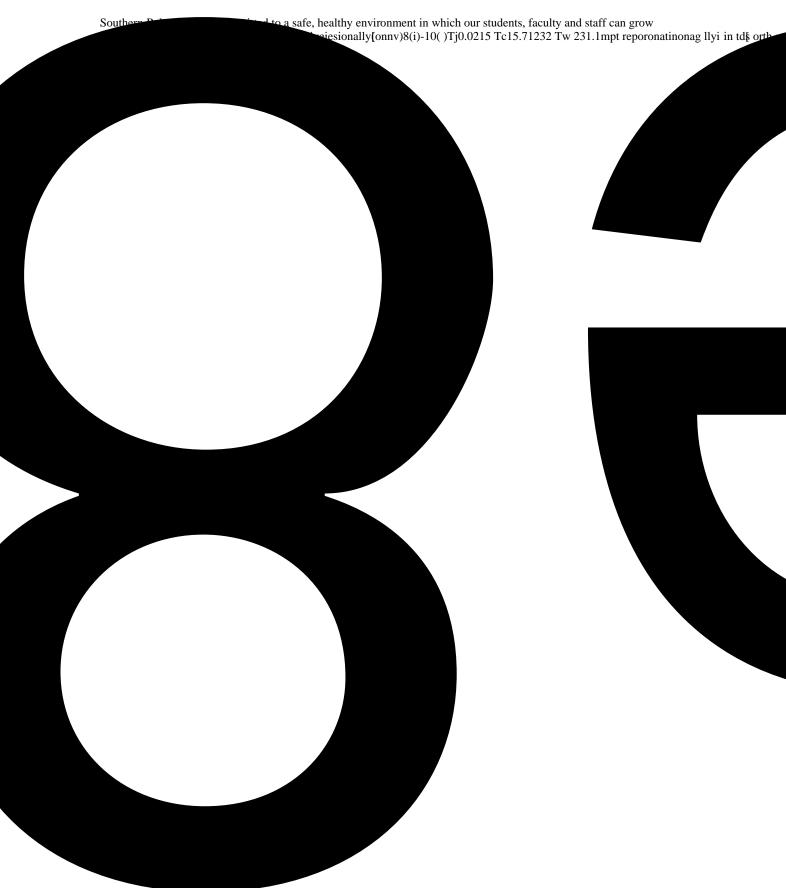
The Southern Polytechnic State University Internship program is a short-term work experience in a professional environment where the emphasis is on learning versus earnings. It is designed

Recreational Facilities

### The ATTIC

The ATTIC (Advising, Tutoring, Testing,

### University Police



#### Extended University

Extended University (EU) is an administrative unit reporting to the Vice President for Academic Affairs. The mission of EU is to provide services to SPSU, the business community and the community at large by extending, enhancing and expanding the traditional teaching and service roles of the un

# Academic Regulations



Index to Academic Regulations <u>General Information</u> <u>Student Responsibility</u> <u>Definitions</u> Academic Standing Appeals Procedure

### General Information

The university's academic rules and regulations are developed and approved by the faculty. The set of processes used to enforce regulations and maintain order are called administrative procedures. In general, each academic rule has an underlying administrative procedure.

For example, the criteria against which a student is judged for graduation is developed and approved by the faculty. The process that is used to examine records and declare a student eligible to graduate is an administrative procedure.

### Student Responsibility

Students are expected to have read this section of the catalog and to be generally familiar with academic rules.

Students are expected to consult this section of the catalog and follow the procedures that are outlined herein when the appropriate time in their academic tenure approaches.

For example, a student who is within a year of graduating should review the graduation section and comply with the time table for petitioning to graduate.

In a pedagogical setting, students are expected to develop the ability to read and follow instructions as part of their educational experience. Academic advisors are available to help students interpret what they've read and to encourage appropriate actions. However, it is in the student's best interest to ask questions when in doubt, and to seek out information from official sources rather than to allow rumor to dictate actions.

#### Definitions

**Full-time** Student – Full-time status is defined for each student level in the table below. Remember that other agencies (such as federal financial aid) may have different definitions of full-time. The definitions below are used when enrollment verifications are produced by SPSU. Note that the definition of full-time changes for summer semester.

#### Fall and Spring Semester

## Catalog and Curriculum Appeals

Matters requiring Petitions to the Faculty include requests for consideration for exceptions to policies published in the catalog or as formal institutional Policies and Procedures. Examples include:

- Receiving a grade of "W" past the withdrawal date
- Extension of the time limit for converting a grade of "I"
- Exceptions to residency requirements

Students should complete a Petition to the Faculty form when they feel the academic policies or procedures have not been applied, or will not apply, fairly or appropriately to them.

Students desiring to petition the faculty for an exception should see the registrar's office for information on how to proceed.

## 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

## *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 2211K (Calculus based Physics I), only one may be counted as hours earned, and only one may be used for graduation purposes.

## Credit by Examination

#### Awarded at the Discretion of the Department Chair

Student evaluation by standardized and/or program examinations may be used at the discretion of the Department Chair as a basis for awarding credit for some courses. These evaluations are available only to currently enrolled students. A fee will be charged before the evaluation.

In order to receive credit by examination:

- Check with the appropriate Department Chair about the applicability of credit by examination to the course(s) under consideration
- If credit by exam is appropriate, obtain a Request for Credit by Examination form from the Office of the Registrar,4(r)Sp1(ete3(e)i)3(S)3(r)-2(rdp)3(ry-9(D)3(h)-2(e)recq3(ud-2(es)3(tie3(e)eewa3(t)3(rD)3(h)-2(e)recq3(tie3(e)eewa3(t)3(tie3(e)eewa3(t)3(tie3(e)eewa3(t)3(tie3(e)eewa3(tie3(e)

## Cross Registration

Students may not attend Southern Polytechnic State University and another institution concurrently for transfer purposes, except under the cross registration program.

Southern Polytechnic State University participates in the cross registration program established among the member institutions of the Atlanta Regional Consortium for Higher Education (ARCHE). The purpose of cross registration is to provide opportunities for enriched educational programs and experiences by permitting students at any ARCHE institution to take courses at any other member institution. A student may cross register only for:

- (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.

### Cumulative Grade Point Average

#### **Computing the GPA**

The cumulative grade point average determines the student's scholastic standing. The cumulative grade point average is computed by dividing the total quality points earned by the total number of credit hours for which the student has received a final grade of "A", "B", "C", "D", "F", or "WF".

Quality Points are assigned as follows:

Grade	Quality Points
А	Four quality points are assigned
В	Three quality points are assigned
С	Two quality points are assigned
D	One quality point is assigned
F	Zero quality points are assigned
WF	Zero quality points are assigned

Graduate student grade point averages, for the purpose of remaining in good standing or graduating from a program are computed using only those courses in the major department and those courses approved by the program faculty

#### **Courses Taken at Other Institutions**

Only courses taken at Southern Polytechnic State University, or courses completed under the crossregistration program, are computed in the cumulative grade point average. Credits earned at other institutions, credit by examination, credits for which quality points are not assigned, institutional credit courses, and courses otherwise excluded by institutional policy are not considered when calculating the cumulative grade point average for graduation purposes.

## Disruptive Behavior and Academic Dishonesty

A faculty member reserves the right to remove any student from his or her course if the student's behavior is of a disruptive nature or if there is evidence of academic dishonesty. In instances of disruptive behavior and/or academic dishonesty, the faculty member will discuss the circumstances

## Grade Appeals

Grade appeals fall into a special category. Grades are assigned by professors based on an evaluation of a student's academic performance. A student who wishes to appeal a grade must present clear evidence that a grade was assigned by some criteria other than an evaluation of academic performance. Appeals that proceed beyond the professor who issued the grade, must be in writing. Check with the Registrar's Office for the procedure to follow.

## Grade Changes

Grades that have been assigned to a student by an instructor may be changed no later than the end of the third consecutive term following the term in which the grade was awarded. The instructor must initiate grade changes. Grades included in this provision are "A", "B", "C", "D", "S", "U", and "F".

## Grade Reports

Grades are reported to students by way of the student information system. Grade reports are not mailed.

Students who desire a written grade report may obtain one by written request to the registrar's office.

## Grading System

#### **Regular Grades**

The following letter grades are used to specify the level of performance in academic courses and are computed into the semester and cumulative grade point averages:

Grade	Definition	Comments
А	Excellent	
В	Good	
С	Satisfactory	Passing, but often must be repeated if needed for graduation
F	Failure	Course must be repeated if required for graduation
WF	Late Withdrawal	A grade of "WF" in a course is assigned upon official withdrawal after the midpoint of the term, and is counted in the student's scholastic average as a failing grade.

#### Lab Grades

For subjects including class and laboratory work, both portions are considered essential and the grades on each will be combined at the end of the semester and reported as one. Failure in either class or lab may result in failure of the entire course.

#### **Other Grades**

The following symbols are used in the cases indicated but are not included in the calculation of semester or cumulative grade point averages:

Grade

## Graduation Requirements

### **Catalog for Graduation Evaluation**

- A student may elect to be evaluated for graduation from any catalog in effect during the time he or she has been enrolled, provided that enrollment has been continuous or that the student has not changed majors.
- Students readmitted or reinstated will be evaluated for graduation from the catalog in effect at the time of readmission or reinstatement, or any catalog in effect during subsequent periods of continuous enrollment.
- Students changing majors will be evaluated for graduation from the catalog in effect at the time of the change, or any catalog in effect during subsequent periods of continuous enrollment.
- Each student is responsible for determining the appropriate catalog to be used for academic advisement and for evaluation of graduation requlos. Catalog selection applies only to the course requirements of that catalog; all other academic procedures and graduation

### 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.

## 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

within a degree program. Transfer credit would be awarded for free elective hours and a course substitution petition would be initiated an

## Transcript Request

Students must request transcripts in writing from the Registrar's Office. All transcripts will include the entire academic record; no partial or incomplete record will be issued as a transcript. Though transcripts are normally issued promptly, requests should be made several business days before the document is required, particularly at the beginning or end of a semester. A transcript will not be issued when a student's record shows financial indebtedness to the institution. Transcripts may be ordered in person in the Registrar's Office, or by faxing or mailing a signed request.

## 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 the midpoint of the term may do so by:

- Completing a Request to Withdraw at the Registrar's Office
- Or withdrawing through the Web-based registration system
- Or by sending a signed fax or letter to the registrar's office

After doing so, the student will be assigned a grade of "W" for those course(s). While a grade of "W" does not count in the student's cumulative grade point average, it does count in attempted hours for financial aid purposes and could affect a student's eligibility for aid if there are repeated withdrawals.

**Refunds associated with withdrawals are made only in the case where a student withdraws completely from all classes for a term.** Refunds are based on the date of the withdrawal and are pro-rated. By University System of Georgia rule, refunds are not initiated for withdrawing from a portion of regisest to ((i)- Tw 13.[s )Tjs.

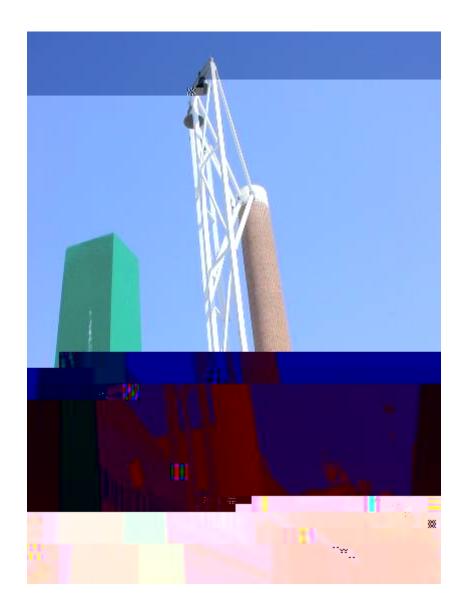
## Withdrawals after the Deadline

A request for a grade of "W" (past the deadline date) is properly made on a Petition to the Faculty form, available in the Registrar's Office.

- The petitions must be completed and signed by the student's instructor(s), instructors' Department Chair(s), and major Department Chair.
- The petition must be substantiated by evidence sufficient to support the extenuating circumstances claimed.

No student will be allowed to withdraw from a course after the final class day of the term.

Students withdrawing from **all** classes during the refund period are entitled to a refund of a portion of the fees paid for the course(s). Students should check the Registration Bulletin to determine the date and amount of refund (if any) available. **No refunds are made for partial withdrawal.** 



## Graduate Degree Programs



## **Business Administration**

Offering the Master of Business Administration Degree



## Master of Business Administration (MBA) Program

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.

International students should refer to the <u>International Students</u> sub-section for additional admission requirements.

#### **Admission Criteria**

Applicants for admission to the MBA program must meet the following criteria:

Regular admission index: GMAT + (200 \* undergraduate GPA) = 900

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 the advanced degree has been completed at an accredited university in the United States.

#### **Admission Status**

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

#### **Degree Requirements for the Master of Business Administration Program**

The requirement to complete the degree is **36** semester hours at the 6000 level. Students will complete eight required courses and four electives.

Required MBA Degree Curriculum		Hours	
MGNT 6000	Managerial Accounting	3	;
MGNT 6002		3	i
	Corporate Finance		
MGNT 6005	Managerial Economics	3	;
MGNT 6004	Service & Operations Management	3	j
MGNT 6008	Marketing Management	3	j
MGNT 6010	Management of Information Technology	3	j.
MGNT 6025	Managing Professionals	3	ì
MGNT 6090	Strategic Management	3	ì

Required Courses	24 hours
Elective Courses	<u>12 hours</u>

TOTAL HOURS

36

A grade of "C" or better is required for each course and an overall "B" average (3.0), including in the 5000-level transition courses, is required. Students must maintain a 3.0 average to remain in good standing.

#### **Custom Concentration**

In consultation with their advisor, MBA students may design a custom concentration consisting of four elective courses in business or a related area. Concentrations might be in such areas as marketing, operations, management, or management information systems.

#### Transition Courses

The following transition courses which cover the Common Professional Core may be required for students who have not taken business courses. These courses may not be used to satisfy degree requirements.

MGNT 5000	Survey of Management	1.5
MGNT 5002	Survey of Financial Accounting	1.5
MGNT 5004	Survey of Managerial Accounting	1.5
MGNT 5006	Survey of Corporate Finance	1.5
MGNT 5008	Survey of Marketing	1.5
MGNT 5010	Survey of Business Law	1.5
MGNT 5012	Survey of Economics	1.5
MGNT 5014	Survey of Statistics	1.5
MGNT 5873	Strategic Environment of Business	3
	(Marketing Principles, Legal Environment, Economics)	

Note: MGNT 5873 will only be offered during Fall 2007. Beginning in Spring 2008, it will be replaced by MGNT 5008, MGNT 5010, and MGNT 5012.

#### Transition Courses (Common Professional Core)

#### MGNT 5000

Survey of Management (formerly MGNT 5773)

#### 1.5-0-1.5 Broad anal

Broad analysis of the many facets of management including the fundamentals of management and organization, managing people and production, planning and control, strategy, global business, ethics, and management careers.

#### MGNT 5002

Survey of Financial Accounting (formerly MGNT 5653) 1.5-0-1.5

#### 1.5-0-1.5

A study of the underlying theory and application of financial accounting concepts.

#### MGNT 5004

Survey of Managerial Accounting

Prerequisite: MGNT 5002 or an undergraduate financial accounting course 1.5-0-1.5

A study of the underlying theory and application of managerial accounting concepts.

#### MGNT 5006

Survey of Corporate Finance(formerly MGNT 5653)

#### 1.5-0-1.5

This course provides an introduction to financial analysis, budgeting, sources and uses of funds, management of assets, short and long run financial strategy and interpretation of financial data as these relate to the process of business decision-making.

#### MGNT 5008

Survey of Marketing (formerly MGNT 5873)

#### 1.5-0-1.5

A study of the theory and principles of marketing. Emphasis will be placed upon the concept of customer satisfaction. Topics to be covered include total quality management (TQM), innovation, product distribution, cooperative associations, advertising and salesmanship, and the development of brands and trademarks.

#### MGNT 5010

Survey of Business Law (formerly MGNT 5873)

#### 1.5-0-1.5

An introduction to the legal system as it applies to commercial transactions and a study of the law of contracts and torts. Ethical issues in business and the regulatory environment will also be addressed.

#### MGNT 5012

Survey of Economics (formerly MGNT 5873)

#### 1.5-0-1.5

Provides and introduction to current issues in American society buttressed by reference to economic theories that assist in explaining and understanding macro and micro economic policy.

#### MGNT 5014

Survey of Statistics (formerly MGNT 5773) 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

#### hypotheses testing.

#### Required MBA Courses

#### MGNT 6000

#### Managerial Accounting

Prerequisite: MGNT 5002 and MGNT 5004, or undergraduate financial accounting and managerial accounting courses

3-0-3

This course deals with the procedures and concepts of computing and allocating costs for reporting, pricing, planning and control, and internal decisions making. It will focus mainly on the principles and techniques dealing with

merchandise and manufacturing costing, job order and process costing, standard and conventional costing, and make or buy decision-making.

#### MGNT 6002

<u>Corporate Finance</u> Prerequisite: MGNT 5006 or undergraduate accounting and finance courses

3-0-3

This course includes a review of capital budgeting and ratio analysis, making further extensions in the areas of probability-dependent project analysis, co-varying risks and optimal capital structure.

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 6001

Management Communications

3-0-3

Effective communication skills are essential for managers in high technology environments. This course will emphasize skill building in writing, oral presentations, interpersonal communication, and research.

#### MGNT 6015

Technology and Innovation Management

Prerequisite: MGNT 5000 or an undergraduate course in management principles

3-0-3

This course emphasizes innovation and creativity, and evaluation and analysis of new technology. The objective is to learn how to evaluate new technologies (either hard or soft) in order to be able to determine whether or not to make significant investments in them.

#### MGNT 6020

<u>R&D Management</u> Prerequisite: MGNT 6015 3-0-3

A systematic examination of product innovations ranging from planning and research to development and commercialization or implementation of new product technology. Topics include pertinent business policy and strategic management issues, the process of innovation, concepts and interconnections between product and process creativity management, technology transfer, and relevant marketing issues. Students will analyze cases and complete a project.

#### MGNT 6022

#### Sales Management

Prerequisite: MGNT 5008 or an undergraduate course in marketing principles 3-0-3

Sales management will highlight the differences experienced by a sales manager from those of a manager geographically located with his or her subordinates. The "arms length" supervision requirements of sales management will better equip the student to manage and motivate any group in a business environment. Emphasis is also placed on hiring skills needed to maintain and expand a sales force.

#### MGNT 6024

Business-to-Business Marketing

Prerequisite: MGNT 5008 or an undergraduate course in marketing principles

3-0-3

This course focuses on the buying patterns practiced in the industrial marketplace. The course builds a foundation for the student to better understand the underlying conditions that govern an industrial marketing transaction beyond the immediate product or service that is being sought. The role of technology and its importance in the development of industrial products is explored along with the critical role of services to the products with which they are connected.

#### MGNT 6028

Marketing Research

Prerequisite: MGNT 5008 and MGNT 5014 or an undergraduate course in marketing principles and an undergraduate course in statistics

3-0-3

Marketing Research enables the student to conduct an opinion research project to better understand the underpinnings of a successful marketplace query. "Hand-on" experience in questionnaire design, data gathering and analysis. Student teams prepare both a written and oral presentation of the results to experience the relationship between researcher and management in the gathering and communication of research information. The statistics prerequisite enables the students to effectively utilize SPSS for Windows to manipulate the gathered data and use it to support meaningful decisions.

MGNT 6032 System Analysis and Design Prerequisite: MGNT 6010 3-0-3 This course provides an understanding of the system development and modification process. It enables students to evaluate and choose a system development methodology. It emphasizes the factors for effective communication and integration with users and user systems. It encourages interpersonal skill development with clients, users, team members, and others associated with development, operation and maintenance of the system. Topics will include

#### MGNT 6065

Issues in International Management

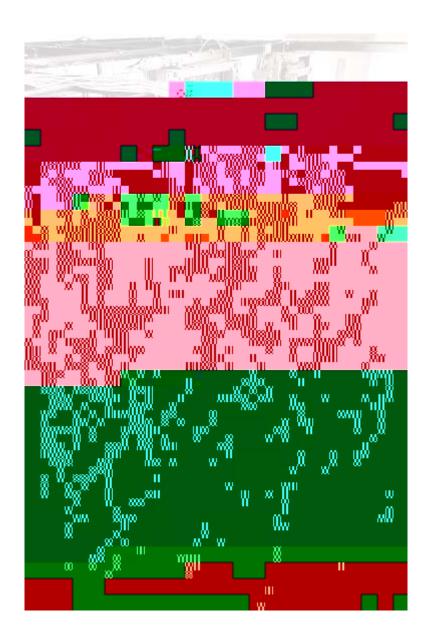
Prerequisites: MGNT 5000 or undergraduate management principles, MGNT 5006 or undergraduate finance, MGNT 5008 or undergraduate marketing) and MGNT 6005

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

# Computer Science

## Offering the Master of Science Degree



The Graduate Transition Certificate in Computer Science prepares individuals for Masters level computer science programs or entry-level positions in the industry. The program is designed for those students holding an accredited bachelor's degree in an area unrelated to computer science who have an interest in computer science.

The focus is on providing broad-based knowledge and skills. The required courses are:

- CS 5123 Advanced Programming & Data Structures 3 hours
- CS 5153 Database Systems 3 hours
- CS 5183 Object-Oriented Programming 3 hours
- CS 5223 Computer Architecture 3 hours
- CS 5243 Operating Systems 3 hours

CS 5423 Mathematical Structures for Computer Science 3 hours

Prerequisites include:

• Some knowledge of programming (equivalent to CSE 1301 – Programming & Problem Solving I; may be taken in addition to required courses if needed)

• Calculus

Applicants with satisfactory preparation in some transition topics may be allowed to substitute up to two approved 6000-level courses for the same number of required courses.

#### **Graduate Certificate in Computer Science**

The Graduate Certificate in Computer Science is intended for those with a bachelor's degree in Computer Science or a closely related field or with a bachelor's degree in another field with professional competence or knowledge equivalent to the Graduate Transition Certificate in Computer Science. The GRE is not required.

A Graduate Certificate in Computer Science student is required to take 6 courses from those offered in the MSCS, with some constraints. More specifically, the student needs to take three MSCS core (required) courses. The other three courses can be either from the core, or those 6000-level electives available to MSCS students. There is no independent study or thesis option. From the 6 courses required for the certificate, at least 4 must have the CS prefix, at most 2 can have the SWE prefix, and at most 1 can have the IT prefix.

### Computer Science Graduate Courses

CS 5123 Advanced Programming and Data Structures Prerequisite: CS 1301 or equivalent course 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: CS 5123 or CS 1302 or IT 5113 3-0-3

Transition course. This course provides an overview of various database models including relational, objectoriented, 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 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 5223 Computer Architecture Prerequisite: CS 1301 or equivalent course 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: CS 5123/3424 and CS 5223/3223 3-0-3 Transition Course: Topics from the principles of

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 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 the use 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 efficient storage and effective retrieval of large amounts of unstructured text information, including an overview of conventional IR techniques and newer perspectives.

CS 6283 Real-Time Systems Prerequisite: CS 5243/3243 3-0-3

The software development life cycle as it applies to real-time systems. Labs involve the use of a real-time operating system and an associated development environment. Related topics such as concurrent task synchronization and communication, sharing of resources, schedulability, reliability, fault tolerance, and system performance are discussed. Project included.

#### CS 6293

Information Security: Implementation and Application Prerequisites: CS 5123 and CS 5423 3-0-3 This course covers the fundamentals of computing securi

This course covers the fundamentals of computing security, access control technology, cryptographic algorithms, implementations, tools and their applications in communications and computing systems security. Topics include public key infrastructure, operating system security, database security, network security, web security, firewalls, security architecture and models, and ethical and legal issues in information security.

#### CS 6323

Human Factors 3-0-3

The psychological, social, and technological aspects of interaction between humans and computers. Includes usability engineering, cognitive and perceptual issues, human information processing, user-centered design approaches, and development techniques for producing appropriate systems. Major projes

CS 6453 Simulation and Modeling Prerequisites: CS 5123/3424, Matrix Algebra, and Probability and Statistics 3-0-3 The application of various modeling techniques to the understanding of computer system performance.

Includes analytic modeling, queuing theory, continuous and discrete simulation methods, and the use of some simulation software tools to implement a major project.

CS 6523 Survey of Artificial Intelligence Prerequisite: CS 5123/3424 and CS 5423 3-0-3 A survey of the major issues in AL. Knowledge representation, reasoning, and learning with AL programming techniques. Current topics are also included.

CS 6563

Digital Image Processing and Analysis Prerequisites: CS 5123 and CS 5423 3-0-3

Theory and application of digital image processing. Topics include sensing, sampling and quantization, image enhancement and restoration, image transforms, geometrical image modifications, edge detection, image segmentation and classification, image coding, feature extraction, image representation, morphological image processing, and parallel image processing. Applications include satellite images and biomedical images.

#### CS 6593

Selected Topics in Artificial Intelligence Prerequisites: As determined by the Instructor and Department Chair 3-0-3 In-depth study of specific AI topics. Possible topics include, but are not limited to, Expert Systems, Neural Networks, Genetic Algorithms, Machine Learning, Fuzzy Logic, etc.

CS 6703 Independent Study Prerequisites: Approval of course director 3-0-3 Independent study/project under the direction of a graduate CS faculty member.

CS 6901-6903 Special Topics Prerequisite: As determined by the Instructor and Department Chair 1 to 3 hours Special topics selected by the Department Chair. Offered on a demand basis. A student may repeat this course with special permission.

CS 7803 Masters Thesis Prerequisite: Consent of the Department Chair and the Thesis Advisor 3-0-3 The thesis is designed for students wanting a research focus to their degree. The student works independently under the supervision of a designated CS faculty member on a thesis of substance in computer science. The student will generate a formal written thesis and give a final defense of the thesis. This course may be repeated, but only 6 hours may be applied toward the degree.

## Construction Management

*Offering: The Bachelor of Science in Construction Management* 

## **Masters Program in Construction Management**

The Master of Science program in Construction Management is designed to offer education in construction and project management to:

- Practicing U.S. and international professionals educated in related disciplines such as engineering, engineering technology, business or architecture, who desire more knowledge in the construction process
- Professionals educated in construction or construction management and who wish to pursue the subject in greater depth
- Persons holding a baccalaureate or higher degree who are actively pursuing a construction industry career but lack education in construction and project management.

Program objectives are:

- To offer a degree oriented toward the practice of construction
- To deliver this graduate education in an evening and weekend setting
- To provide a program which will enhance graduates' management skills and advancement opportunities

#### Admissions

Admission to the Master of Science program with a major in Construction Management is open to persons holding the bachelor or higher degree from a regionally accredited college or university in:

- Engineering
- Engineering Technology
- Construction Management
- Construction Technology
- Architecture
- Management

In many cases, other degrees may be acceptable.

Preference in admission will be given to applicants having professional experience in a construction 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

#### **Degree Requirements for the Master of Science program in Construction Management**

CNST 6000	Information Methods	4 hours
CNST 6100	Construction Law: Contracts and Claims	4 hours
CNST 6200	Strategic Bidding and Estimating	4 hours
CNST 6600	Construction Risk Analysis and Control	4 hours
Construction Degree Option (select one of the options listed below)		
TOTAL FOR THE PROGRAM		

#### **Elective Option**

• Select five construction elective courses, up to two of which may be **approved** courses from another graduate department.

#### **Thesis Option**

- Select two 4-hour construction elective courses at the 6000 level
- 12 hours of Masters thesis work:
  - CNST 7801 CNST 7802 CNST 7803

#### **Project Option**

- Select five 4-hour construction elective courses at the 6000 level
- Up to 3 of these courses may be replaced by project courses, CNST 7701-7703

A grade of "C" or better is required for each course applied to the degree program

A cumulative 3.0 grade point average is required in all courses that apply to the degree.

CNST 6200

#### CNST 6510 Marketing of Construction Services 4-0-4

An examination of how construction services are marketed in the various sectors of the construction industry. The relevant characteristics of construction organizations and target clients will be explored with various scenarios structured to highlight critical parameters of search and match. The potential contributions of the media and conventional planning/analysis techniques will be considered.

#### **CNST 6520**

International Construction 4-0-4

An introduction to the construction industry in the international arena. Projects and processes will be studied. Issues of contract law, industry regulation, currency exchange, payment guarantees and risk management will be examined and related to respective countries of concern. Operations under different cultural norms will be projected in realistic scenarios.

#### CNST 6530

Construction Markets 4-0-4

A study of the dominant factors at work in different construction markets. Geographic, technological, economic, political, organizational, and social influences on construction markets are included. Market groupings by type of construction are identified and parad3( an Pr)8(oject(s)-1-)7(Pr)8(oject(s)-1-)Td[(grexTw plh vario)7(u.-23.838 -g CNST 7701-7704 Masters Project Prerequisites: CNST 6000 and consent of the department head 4 hours This course is designed for the students who want to focus their

This course is designed for the students who want to focus their course of study on a particular aspect of construction. The student works independently under the supervision of the course professor on a project or an inquiry that is significant in the construction in

# Engineering Technology--Electrical

Offering the Master of Science Degree



# Masters Program in Engineering Technology, Electrical Concentration

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
- 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 above and have been judged acceptable by the graduate programs committee.

Post-Baccalaureate status is available to students who do not meet the admission criteria bur who are NOT seeking a degree.

Provisional students are graduate students who have not met all the criteria shown above. They are limited to designated courses, either graduate or undergraduate, during which they will be evaluated to determine their likelihood of success. Provisional students are not guaranteed full graduate status.

#### **International Students**

International applicants who do not possess a bachelor's degree from a college within the United States must submit the following additional information to the Admissions Office:

- An official transcript (translated into English) of college-level education,
- Official Course-by Course Equivalency of transcripts by an approved credentialing agency,
- Score on the Test of English as a Foreign Language (TOEFL),
- An affidavit indicating financial security.

#### **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 prBnies to the

# **Degree Requirements for the Master of Science program in Engineering Technology** – Electrical Concentration

## **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).
- Up to two courses and a maximum of 8 credit hours can be free electives. These courses must be at graduate level and may be from any department, with the exception that one 4000-level mathematics course can be used as a free elective. Transfer credit for a 4000-level mathematics free elective is not accepted. Advisor consent is required for your selection of free electives.

#### **Research-Based Program**

Select a minimum of 34 credit hours of courses including:

- At least 26 credit hours must be graduate-level ECET courses.
- One of the ECET courses must be ECET 7504: Research (4 credit hours).
- Up to two courses and a maximum of 8 credit hours can be free electives. These courses must be at graduate level and may be from any department, with the exception that one 4000-level mathematics course can be used as a free elective. Transfer credit for a 4000-level mathematics free elective is not accepted. Advisor consent is required for your selection of free electives.

A grade of "C" or better is required for each course within the student's graduate program and it is required that each student maintain a cumulative grade point average of 3.00 or higher in order to graduate.

# 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.

#### ECET 6002

Programmable Devices

Prerequisites: Digital Theory and Applications, C and any AMS language equivalent to ECET 2210, ECET 4710

3-3-4

A study of the programming and applications of programmable devices for rapid time-to-market product development. Devices range from PLDs through MicroControllers through Programmable Analog devices. Practical experience will result from completing projects that develop systems using several of the devices.

#### ECET 6003

Advanced Test Engineering Prerequisite: Fundamental Test Engineering equivalent to ECET 3600 3-3-4 An in-depth study of test engineer

#### ECET 6102 Mechatronics 3-3-4

This course is about integrating electronics, mechanical engineering and computer science. It is essential for engineers or engineering technologists who have a need to work across disciplinary boundaries. The main topics covered in the course will be mechatronic system design which involves: 1) Modeling, analysis and control of dynamic physical systems; 2) Control sensors and actuators with special emphasis on brushless, stepper, linear and servo-motors; 3) Electronics for mechatronics with special emphasis on special purpose digital and analog integrated devices; and 4) Analog, digital and hybrid mechatronic systems such as harddisk drives and robots.

#### ECET 6201

Advanced Digital Design

## 3-3-4

Prerequisites: Digital Theory and Application, C and Assembly Language equivalent to ECET 2210, ECET 4710 A detailed study of modern digital design principles and techniques. Topics will be investigated utilizing advanced programmable logic devices such as CPLD's, EPLD's, and FPGA's. Device development using both VHDL and schematic capture tools will be thoroughly explored. Practical experience and additional insight will be gained in the design and development of practical solutions to modern problems.

#### ECET 6202

Embedded PC Systems 3-3-4 This course will focus on Emphasis will be on sing

This course will focus on the latest developments in the field of embedded PCs (80186 & 80386ex processors). Emphasis will be on single-board systems used in the control environment. Customizing the ROM BIOS and developing ROM code will be studied. C, assembly language and real-time executive programming tools will be used.

#### **ECET 6203**

Topics in Machine Intelligence 3-3-4

The principles, theory and current applications of fuzzy-logic and neural-networks are covered in this course. Discussions will 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.

#### ECET 6204

Networked Embedded PCs Prerequisite: ECET 6202

#### 3-3-4

A course covering the basics of embedded PCs and their applications in networks and wireless systems. Covers the 80x86 architecture and C++ programming, then covers network programming using TCP/IP. Emphasizes connecting embedded PCs via Ethernet, wireless systems and the Internet. Also, Win CE development will be introduced.

#### ECET 6300

Telecommunications Networking

#### 3-0-3

A study of the fundamentals of telecommunications systems, emphasizing the management viewpoint. Course covers voice and data networks, and the regulations and standards affecting them. Laboratory demonstrations will illustrate key concepts. Course cannot be used as credit for ECET majors.

ECET 6301 Telecommunications Prerequisite: Communications background equivalent to ECET 3400, ECET 4820 3-3-4 The study of technologies and services deployed in today's public and private wide-area networks. Circuit-

switched and packet-switched networks for voice and data will be studied. Topics include ISDN, X.25, SONET/SDH, ATM, and more. Students gain practical experience through detailed studies of actual WAN solutions used by various organizations.

ECET 6302 Digital Communication Networks Prerequisite: Communications background equivalent to ECET 3400, ECET 4820 3-3-4 ECET 6704 Project Proposal

Prerequisites: At least 24 hours completed toward degree and permission of project advisor 1-8-4

Guided by his/her Project Committee, the student will prepare a Proposal for his/her Masters Project. This proposal must conform to the published guidelines, be approved by the Project Committee and filed with the ECET office. In addition, the student will make substantial progress toward meeting the goals stated in the proposal and file an approved Progress Report. The filing of the Project-Committee approved Proposal and Progress Report will constitute completion of this course.

ECET 6901-6905 Special Topics 1 to 5 hours

The topic election and credit for this course will be by written agreement among the student, the instructor and the department head.

#### ECET 7504

Research

Prerequisites: At least 28 hours completed toward degree and permission of instructor 2-6-4

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

Offering the Master of SciTf Ce Dr of gree

# Masters Program in Information Design and Communication

The Masters 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.

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Graduate students may take up to nine hours outside of the program with prior approval from both the Graduate Coordinator and the Department Chair.

#### NOTE: A grade of "B" or better is required in all courses that are applied to graduation (with the exception of the internship and thesis, which require an "S"). Graduate Certificates in Technical Communication

#### **Required Technology and Software**

Requirement:	Required for:
High-speed internet connection (no dial-up)	All courses in the IDC Program
WebCT-compatible versions of a web browser with Sun Java run-time environment installed. Please visit http://www.webct.com/tuneup to determine if your browser needs to be upgraded to work with WebCT.	All courses in the IDC Program
Digital image editing software (Adobe Photoshop, GIMP, etc.)	All courses in the IDC Program
Microsoft Office (required) and EndNote (recommended)	All courses in the IDC Program
Software for creating PDF documents (Adobe Acrobat recommended)	All courses in the IDC Program
Access to a flatbed scanner	All courses in the IDC Program
Macromedia DreamWeaver 8	Website Design
Microsoft Project	Communications Project Management
Adobe Photoshop CS2 (or higher)	Applied Graphics I, Info Graphics
Adobe Illustrator CS2 (or higher)	Applied Graphics II, Info Graphics

#### **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. It also helps current technical communicators update and expand their knowledge and skills, enabling them to move ahead in their profession.

Admissions criteria for the basic online certificate is the same as for the Masters degree program, except that certificate applicants are not required to take the GRE. Certificate students take online versions of the following three Masters courses that are taught separately from the courses offered to Masters students:

IDC 6001, Technical Writing & Editing IDC 6002, Information Design IDC 6030, Foundations of Graphics

Basic certificate students then take 3 other courses as offered online in any given semester(s).

Students completing the basic certificate program may apply for admission to the Masters program without taking the GRE. They will need to submit a portfolio of work completed in the certificate program, which will be reviewed by the admissions committee. Completing the basic certificate program does not guarantee admission to the Masters program. Graduates of the basic certificate program who are accepted into the Masters program may count the six courses they have completed (18 credits) toward the Masters degree.

Students in the basic certificate program who decide to apply for admission to the graduate program before completing the basic certificate will need to take the GRE. If they are admitted to the Masters program, a maximum of 3 basic certificate courses will be counted toward the Masters degree.

After admission to the Masters degree program, students may take one additional certificate online from among the following to complete requirements for the Masters degree:

- Certificate in Content Development
- Certificate in Visual Communication and Graphics
- Certificate in Instructional Design
- Certificate in Communications Management

For questions about the certificate program, contact the English, Technical Communication, and Media Arts Department. The number is 678-915-7202; or write to <u>TCOM @spsu.edu</u>. Visit the web site at <u>www.spsu.edu/htc</u> for more information.

# **Information Design and Communication Graduate Courses**

IDC 6001

Technical Writing and Editing

3-0-3

Overview of technical writing and editing. Emphasis on drafting and editing many documents that reflect the variety of writing done in the field of technical communication. Both experienced and inexperienced writers will benefit from this course, which must be taken the first semester of enrollment in the Masters program.

#### 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.

#### IDC 6004

Research Methods Prerequisite or Co-Requisites: IDC 6001, IDC 6030 3-0-3

Introduction to how to make practical use of research to inform information design and communication decisions. Students learn to create and to be critical consumers of research reports by getting hands-on exposure to quantitative and qualitative methods, including interviewing, survey design, and analysis. The course teaches how to use standard software products such as MS Word and MS Excel to perform basic qualitative and quantitative analyses. Although students learn important statistical concepts, formulas and calculations are de-emphasized.

#### IDC 6005

Visual Thinking Prerequisite or Co-Requisites: IDC 6001, IDC 6030 3-0-3

Course examines principles of effective visual communication. Students analyze visual artifacts, select visual representations for key concepts, and identify appropriate visual forms for different information structures.

IDC 6010 Writing Across Media Prerequisite: IDC 6001; Prerequisite or Co-Requisites: IDC 6030 3-0-3 Course examines rhetorical, structural, and stylistic requirements of various communications media. Topics include writing for the Web, narrative design, and document engineering.

IDC 6030 Foundations of Graphics Prerequisite: IDC 6001 3-0-3

An introduction to the fundamental elements and principles of graphic design and application of these concepts to page design and layout. Study of elementary color theory. Introduction to production techniques and current software applications. Students who took TCOM 4030 Foundations of Graphics as undergraduates must take IDC 6040 Applied Graphics as their required graphics course instead of IDC 6030. Students who took TCOM 4030 Foundations of Graphics as undergraduates may not count IDC 6030 for credit toward their graduate degree.

IDC 6035 Information Graphics Prerequisite: IDC 6001 and IDC 6030; Co-requisite: IDC 6002 3-0-3 Process and product of visual representation and display of information utilizing advanced techniques to produce infographics. Must have working knowledge of PhotoShop and Illustrator. IDC 6040 Applied Graphics Prerequisite: IDC 6001 and IDC 6030; Co- or Pre-Requisite: IDC 6002 3-0-3

#### IDC 6110

Communications Project Management Prerequisite: IDC 6001 and IDC 6030; Co- or Pre-Requisite: IDC 6002 3-0-3

Course introduces and applies the literature, tools, and techniques of professional project management. Includes major online course elements. Students will choose a project in technical communication and apply the major phases of project management: definition, planning, execution, and closing. Topics of emphasis include communication skills, project management software tools, and project team dynamics.

IDC 6120 Usability Testing Prerequisite: IDC 6001 and IDC 6030; Co- or Pre-Requisite: IDC 6002 3-0-3 Study of the relevant research and practical application of usability testing as part of product development. Includes strategies for planning, conducting, and analyzing a test. Teams will perform tests and report

#### IDC 6130

Online Documentation

results from an actual test in a usability lab.

Prerequisite: IDC 6001 and IDC 6030; Co- or Pre-Requisite: IDC 6002 3-0-3

Study of the design and development of effective online Help systems and web-based documentation. Presents principles of usable online information design, task-based user analysis, and advanced tools and technologies

participatory course is a natural complement to graduate courses in instructional design and instructional technology.

IDC 6150

Marketing Communication

Prerequisite: IDC 6001 and IDC 6030; Co- or Pre-Requisite: IDC 6002 3-0-3

Course examines those aspects of technical communication that include advertising, brochures, catalogs, press releases, and other means of marketing in both print and other media. Includes analysis of web pages and the uses of the World Wide Web for marketing purposes.

#### IDC-6155

Online Instructional Development

3-0-3

Course explores online instructional development and deployment in higher education and corporate arenas. addressing issues of pedagogy, current and emerging technologies, marketing, design, and evaluation. Students will create, deploy and evaluate online instructional modules in a variety of online technologies. Prerequisite IDC 6140 Instructional Systems Design.

#### IDC 6160

Rhetoric: History, Theory, and Practice

Prerequisite: IDC 6001 and IDC 6030; Co- or Pre-Requisite: IDC 6002 3-0-3

Course introduces rhetoric as the relationship between thought and expression. Explores connections between rhetoric and writing, between a public act and a personal thinking process, by examining classical and contemporary accounts of rhetorical history and theory. Students apply theory to their own writing as they explore the relationship between writers, readers, and subjects and the range of options available to communicators. This course is double-listed for both undergraduate and graduate students. Graduate students will be required to complete additional work that emphasizes theory and research over application. Thus they must demonstrate a higher level of learning than undergraduates.

IDC 6165

Writing Style in the Workplace

Prerequisite: IDC 6001 and IDC 6030; Co- or Pre-Requisite: IDC 6002 3-0-3

This course examines writing style in the workplace. Topics include grammar, paragraphs, sentence structure, diction, spelling, and revision, as well as some larger issues surrounding style (persuasion, discourse communities, appropriateness, tone, bias, ethos)

#### IDC 7503 Independent Study Prerequisite: IDC 6001 and IDC 6030; Co- or Pre-Requisite: IDC 6002 3-0-3

A directed study for a graduate student who wishes to pursue a special interest in technical and professional communication not covered in the curriculum. The student submits to the IDC graduate program coordinator a proposal that clearly defines the course of study and the benefits to be obtained. The proposal must be submitted at least one semester prior to registration for independent study hours. Once the proposal is approved, the student is assigned a faculty advisor and registers for 3 credit hours.

### IDC 7601-7603

Masters Internship

Prerequisites: Completion of 27 hours of IDC coursework or consent of the department chair, confirmation of approved internship

1 to 3 hours

Course provides student with hands-on experience in technical communication in a professional environment. Work should be typical of technical communicators. Work may be either an extended project or a variety of shorter assignments. (Total of 6 hours of Masters Internship required.)

IDC 7801-7803

Masters Thesis

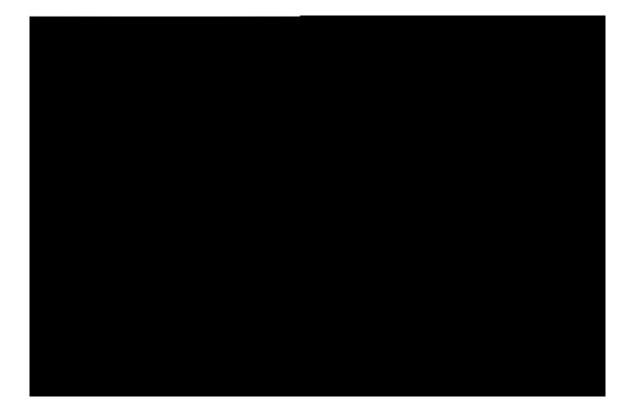
Prerequisites: Completion of 30 hours of IDC coursework or consent of the department chair, approval of thesis proposal

1 to 3 hours

Intensive research project that results in a formal written thesis. Usually flows from an area of interest discovered by the student in early stages of the Technical and Professional Communication program or

# Information Technology

Offering the Master of Science Degree



## Degree Requirements for the Master of Science program in Information Technology

٠	IT 6403	Windows Application Development	3 hours
٠	IT 6643	Issues in Information Management	3 hours
٠	IT 6683	Management of Information Technology <b>OR</b>	
	MIS 6010	Management of Information Technology	3 hours
•	IT 7883	IT Strategy and Policy (Capstone Course)	3 hours
•	MGNT 6025	Managing Professionals	3 hours
٠	SWE 6623	Software Engineering I	3 hours
•	SWE 6633	Software Project Management OR	
	MIS 6050	Project Management	3 hours

IT Electives	Select 5 courses from the list below (all are 3 hours) 15 hours		
	CS 6223	Human Factors	
	IT 6473	Multimedia Applications	
	IT 6663	Data Center Management	
	IT 6723	Managing Operating and Network Systems	
	IT 6733	Database Administration	
	IT 6753	Advanced Web Concepts and Applications	
	IT 6763	Electronic Commerce	
	IT 6823	Information Security Concepts and Administration	
	IT 7803	Thesis (students may substitute 2 thesis courses for 2 IT electives)	
	MGNT 6055	Total Quality Management	
	MGNT 6090	Strategic Management	
	MKTG 6010	Marketing Management	
	SWE 6743	Object-Oriented Analysis and Design	
	Other courses as a	pproved by the Information Technology Department	

TOTAL FOR THE PROGRAM

#### 36 hours

## **Transition Courses**

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#### Graduate Certificate in Information Security and Assurance

The Graduate Certificate in Information Security and Assurance (ISA) Program is designed for IT professionals who have a bachelor's degree and have undertaken the Graduate Transition Certificate in Information Technology (or the equivalent through other coursework) to advance their knowledge in the field of information security and assurance.

Students graduating with this program will have a strong background in fundamental principles and applications of computer security and information assurance, as well as hands-on experience with security tools commonly used in industry.

Candidates must complete the three core courses in Information Security and Assurance and one elective course for a total of 12 credits.

#### **Required Courses (9 Hours):**

IT6823	Information Security Concepts and Administration	3 hours
IT6843	Ethical Hacking: Network Security and Penetration Testing	3 hours
IT6863	Database Security and Auditing	3 hours

#### **Elective Courses (3 Hours, choose 1 from the following list):**

IT6833	Wireless Security	3 hours
IT6853	Computer Forensics	3 hours
IT6873	Information Security Seminar	3 hours

### Graduate Transition Certificate in Information Technology

The Graduate Transition Certificate in Information Technolog

#### Graduate Certificate in Information Technology

The Graduate Certificate in Information Technology prepares individuals who hold an accredited bachelor's degree and have undertaken the Graduate Transition Certificate in Information Technology (or the equivalent through other coursework) 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.

•	IT 6403	Windows Application Development	3 hours
•	IT 6683	Management Information Systems OR	
	MIS 6010	Management Information Systems	3 hours
•	SWE 6633	Software Project Management OR	
	MIS 6050	Project Management	3 hours
•	SWE 6623	Software Engineering I	3 hours
•	IT Electives	Select 2 from the following list:	6 hours
	IT 6473	Multimedia Applications	
	IT 6663	Data Center Management	
	IT 6723	Managing Operating and Network Systems	
	IT 6733	Database Administration	
	IT 6753	Advanced Web Concepts and Applications	
	IT 6763	Electronic Commerce	
	IT 6823	Information Security Concepts and Administration	

TOTAL FOR CERTIFICATE:

18 hours

# Information Technology Graduate Courses

IT 5113

Advanced Programming and Applications Prerequisite: IT 1113 or equivalent

3-0-3

This course includes topics in beginning data structures, including arrays, stacks and queues. In addition, the course examines different computer applications concentrating primarily on those used in business and management. CS and MSSE students cannot receive credit for this course.

IT 5123 Web Development Prerequisite: IT 5113 or equivalent 3-0-3 This course examines how to create applications for the world- wide- web. Topics include current languages (such as HTML, XML, CGI, JAVA Script) and human-computer interfaces for the web.

IT 5133

Data Communications & Networks Prerequisite: IT 5113 or equivalent 3-0-3

Fundamental concepts of computer networking. Topics include properties of signals and media, information encoding, error detection and recovery, LANs, backbones, WANs, network topologies, routing, Internet protocols, and security issues. The focus is on general concepts together with their application to support the business enterprise.

IT 6403 Windows Application Development Prerequisite: CS 5153 or equivalent 3-0-3

This course covers the logical analysis, design, development, testing and implementation of a windows system. Students will implement an object-based, event-driven design using a programming environment.

IT 6473 Multimedia Applications Prerequisite: CS 5153 or equivalent 3-0-3

This course introduces students to current practices, technologies, methodologies, and authoring systems in the design and implementation of systems that incorporate text, audio, images, animation and full-motion video. Students will complete multimedia projects using state-of-the-art tools.

IT 6553 Business Continuity Risk Assessment Prerequisite: None 3-0-3 This course covers fundamental princi business continuity. Group projects an

This course covers fundamental principles of risk, managing risk, and business impact analysis to maintain business continuity. Group projects and exercises will have students develop asset inventories and assess the levels of interrupting events using current tools and techniques. Some individual research will also be required.

IT 6733 Database Administration Prerequisite: CS 5153 or equivalent 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 Concepts & Applications Prerequisites: IT 5123 and CS 5153, or equivalent 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: CS 5153 or equivalent 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, privacy, intellectual property, acceptable use, legal liability, and economic analysis.

#### IT 6823

Information Security Concepts and Administration Prerequisite: IT 5113 Advanced Programming & Applications 3-0-3

This course covers the fundamentals of computing security, access control technology, cryptographic algorithms, implementations, tools and their applications in communications and computing systems security. Topics include public key infrastructure, operating system security, database security, network security, web security, firewalls, security architecture and models, and ethical and legal issues in information security.

#### IT 6833

Wireless Security

Prerequisite: IT 6823 Information Security Concepts and Administration, and IT 5133 Data Communication and Networks

#### 3-0-3

This course covers methods and techniques to secure wireless networks against threats and attacks. Topics include: Encrypt wireless traffic for privacy and authenticity, implement WPA and the 802.11i security standards to protect Wi-Fi networks, wireless network intrusion detection and prevention, and security trouble-shooting WLANs.

#### IT 6843

Ethical Hacking: Network Security and Penetration Testing Prerequisite: IT 6823 Information Security Concepts and Administration 3-0-3

This course covers the major issues surrounding the use of penetration testing to secure network security and important skills of a professional hacker and common security challenges that an information security officer will face in his/her work. Topics include the ethics of ethical hacking, laws and regulations, vulnerability discovery and risk analysis, internal and external attacks, how malicious hackers attack and exploit system vulnerabilities, penetration testing methods and tools, latest security countermeasures, and various types of penetration testing and programming skills required to complete successful penetration tests and to secure real systems against real attacks.

IT 6853 Computer Forensics Prerequisite: IT 6823 Information Security Concepts and Administration 3-0-3 This course studies techniques and tools in computing investigation, digita

This course studies techniques and tools in computing investigation, digital evidence collection, recovery, and analysis. Topics include: Legal issues relating to digital evidence, recover deleted files and discover hidden information, reconstruct user activity from e-mail, temporary Internet files and cached data, assess the integrity of system memory and process architecture to reveal malicious code.

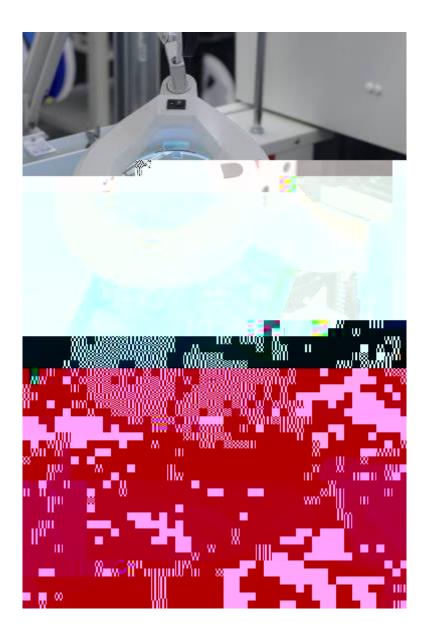
IT 6863

Database Security and Auditing

Prerequisite: IT 6823 Information Security Concepts and Administration and IT 5153 Database Systems 3-0-3

# Quality Assurance

Offering the Master of Science Degree



# Degree Requirements for the Master of Science program in Quality Assurance

# **Engineering Technology Concentration**

This concentration is designed for prospective students who have undergraduate degrees in engineering technology (any major), physical science, mathematics, and other technical majors. To qualify fully for admission students will need the technically oriented undergraduate degree including a laboratory-

#### Graduate Green Belt Certificate

This certificate is designed for students with an undergraduate degree form an accredited institution and two years work experience in the field. Coursework completed in the certificate program will be entered on the student's official transcript as regular academic coursework counting for graduate credit. Admission in the Certificate program does not necessarily qualify students for full admission to the MSQA program.

Students with an insufficient undergraduate statistics background may be asked to complete QA5000, Statistical Concepts in Quality Assurance before beginning the statistical requirements of the certificate.

QA 6602	Total Quality	3 hours
QA 6610	Statistics for Quality Assurance	3 hours
QA 6611	Statistical Process Control	3 hours
QA 6650	Quality Systems Design	3 hours

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

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

QA 6615 Applied Systems Reliability Prerequisite: QA 6612 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 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 Technical Training Methods 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 The development of the quality organization, systems, and procedures necessary for effective participation in world markets. Creating and documenting methods and procedures are stressed.

QA 6660 Six Sigma B placlupsiostepts. 3-0-3

A study and review of the SuproBiby an addition of the suproBiby and the suproBiby and the superstant of the superstant

QA 6722 Humpla Prerequisite: QA 6600 or QA 6602 3-0-3 A comprehensive survey of human

A comprehensive survey of human factors theory, research, alad applications which are of particular relevance to quality assuran0 ce. Emphysis will be p pced on operator costraints in the design of work processes, workplpces, and instrumentation.

#### QA 6763 Software Quality 3-0-3

The Personal Software Process (PSP) is a technology that brings discipline to the practices of individual software engineers, dramatically improving the quality, predictability, and cycle time for software-intensive systems. PSP makes engineers aware of the processes they use to do their work and the performance of those processes. The course covers quality assessment, cost estimation, configuration management, software performance measures, proof of correctness, validation and verification, and management of the total quality environment for software.

#### QA 6901-6903

#### Special Topics in Quality

1 to 3 hours

Students may arrange to study and perform independent research on a topic approved by a graduate faculty member. An appropriate research paper will be required and the student may be required to make an oral presentation to faculty, graduate students, and/or quality professionals.

#### QA 7403

Graduate Seminar Prerequisites: QA 6602, QA 6611 or consent of the department head 3-0-3

The course is designed to cover various topics within the field of quality assurance which are not taught in other courses. These topics might include acceptance sampling, risk analysis, regression analysis, SPC training methods, and others.

QA 7503 Research in Quality Prerequisites: QA 6602, QA 6611 or consent of the department head 3-0-3 This course is designed to guide the student in a thorough and in-depth written examination of one or more topics relevant to the application of guality assurance. Emphasis is placed upon students using both traditional and

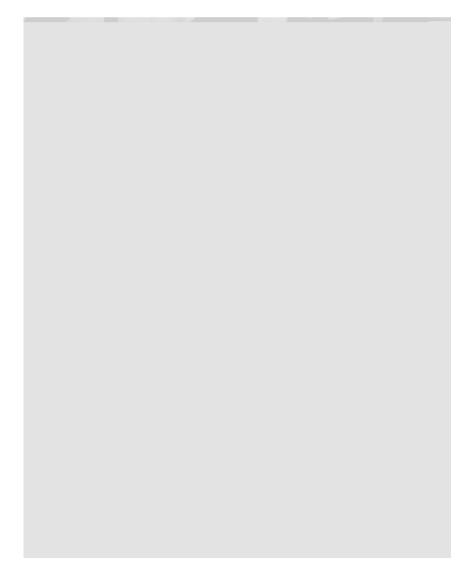
relevant to the application of quality assurance. Emphasis is placed upon students using both traditional and electronic means to perform the research.

QA 7603 Applications in Quality 3-0-3

This course is designed to guide the students through a thorough and in-depth application of quality principles in the workplace environment. Emphasis will be on the application of the principles and measurable outcomes.

# Software Engineering

Offering the Master of Science Degree



## **Masters Program in Software Engineering**

Software engineering represents the fastest growing segment of software professionals -- men and women who solve problems and issues in the development of mission-critical software to meet the needs of business and industry.

At Southern Polytechnic, our Software Engineering students are ahead of the game, learning real-time strategies and procedures that will give them a competitive edge in the market.

Our Master of Science in Software Engineering Program is designed for working professionals who want to earn a professional degree part-time in the evening and on weekends.

Accepted students have at least one year of full-time experience in software development and/or maintenance. Typically, students are working professionals in metro Atlanta with at least a bachelor's degree; however, students who lack a formal degree or previous coursework in Software Engineering or Computer Science may transition into the program.

Thirty-six hours of coursework are required for successful completion of the program. Students who do not have a degree in Computer Science or Software Engineering 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 Computer Science or a closely related field who wish to advance into leadership positions. Applicants must 6 0 Tf()5(r)s s -1.2 TDo r of(wo)8(rkre)8xrhe coatersSoftre fiel. Pwaftnsenroill in s tses-4( eor s)4(e)1measterr rss. t

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for being fully admitted into the Masters Program. If four or more prerequisite courses are required, the student will be eligible for the Graduate Transition Certificate in Computer Science.

#### **Degree Requirements for the Master of Science program in Software Engineering**

SWE 6623	Software Engineering I	3 hours			
SWE 6633	Software Project Management	3 hours			
SWE 6723	Software Engineering II	3 hours			
SWE 6743	Object-Oriented Analysis and Design	3 hours			
SWE 6763	Software Metrics and Quality Management	3 hours			
SWE 6883	Formal Methods in Software Engineering	3 hours			
Software Engine	eering Option: Select one of the options listed below	18 hours			
Contware Engine		10 11001 5			
TOTAL FOR THE PROGRAM 36 hours					
<b>Project Option</b>	l				
SWE Electives Select 5 electives at the 6000 level with an SWE, CS or IT prefix.					
• At I	east 2 electives must be from SWE				
• No	more than 1 elective can be from IT				
• Ele	ctives must be approved by the department	15 hours			
SWE 7903	Software Engineering Capstone (Project)	3 hours			
<u>Thesis Option</u>					
SWE Electives Select 4 electives at the 6000 level with an SWE, CS or IT prefix.					
• At I	least 2 electives must be from SWE				
• No	more than 1 dective can be from IT				

No more than 1 elective can be from IT	
Electives must be approved by the department	12 hours
Masters Thesis	6 hours
	No more than 1 elective can be from IT Electives must be approved by the department

#### Transition Courses

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

CS 5123	Advanced Programming and Data Structures	3 hours
CS 5153	Database Systems	3 hours
CS 5183	Object-Oriented Programming	3 hours
CS 5223	Computer Architecture	3 hours
CS 5243	Operating Systems	3 hours
CS 5423	Mathematical Structures for Computer Science	3 hours
SWE 1301	Software Development I	4 hours

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 completion of the prerequisite courses with a grade of "B" or better, the student will be fully admitted into the MSSWE program and be eligible to register for regule)ite couwork. Noneion of the

#### Graduate Certificate in Software Engineering

The Graduate Certificate in Software Engineering prepares practitioners to advance into leadership positions.

Applicants should have:

- A bachelor's degree in Computer Science or a closely related field (or a bachelor's degree with professional competence and knowledge equivalent to a Computer Science degree)
- At least one year of software project-related work experience (or comparable co-op work)

The focus is on sharpening capabilities to function effectively in software engineering teams producing higher quality software.

SWE	6623	Software Engineering I	3 hours
SWE	6633	Software Project Management	3 hours
SWE	6723	Software Engineering II	3 hours
SWE	Electives:	Select 3 electives from the list below	9 hours
	CS 6153	Advanced Database Systems	
	CS 6323	Human Factors	
	CS 6353	Computer Graphics and Multimedia	

## Software Engineering Graduate Courses

SWE 6343 User Interface Design and Implementation Prerequisite: SWE 6623 3-0-3

This course covers the major frameworks, methods, and approaches to designing, engineering, implementing, and testing user interfaces. It covers user and usability requirements gathering, task analysis, user-interface design, implementation of the user interface, and evaluation with respect to requirements and the users' tasks. Illustrative design and implementation projects are completed throughout the term.

SWE 6623 Software Engineering I Prerequisite: CS 5123/3424 3-0-3

This course covers the initial phases of the software-development life cycle. Topics include planning, requirements analysis, requirements specification, and design. A number of techniques for performing analysis and design are explored and applied in a major project.

SWE 6633 Software Project Management Prerequisites: SWE 6623 3-0-3

Focus on organizational and technical roles in software engineering. Emphasis on: models of software life cycle, software maturity framework, strategies of implementing software, software process assessment, project planning tools, software configuration management, managing software quality and usability, leadership principles, and professional and ethical issues. A required project combines technical and managerial techniques for assessing software design and development.

SWE 6723 Software Engineering II Prerequisite: SWE 6623 3-0-3

This course covers the entire software development life-cycle. Emphasis is placed on advanced topics including prototyping, verification and validation, formal methods, and quality management. A major component is a group project that utilizes a Computer Assisted Software Engineering (CASE) tool to assist in the analysis, design, and implementation of a system.

SWE 6743 Object-Oriented Analysis and Design Prerequisites: CS 5183/3663 and SWE 6623 3-0-3 This course explores the object-oriented software development process including analysis, design, and programming. Emphasis is on the object-oriented paradigm.

SWE 6753 Computer Game Design & 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 Quality Management 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 SWE 6901-6903 Special Topics Prerequisite: As determined by the Instructor and Department Chair 1 to 3 hours Special topics selected by the Department Chair. Offered on a demand basis. A student may repeat this course with special permission.

#### SWE 7803

Masters Thesis

3-0-3

The thesis is designed for students wanting a research focus to their degree. The student works independently under the supervision of a designated SWE graduate faculty member on a thesis of substance in software engineering. The student will generate a formal written thesis and give a final defense of the thesis. This course may be repeated, but only 6 hours may be applied toward the degree. This course will be an alternative to SWE 7903 Software Engineering Capstone.

#### SWE 7903

Software Engineering Capstone

Prerequisite: Satisfactory completion of the MSSWE core (SWE 6623, SWE 6633, SWE 6723, SWE 6743, SWE 6763, and SWE 6883)

3-0-3

This course is designed for students to give a professional focus to their degree. The students work in designated teams under the supervision of the course instructor (a CSE faculty member), on a project of practical significance in software engineering. Each of the teams will deliver a final working product, generate a substantial final report, and give a final presentation on the project.

# Systems Engineering

## Offering the Master of Science Degree



## **Masters Program in Systems Engineering**

In the modern engineering environment very few products function in isolation. Users in all environments have come to expect a high level of integration. Systems engineering involves the integration of multiple technologies for the solution of large-scale, complex problems. Traditional engineering specialists use methods which allow them to focus inward on details unique to their disciplines. Systems engineers look outward from the details of the

### Admission Criteria

Applicants shall have:

## Degree Requirements for the Master of Science program in Systems Engineering

SYE 600	)5	Introduc	ction to Systems Engineering	3 hours
SYE 6010		Managing the Technical Effort		3 hours
SYE 6015		Systems Analysis and System Design		3 hours
SYE 6020		-	Architecture	3 hours
SYE 602	25	Enginee	ring Economic Analysis	3 hours
SYE 603	30	Verificat	tion Program Development & Management	3 hours
SYE Ele	ectives		ect 2 courses from the following list	
	QA 6610		Statistics for Quality Assurance	
	<b>SWE 66</b>	33	Software Project Management	
	SYE 603	35	Modeling and Simulation	
	SYE 604	10	Advanced Configuration Management	
	SYE 604	15	Process Assessment and Improvement	
SYE 605	50	Reliabili	ty and Sustainability	3 hours
SYE Wo	rkshop	Select 1	course from the following list	3 hours
	SYE 605	55	System Development Workshop	
	SYE 606	60	Systems Engineering Workshop	
Elective	S	Select 2	courses from the following list	6 hours
	CS 5123	1	Advanced Programming and Data Structur	res
	CS 5153		Database Systems	
	CS 5183		Object-Oriented Programming	
	CS 6453		Simulation and Modeling	
	CS 6523		Artificial Intelligence	
	ECET 6	102	Mechatronics	
	ECET 6	401	Linear Control System Analysis and Desig	n
	ECET 6	202	Embedded PC Systems	
	MGNT 6	6001	Management Communications	
	MGNT 6	6015	Technology and Innovation Management	
	MGNT 6	6020	R & D Management	
	MGNT 6	6025	Managing Professionals	
	MGNT 6	6030	Decision Making Techniques	
	MGNT 6	6050	Project Management	
	MGNT 6	6090	StrategicManagement	
	QA 6610	)	Statistics for Quality Assurance	
	QA 6611		Advanced Statistical Applications	
	QA 6722		Human Factors Engineering	
	SWE 66		Software Project Management	
	TCOM 6	6001	Technical Writing and Editing	

TOTAL FOR THE PROGRAM

36 hours

Note: A grade of "C" or better is required in each course to receive graduate credit.

## Graduate Certificate in Systems Engineering Requirements

SYE 6005	Introduction to Systems Engineering	3 hours
SYE 6010	Managing the Technical Effort	3 hours
SYE 6015	Systems Analysis and System Design	3 hours
SYE 6020	System Architecture	3 hours
TOTAL FOR THE CERTIFICATE		

#### Advanced Graduate Certificate in Systems Engineering Requirements

SYE 6005	Introduc	tion to Systems Engineering	3 hours
SYE 6010	Managir	ng the Technical Effort	3 hours
SYE 6015	Systems	Analysis and System Design	3 hours
SYE 6020	System /	Architecture	3 hours
SYE 6025	Enginee	ring Economic Analysis	3 hours
SYE 6030	Verificat	ion Program Development & Management	3 hours
SYE Electives	Select 2	courses from the following list	6 hours
QA 6610	)	Statistics for Quality Assurance	
SWE 66	33	Software Project Management	
SYE 603	35	Modeling and Simulation	
SYE 604	40	Advanced Configuration Management	
SYE 604	45	Process Assessment and Improvement	

TOTAL FOR THE CERTIFICATE

24 hours

## Systems Engineering Graduate Courses

SYE 6005

Introduction to Systems Engineering

3-0-3

The goal is to introduce the student to the essential principles, processes, and practices associated with the application of Systems Engineering. The applicability and use of Process Standards will be examined. Emphasis will focus on defining the problem to be solved, establishing the initial system architecture, understanding the role of system life-cycles, requirements development, and verification and validation of the realized system.

#### SYE 6010

Managing the Technical Effort Associated with System Creation Prerequisite: SYE 6005 3-0-3

Technical management, its relationship with project and program management, elements of successful and less than successful technical management, and the elements that should be in place prior to commitment to system creation will be reviewed. The core of this course will examine three significant aspects of managing the technical effort: effective technical planning, assessment of technical progress, and control of technical activities.

#### SYE 6015

Systems Analysis and System Design Prerequisite: SYE 6010 3-0-3

An examination of the current systems analysis and system design methods used to define system boundaries, constraints, and detailed technical requirements from acquirer needs and expectations. In addition, approaches to verification of the design solution, including verification methods against the specified requirements will be examined.

SYE 6020 System Architecture Prerequisite: SYE 6015 3-0-3

Examination of concepts and techniques for architecting systems, the establishment of a bounded and integrated structure that provides a framework for system creation, work breakdown structures, cost analysis, and subcontractor control and interface will be reviewed. A structured approach to system architecture that proceeds from a topmost "system" to an aggregation and integration of systems created in lower level development layers, both internal and external to the developer as described in the standard ANSI/EIA-632 (Processes for Engineering a System) will be explored.

SYE 6025 Engineering Economic Analysis 3-0-3 Examination of the principles and methods used in evaluating costs associated with development and

#### SYE 6035 Modeling and Simulation 3-0-3

The use of models and simulations to validate or predict expected performance, behavior, and interaction of selected design elements in a controlled environment will be examined. This course will also present guidelines for selecting and using models and simulations on projects. Various modeling and simulation methods and tools will be examined and their value and applications probed for differing engineering development needs.

#### SYE 6040

Advanced Configuration Management 3-0-3

An examination of processes and methods to identify, control, audit, and track the evolution of system characteristics throughout the system life cycle will be conducted.

#### SYE 6045

Process Assessment and Improvement 3-0-3

This course provides an operational understanding of the differences between process standards and assessment standards where the latter provide a formal and structured means of examining a specific process

# Graduate Faculty Listings



## **Business Administration**

#### Conn, Jennie S.

Associate Professor

B.A., Indiana University M.B.A., Clark Atlanta University J.D., Georgetown University

#### Davis, Sidney

Professor

Ph.D., Georgia State University M.B.A., Georgia State University B.I.E., Georgia Institute of Technology P.E., Georgia

#### North, Max M.

Associate Professor Ph.D., Clark Atlanta University M.S., Jackson State University B.S., Karaj College, Iran

#### Obeidat, Muhammad A.

Professor

Ph.D., Illinois Institute of Technology M.S., Western Michigan University B.S., Yarmouk University

#### **Richardson**, Ronny

Department Chair and Professor Ph.D., Georgia State University

M.S., Georgia State University M.B.A., Georgia State University B.S., University of Southern Mississippi

#### Vasa-Sideris, Sandra

Associate Professor

Ph.D., Georgia State University M.B.A., Georgia State University M.A., University of Tennessee B.A., University of Tennessee

#### Warsi, T. A.

Associate Professor M.B.A., Atlanta University M.A., Gorakhpur University B.A., Agra University B.Ed., Gorakhpur University

# Computer Science

#### **Bobbie**, Patrick O.

Professor

Ph.D., University of Southwestern Louisiana M.S., Marquette University B.S., University of Science & Technology, Ghana

#### Dasigi, Venu

Professor and Department Chair

Ph.D., University of Maryland M.S., University of Maryland M.E.E., Philips International Institute of Technological Studies B.E., Andhra University

#### **Faruque, Abdullah** Associate Professor

Ph.D., Clarkson University M.S. EE, Bangladesh University of Engineering & Technology B.S. EE, Bangladesh University of Engineering & Technology

#### **Guzman**, Juan Carlos

Associate Professor Ph.D., Yale University M.S. M.Phil., Yale University M.S., B.S., Universidad Simon Bolivar [Venezuela]

#### Harbort, Robert A., Jr.

Professor

Ph.D., Emory University M.S., Georgia Institute of Technology B.S., Emory University P.E., Georgia

#### Hung, Chih-Cheng

#### Professor

Ph.D., University of Alabama-Huntsville M.S., University of Alabama-Huntsville B.S., Soochow University

#### Karam, Orlando A.

#### Assistant Professor

Ph.D., Tulane University

M.S., Tulane University

B.S., University of O1s30.0003 Tc 0.00xb50a70011 h.xico Tf0 Tc 0 Tw 12 0 0 12 90 392.28 Tm()T177TT2 1 Tf-0.0047 Ph.D., YaleMchow Univern Lou3(ty of )3(ty Polyteogy )]icT M.S., Maochow ersity ity

#### Qian, Kai

Professor

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

#### Roth, Patricia H.

Instructor

M.S.S.W.E., Southern Polytechnic State University B.A., Dunbarton College of Holy Cross

# Construction Management

Banik, Gouranga C. Professor

Ph.D., Iowa State University M.S., University of Manchester (UK)

# Engineering Technology—Electrical

#### Asgill, Austin B.

Professor

PhD, University of South Florida MSEE, University of Aston in Birmingham MBA, Florida State University BEngr, University of Sierra Leone PE, Florida

#### Fallon, Thomas J.

Associate Professor PhD, Georgia State University MSEE, Georgia Institute of Technology BSEE, Georgia Institute of Technology

ThainnAssociate Professor MSEE,

Georgia

Institute

# Information Design and Communication

#### Barnum, Carol M.

Professor

Ph.D., Georgia State University M.A., Georgia State University B.A., University of North Carolina

#### Haimes -Korn, Kim

Professor

Ph.D., Florida State University M.A., Florida State University B.A., Florida State University

#### Hopper, Keith B.

Associate Professor

Ph.D. Georgia State University M.A., Boise State University B.S., Boise State University

#### Nunes, Mark

Department Chair and Associate Professor Ph.D., Emory University M.A., University of Virginia M.A., Columbia University B.A., Columbia University

#### **Oliver**, Betty

Professor

Ph.D., University of Georgia M.A., University of Georgia B.A., University of Georgia

#### Shauf, Michele

Assistant Professor Ph.D., University of Delaware M.A., University of Delaware

B.A., University of Delaware

#### Smith, Herbert J.

Professor

Ph.D., Kent State University M.A., Northeastern University B.A., Northeastern University

# Information Technology

#### Brown, Robert L.

Lecturer

M.S., Southern Polytechnic State University B.S., State University of New York Regents College

#### Halstead-Nussloch, Richard

Professor

Ph.D., University of Michigan B.A., Macalester CollegUniversity of Michigan Quality Assurance and Systems Engineering

# Software Engineering

#### Duggins, Sheryl L.

Professor

Ph.D., University of Florida 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

#### Thomas, Barbara B.

Professor

M.Ed., Georgia State University B.S., Georgia State University

#### 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

# Institutions of the University System of Georgia

### Research Universities

Georgia Institute of Technology Georgia State University Medical College of Georgia University of Georgia

## Regional Universities

Georgia Southern University Valdosta State University

### State Universities

Albany State University Armstrong Atlantic State University Augusta State University Clayton State University Columbus State University Fort Valley State University Georgia College & State University Atlanta Atlanta August Athens

Statesboro Valdosta

Albany Savannah August Morrow Columbus Fort Valley Milledgeville