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2009-2010

Southern Polytechnic State University in the University System of Georgia

1100 South Marietta Parkway
Marietta, Georgia 30060-2896

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

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

Welcome to Southern Polytechnic

Southern Polytechnic is a place where students are educated for life and for leadership in an increasingly technological world. We prepare our students for their very first job after graduation, with the skills that make them highly marketable and successful. We feel it is just as important that a Southern Polytechnic education also prepares students for the last job in their careers. Thus, our courses and programs are structured to enable men and women to adapt, grow, and continue to learn over the years, developing

Calendar

Fall 2009

17 August	Mon	New Student Orientation
24 August	Mon	Classes Begin
7 September	Mon	Labor Day Holiday
25-29 November	Wed - Sun	Thanksgiving Holiday for Students
10 December	Thurs	Last Day of Classes
12 December	Sat - Wed	Final Exams
19 December	Sat	Commencement

Spring 2010

7 January	Thursday	New Student Orientation
11January	Mon	First Day of Classes
18 January	Mon	Martin Luther King, Jr. Holiday
8-14 March	Mon - Sat	Spring Break
29 April	Thurs	Last Day of Classes for Spring
31 April	Sat - Wed	Final Exams
8 May	Sat	Commencement

Summer 2010

13 May	Thur	New Student Orientation
17 May	Mon	First Day of Classes
31 May	Mon	Memorial day Holiday
5 July	Mon	Holiday

For a more detailed calendar, point your web browser to
http://www.spsu.edu/registrar/calendarpointer.html
http://www.spsu.edu/registrar/calendarpointer.html

For Your Information

Admissions	(678) 915-7281
Dean of Students	(678) 915-4102
Financial Aid	(678) 915-7290
President	(678) 915-7230
Registrar	(678) 915-7267
University Relations	(678) 915-7351
Vice President for Academic Affairs	(678) 915-7206
Vice President for Business and Finance	(678) 915-7232
Vice President for Student and Enrollment Services	(678) 915-3720
Continuing Education	(678) 915-7240

For additional phone numbers and contacts, see the Campus Directory

From outside the Atlanta Metro area (For Admissions Information

Greek Affairs
Student Life
Mr. Ron Lunk

Veteran Affairs
VA Coordinator
Mr. Greg Osborne

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.

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Responsibility for Notices

Students are expected to be aware of the contents of all general

Construction Engineering (Bachelor of Science)

Construction Management (Bachelor of Science)

Electrical Engineering (Bachelor of Electrical Engineering)

Electrical Engineering Technology (Bachelor of Science)

English and Professional Communication (Bachelor of Arts)

Industrial Engineering Technology (Bachelor of Science)

Information Technology (Bachelor of Science)

International Studies (Bachelor of Science)

Mathematics (Bachelor of Science)

Mechanical Engineering (Bachelor of Mechanical Engineering)

Mechanical Engineering Technology (Bachelor of Science)

Mechatronics Engineering (Bachelor of Science)

Physics (Bachelor of Arts)

Physics (Bachelor of Science)

Political Science (Bachelor of Science)

Psychology (Bachelor of Science)

Software Engineering (Bachelor of Science)

Surveying and Mapping (Bachelor of Science)

Systems Engineering (Bachelor of Science)

Technical Communication (Bachelor of Science)

Telecommunications Engineering Technology (Bachelor of Science)

Masters Degree Programs

(See the Graduate Catalog)

Accounting (Master of Science)

Master of Business Administration (MBA)

Computer Science (Master of Science)

Construction Management (Master of Science)

Engineering Technology (Electrical Concentration) (Master of Science)

Information Design and Communication (Master of Science)

Information Technology (Master of Science)

Instructional Design and Communication (Master of Science)

Quality Assurance (Master of Science)

Software Engineering (Master of Science)

Systems Engineering (Master of Science)

Certificates

In addition to the above degree programs, SPSU also offers certificates in the following areas. The offering department is listed in parentheses. Admissions requirements vary, depending on the certificate.

Apparel Product Development (Industrial Engineering Technology)

Business Administration (Business Administration)

Business Continuity (Information Technology)

Communication Management (English, Technical Communications, and Arts)

Computer Science (Computer Science)

Computer Science Transition Certificate (Computer Science

Content Development (English, Technical Communic(l)3gn

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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. 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.

General Information

Admission to Southern Polytechnic State University is made without regard to race, nationality, sex, or religion. Admission to Southern Polytechnic State University is based on a number of factors depending upon your admissions type of entry and previous educational experience. The admission requirements for the University have been developed in accordance with the rules and regulations of the Board of Regents for the University System of Georgia.

Falsification

Approval for admission is valid only for the term specified at the time of acceptance and does not imply that approval will be granted for a term not specified. Georgia.

Mathematics	4	Algebra I and II, Geometry and a fourth year to include courses such as Advanced Algebra and Trigonometry, Algebra III, Pre-calculus, Discrete Mathematics , Calculus, AP Calculus, Statistics, IB Mathematics, Analysis
Science	3	Must include at least one lab course from Life Science and one lab course from the Physical Sciences
Social Science	3	Must include U.S. History and World History
Foreign Language	2	Must be in the same language and

Joint Enrollment/Early Admission/The ACCEL Program

Southern Polytechnic State University recognizes the need to provide academically talented high school students with opportunities for acceleration of their formal academic programs. There are three programs available to talented students:

Joint Enrollment

A joint enrollment student continues his/her enrollment in high school as a junior or senior and enrolls in courses for college credit.

Early Admission

An early admission student enrolls as a full-time college student following completion of the junior year in high school.

The ACCEL Program

- The ACCEL Program is a joint enrollment program that allows high school, typically juniors and seniors, to take approved college courses. Courses earned through the ACCEL Program carry both college credit and high school Carnegie unit credit. ACCEL is a state funded program that provides dual enrollment tuition assistance for qualified public and private high school students. Students must be at least 16 years old, meet a certain set of requirements and submit necessary paperwork to participate. Students interested in this program should contact their High School Counselor to obtain the necessary paperwork.

Transfer Admissions

Transfer Freshman Admissions Standards

Applicants with fewer than 30 semester hours of acceptable transfer credit will be considered under the following policies:

- Applicants must meet the same admission requirements as freshman admitted from high school.
- Applicants must have completed and exited all required remedial courses at their previous institution.
- Applicants must not be on dismissal from their previous institution.
- Applicants must have at least a 2.0 cumulative college GPA.

Transfer Admissions Standards for Sophomores and Upperclassmen

Transfer applicants with sufficient transferable hours to be classified as a sophomore, junior or senior at SPSU will be considered under the following policies:

- Applicants must have completed and exited all required remedial courses at their previous institution
- Applicants must not be on dismissal from their previous institution
- Applicants must have at least a 2.0 cumulative college GPA

Award of Transfer Credit

See Academic Regulations and Administrative Procedures for the policy on acceptance of transfer credit.

Special Admission Categories

SPSU has a number of special categories other than those for freshman and transfer applicants.

Nontraditional Freshman Admission Standards

Nontraditional freshman are those students who:

- Have not attended high school or college within the previous five years
- Have earned fewer than 30 transferable semester hours of credit
- Hold a high school diploma from an accredited secondary school or a GED certificate which satisfies the minimum requirement of the State of Georgia

- 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

http://www.collegeboard.com SPSU's Institutional Code: 5626	SPSU's Institutional Code: 0865
SAT I and II Tests	**ACT Tests**

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Steps to Apply for Financial Aid and Cost of Attendance

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

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

Aid awarded to a student one year does not mean that he or she is eligible to receive aid in a subsequent year, unless the student continues to demonstrate need as defined by the U.S. Department of Education. An application, each year, is required to continue to receive financial aid.

Information concerning financial aid may be obtained by writing to:

Director of Financial Aid
Southern Polytechnic State University
1100 South Marietta Parkway
Marietta, Georgia 30060-2896

or by calling the Office of Scholarships and Financial Aid at 678/915-7290 or 800/635-3204, or email at finaid@spsu.edu.

Cost of Attendance

First-time-full-time Cost of Attendance for dorm student 2009-2010

Cost of Tuition and Mandatory Fees:

Tuition and Fees $5,414

Room and Board $6,350

Cost determined by Lifestyle:

Books and Supplies $1,700

Personal Expenses $1,700

Transportation $1,200

Loan Fees $60

Total Estimated Cost of Attendance: $16,424

Types of Financial Aid

Types of aid for which one might be eligible include:

- The Federal Pell Grant
- The Federal Supplemental Educational Opportunity Grant (FSEOG)
- The Federal ACG Grant
- The Federal SMART Grant
- The Federal Work Study Program (FWSP)
- The Federal Family Educational Loan Program

Depending on financial need, the maximum that a student may borrow from the combined Subsidized and Unsubsidized Stafford Loan Program is:

Class	Dependent	Independent
Freshman	$5,500	$9,500
Sophomore	$6,500	$10,500
Junior/Senior	$7,500	$12,500

The total undergraduate loan amount is $31,000 for Dependent students and $57,500 for Independent students.

The PLUS Loan Program enables parents with good credit histories to borrow funds for each child who is enrolled at least half-time and is a dependent student. Students whose parents are denied a parent plus loan are eligible for additional federal funds.

The HOPE Scholarship Program provides financial assistance to students attending Georgia post-secondary institutions who achieve academic excellence throughout their high school studies.

To be eligible for HOPE, a student must:

- Be a Georgia resident
- Have graduated from a Georgia High School in 1993 or later
- Have earned a cumulative grade point average of at least 3.0 in all academic classes

And meet other regulatory requirements

Payment for Non-credit Courses

For a student to receive financial aid funds for remedial work, the coursework must be necessary for the student to pursue the eligible post secondary program. Students **may not** receive financial aid funds to pay for courses that they audit.

Satisfactory Academic Progress

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

Southern Polytechnic State University's SAP requirements include:

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

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

Registration and Fee Payment

SPSU offers multiple registration periods, each with an assigned fee payment deadline, for currently enrolled students to give them the opportunity to secure a schedule for a coming term.

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.

Residency Classification for Fee Payment Purposes

A person's legal residence is his or her permanent dwelling place. It is the place where he or she is generally understood to reside with the intent of remaining there indefinitely and returning there when absent. There must be a concurrence of actual residence and of interest to acquire a legal residence.

Because a proportion of financial support for the operation of public institutions of higher education in Georgia comes from the citizens through the payment of taxes, the determination of whether a student is classified as a resident or a nonresident of the state is a significant matter. The fees paid by resident students cover only a portion of the total cost of their education in the University System. Therefore, Georgia taxpayers are contributing part of the necessary funds to provide quality education for the citizens of the state.

Students are responsible for registering under the proper residency classification. Any student classified as a nonresident who believes that he or she is entitled to be reclassified as a legal resident may petition to the Registrar's Office for a change of status.

The Board of Regents establishes all rules regarding residency classification. For additional information visit this site:

http://www.usg.edu/regents/policymanual/400.phtml

62 Years Old 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 Syst

The student affairs areas at Southern Polytechnic State University include:

- Student Life
- Student Center
- Student Health Services
- Recreation Sports and Intercollegiate Athletics
- Career & Counseling Center

The Dean of Students supervises a professional staff who are responsible for providing these services and activities for students. In addition, the Dean of Students may be contacted by students who are encountering problems or issues on campus for which they need assistance.

Student Activities

There is more to college life than classrooms and tests...getting involved in Student Activities includes countless other recreational activities, special events, and opportunities for learning, leadership and service. Participating in campus life outside the classroom offers students the opportunity to learn the lessons, make the memories, and forge the relationships that will inspire and sustain them for a lifetime.

Through Campus Activities Board (CAB), Greek Life, and over 60 Student Organizations, you can connect the dots between circuit boards and business plans and becoming the kind of team member, leader, and community member you would like to become.

Emergency Locator Service

Emergency assistance in locating a student is provided by the Dean of Students Office (678-915-7374) from 8:00 a.m. until 5:00 p.m., Monday through Friday. The University Police Department provides emergency assistance in locating students on weekends and after 5:00 p.m. on weekdays (678-915-5555).

If campus security officials determine that a student (for whom a missing person report has been filed) has been missing for more than 24 hours, then within the next 24 hours they will:

* Notify the individual identified by the student to be contacted in this circumstance;

* If the student is under 18 years old, notify a parent or guardian; and

* In cases where the student is over 18 and has not identified a person to be contacted,

notify appropriate law enforcement officials.

Student Housing

SPSU offers nearly 1200 on-campus student housing beds. In addition to providing a convenient and economical "home", on-campus living also meets a student's physical needs of shelter, comfort, and attractive surroundings. Living on campus contributes to the educational development of each student through exposure to students of varied backgrounds, experiences, and personal philosophies. The Department of Housing and Residence Life is staff by professionals along with 22 Resident Assistants. The primary function of the Housing and Residence Life staff is to create and maintain a desirable environment for all residents.

All students who have applied for admission to Southern Polytechnic State University and are interested in living on

students beyond those that are covered for any student paying the Student Health Fee.

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, and communication issues can make it very difficult for students to gain the most from their classes and the university environment. Professional counselors provide time-limited individual and/or group sessions for students seeking confidential assistance with these and other personal issues.

Academic concerns center on more effective time management, study skills and dealing with test anxiety. Counselors can assist students in identifying deficiencies in these areas to make the overall academic experience more successful. Many students find university work more challenging than they expected and realize they need to enhance their academic skills to be successful.

Counselors can assist a student's developmental skills to manage stress, overcome test anxiety, manage their time more efficiently, improve test-taking strategies, enhance memory and better understand their learning style.

The Career development process involves increasing self-understanding in such areas as values, life goals, interests, and skills. Counselors can help students increase their self-understanding and learn how to match their personal characteristics with the work environments that a university education makes possible for them.

The Career and Counseling Center provides a variety of assessments to assist students in clarifying and/or confirming their goals. The Center also offers an on-line mental health screening that helps determine the need for additional evaluation and/or services.

All counseling services are free of charge to currently enrolled students, confidential, and are available by appointment or on a walk-in basis.

Counselors provide outreach programs on many topics, including
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competes in four different intercollegiate sports: Men's basketball, women's basketball, men's soccer, and baseball.

The Recreational Sports program maintains a comprehensive program of activities that appeal to the leisure time interests and needs of the campus community.

Activities available through the intramural sports program include competitive team sports leagues such as:

- Flag football
- Volleyball
- Basketball
- Softball

There are also individual competitive tournaments such as:

- Billiards
- Golf
- Tennis
- Racquetball

In addition to the intramural

Regents' Test

The University System of Georgia requires that all students obtaining a degree have literacy competence. Students enrolled in an undergraduate baccalaureate degree program leading to a degree must pass the Regents' Test

Call 678/915-7240 for additional information or check the CEC web site at http://oce.spsu.edu.

Applied Research Center (SPARC)

The mission of the Southern Polytechnic Applied Research Center (SPARC) is to support Southern Polytechnic faculty in research, development and the application of technology within their areas of expertise. This support includes the identification of opportunities, development of proposals and the administration of grants and contracts upon award. The Applied Research Center is committed to providing growth opportunities for faculty and students and establishing Southern Polytechnic State University as a leading center of applied technology. For more information go to: http://eu.spsu.edu/sparc.html

Office of Sponsored Programs (OSP)

The Office of Sponsored Programs has overall responsibility for the administration of grants, contracts and sub-awards, as well as compliance with state and federal regulations. Pre-award services include identifying funding opportunities and working with faculty to prepare proposals for submission. Post-award activities include tracking expenses, supplying reports to faculty and interfacing with the business office. For more information call 678-915-3156, visit the web site at http://eu.spsu.edu/osp/ or stop by rooms J-354 and J-356.

The Usability Center (UC)

Since 1995, The Usability Center at Southern Polytechnic has been helping clients apply usability concepts to products in the development process. This allows the user's experience to improve the product before it reaches market. The Usability

Introduction and 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. Frequently, the phrase "nobody told me" is used as justification for an appeal to a specific rule. Such justification is not acceptable.

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 the student's responsibility 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 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.

	Part-Time	Half-Time	¾ Time	Full-Time
Undergraduate	Less than 6 Hours	6, 7, or 8 Hours	9, 10, or 11 hours	12 Hours or More

NOTE: Most forms of financial aid (except HOPE and PELL) require that a student be registered for at least 6 hours without regard to the institutional definition of a full-time student.

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

Auditing Classes

The following rules apply to Audit courses:

- Audit courses count at full value in determining the number of credit hours for which the student is enrolled.
- No academic credit is granted for audited courses.
- Students may not change a class to or from audit status after the close of the drop-add period.
- The grade assigned for auditing is "V" (visited), and will have no effect upon the student's scholastic average.

Students will not be permitted to receive credit for their participation in a course as an auditor.

Additionally, students who audit a course will not be allowed to receive academic credit, including credit by examination for the same course.

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 include8 Tm0.0005 Tc-r0.07183 -1.5211 TD0 Tc0 Tw(•)Tj/TT8 1 Tf0.4577 0 TD( )Tj/F3 1 Tf1.6549

Note that the federal government and some other agencies have different definitions of student status. For example, without regard to the above table, all undergraduate students must be enrolled in at least 6 hours to qualify for most types of financial aid (HOPE excepted).

- Part-Time Less than 6 hours
- Half-Time 6, 7, or 8 hours
- 3/4 Time 9, 10, or 11 hours
- Full-Time 12 hours or more

Exceptions to Academic Regulations

Exceptions to the Academic Regulations of Southern Polytechnic State University may be made by the faculty or by the Registrar whenever a consideration of the student's complete record indicates that the application of a specific regulation will result in an injustice.

See sections on appeals for additional information.

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 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".

Courses Taken at Other Institutions

Only courses taken at Southern Polytechnic State University, or courses completed under the cross-registration 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.

Quality Points are assigned as follows:

Grade	Quality Points

with the published deadline. The fee must be paid with check or money order only.

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

Students are allowed and encouraged to petition early.

Honors

To graduate with honors, a student must have earned a minimum of 40 hours (in residence) for the associate degree and a minimum of 60 hours (in residence) for the bachelor's degree. The following GPA's apply to honors:

The following are NOT available for students entering the system Summer 2008 or later:

- SAT - I Verbal score of at least 530 and a grade of "A" in English 1101, or
- SAT - I Verbal score of at least 590 and a grade of "B" in English 1101, or
- ACT English score of at least 23 and a grade of "A" in English 1101, or
- ACT English score of at least 26 and a grade of "B" in English 1101

(SAT or ACT scores must be from a national administration. Scores from institutional SAT or

Destruction of Records

The complete academic record of all matriculating students will become permanent records of the institution. Following the third continuous term of non-enrollment by a student, the nonacademic records will be placed in an inactive, but accessible status. Following the end of the ninth year of inactive status, the nonacademic records will be purged and destroyed by the official responsible for their maintenance.

Students also have the right to file complaints with the FERPA Office of the Department of Education, Washington, D.C., 20201, regarding alleged violations of the Act.

- Must have been evaluated and endorsed/certified/accredited by a nationally-known evaluation agency,
- Must be offering degrees and course work at the college or university level, and
- Must have a well-established international reputation for quality instruction.

Transcript Request

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 on line at getmytranscript.com.

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 registered classes.

- Include an informed use of information technology.
- Employ pedagogy designed to increase intellectual curiosity and to initiate a continuing interest in the subject matter.
- Feature courses that are challenging and rigorous and provide learning experiences that distinguish a field.
- Introduce the methods used by technical and scientific professionals such as the evaluation of empirical data, problem recognition, problem definition, the application of scientific principles, and logical problem solving.
- Be cohesive and provide entry to both specialized studies in the student's chosen field and remaining courses (whether upper or lower division) in the institution's general education curriculum.
- Be designed with the assumption that students have met all admissions standards to th

Core Courses

Listed below are Southern Polytechnic State University core-curriculum courses and the credit hours for those courses.

Area A

Essential Skills

Three Courses are Required

All students must complete Composition I and II and either Math 1111 or Math 1113 depending on their major.

Take both English classes and one mathematics class, depending on your major.

Course	Title	Hours
ENGL 1101	Composition I	3
ENGL 1102	Composition II	3
MATH 1111	College Algebra	3
	or	
MATH 1113	Pre-calculus	4
	or	
MATH 2253	Calculus I	4
	Area Total is 9 or 10 Hours depending on major	

NOTE: See your academic advisor for information about which specific math course you should take.

Area B

Institutional Option

Two Courses Are Required

All students must complete Speech 2400 and Science, Technology, and Society 2400.

Take both of these

Course EN281(e9c3538.14 Tm0958(ire TENGL 2.52187370 TdWorld LiteratO) II[(EN250.02c3538.14 Tm0 Tc0 Tcompl50011 TENGL 2.20187370 TdBritish Lit

	Music	
FREN 1002	Elementary French II	3
GRMN 1002	Elementary German II	3
SPAN 1002	Elementary Spanish II	3
FREN 2001	Intermediate French I	3
SPAN 2001	Intermediate Spanish I	3
FREN 2002	Intermediate French II	3
SPAN 2002	Intermediate Spanish II	3
		Area Total is 6 Hours

Area D

Science, Mathematics, and Technology
Three Courses are Required

All students must complete two courses from the sciences group and one course fr

PSYC 1101	Introduction to General Psychology	3
SOCI 1101	Introduction to Sociology	3

Cultures and Societies Group

Take one of these five.

Course	Title	Hours
ANTH 1102	Introduction to Anthropology	3
ES 1100	Ethnic Studies	3
GEOG 1101	Introduction to Human Geography	3
POLS 2401	Global Issues	3
RELG 1200	World Religion	3
	Area Total is 12 Hours	

Area F

Courses Related to the Major Program of Study

See your advisor or your academic department for the required courses in this area.

NOTE: The additional hours in Areas A and D carry over to Area F or general degree requirements.

Area Total is 18 Hours.

Total Hours for USG CORE **60**

eCore

eCore — short for electronic core-curriculum — allows University System of Georgia (USG) students the opportunity to complete their first two years of their collegiate careers in an online environment. eCore courses are taught entirely online, except for the occasional proctored exam. eCore offers courses in English, mathematics, science, history, and the social sciences that are designed, developed, taught and supported by faculty and staff from the USG. Please note

SPSU Majors and Areas of Study

Area of Interest	See Section in Catalog	Major Offered
Accounting	Business Administration	B.S., Accounting M.S. Accounting (see graduate catalog)
Apparel	Apparel Textile Technology	Bachelor of Apparel and Textiles
Applied Science	Applied Science	Bachelor of Applied Science (six different concentrations)
Architecture	Architecture	B. Architecture
Art	Arts	B.S., Technical Communication—Digital Media and Graphics
Astronomy	Physics	courses only
Biochemistry	Biology	B.S., Biology—Biochemistry and Molecular Biology
Bioinformatics	Biology	B.S., Biology—Bioinformatics
Biology	Biology	B.S., Biology
Business	Business Administration	B.S., Business Administration B.A.S., Business Management M.B.A., Business Administration (see graduate catalog)
Chemistry	Chemistry	B.S., Chemistry. B.S., Biology - Biochemistry
Civil Engineering	Civil Engineering	B.S., Civil Engineering
Civil Engineering	Civil Engineering Technology	B.S., Civil Engineering Technology B.S., Surveying and Mapping
Computer Engineering	Electrical Engineering Technology	B.S., Computer Engineering Technology
Computer Science	Computer Science	B.A., Computer Science B.S., Computer Science B.S., Computer Game Design and Development M.S., Computer Science (See Graduate Catalog)
Communication	Electrical Engineering Technology, English and TCOM	B.S., Telecommunications Engineering Technology B.S., Technical and Professional Communication
Construction Management	Construction Management	B.S., Construction Management M.S., Construction Management (See Graduate Catalog)
Construction Engineering	Construction Engineering	B.S., Construction Engineering
Content Design	English and TCOM	B.A.S., Content Design
Education (Math & Science)	Under Development	Letter of Intent Submitted, programs under development
Electrical Engineering	Electrical Engineering	B.S., Electrical Engineering
Electrical Engineering	Electrical Engineering Technology	B.S., Electrical Engineering Technology B.S., Computer Engineering Technology

		B.S., Telecommunications Engineering Technology M.S., Engineering Technology: Electrical (See Graduate Catalog)
Engineering	Engineering	multiple degrees – see catalog section

Pre-Medical	Biology	B.S. in Biology—Pre Professional B.S., Chemistry

Architecture

Offering the Bachelor of Architecture

The mission of the Architecture Program at Southern Polytechnic State University is to expand and extend the university mission into the realm of architecture. The program prepares students for professional practice in the design, planning, development, and stewardship of the built environment.

An architect tackles many issues: people's needs, building needs, a building site, and environmental concerns. Because creativity is the greatest source of solutions that fit all these issues, students find that a background in art proves helpful. The best ideas are bigger than a computer mouse or a drafting instrument, so we've structured a program that puts your imagination and your hands to work from Day One.

Known as a 2+3 program, our School begins with two years of Design Foundation. Students analyze the organization of space, building designs by noted Architects, and contextual issues. They evaluate each building's successes and failures, and discuss how they might make changes to improve the designs. This preparation introduces you to the issues, processes, and the spirit of experimentation that characterizes the professional design of built environments. This experience forms a foundation of skills that you develop more fully during the last three years of the program. Because our courses must be taken in sequence, Architecture students typically attend year-round.

Many students elect to take our Furniture Design Studio, following in the footsteps of great architects who design and create furniture — and learning much from the process of choosing materials, creating joints, and fitting together materials. A spacious workshop provides tools for use in modeling and construction projects.

Laptops and drafting instruments come in handy, but the most important piece of equipment for an architect is imagination. Initially, SPSU's award-winning faculty stimulate ideas through freehand drawing, which helps you reach into your creative "well" and channel those images onto paper.

Next, you'll learn a lot about scale and materials by putting models together. After you master these two skills, you're ready for computer use.

Throughout this program of study, you work with outstanding educator practitioners. Our faculty includes several Fellows of the American Institute of Architects, as well as faculty who have earned their Ph.D. — an unusual distinction in our profession.

About the program

SPSU is the only public state institution in Georgia to offer the Bachelor of Architecture degree. Our membership in the School of Architecture, Civil Engineering Technology, and Construction affords our students the opportunity to take classes in Construction and Civil Engineering for a multi-disciplinary degree. We also offer classes in furniture design, applied architectural research and design/build.

The faculty

Many of our faculty members are licensed architects, some with active architectural offices. Their fields of expertise encompass the areas of architectural design, environmental design, environmental psychology, cultural anthropology, urban design, urban planning, cultural diversity, structural design, methods of construction sustainability, architectural history and criticism, professional practice, and computer application... to name a few. The depth and breadth of our faculty's backgrounds is reflected in the choices available to Architecture students at Southern Polytechnic

Ameen Farooq	Professor and Department Chair
William J. Carpenter	Professor
C. Richard Cole	Professor
Howard F. Itzkowitz	Professor
Harry F. Kaufman,	Professor [Emeritus]
M. Saleh Uddin	Professor
Richard Becherer	Associate Professor
Willie (Peter) Pittman	Associate Professor
Anthony Rizzuto	Associate Professor
Ed Akins	Assistant Professor
Kathryn Bedette	Assistant Professor
Michael J. Carroll	Assistant Professor
Bronne Dytoc	Assistant Professor
Mine Hashas	Assistant Professor
Pyo-Yoon Hong	Assistant Professor
Elizabeth Martin	Assistant Professor
Ermal Shpuza	Assistant Professor
Robert Tango	Assistant Professor
Manole Voroneanu	Assistant Professor
Christopher Welty,	Assistant Professor
Hazem Ziada	Assistant Professor
Kemp Mooney	Lecturer
Pegah Zamani	Instructor

Admissions

University admission's deadline for our program is June 1st. Admission to the University does not guarantee admission to the Design Foundation nor to the Professional Program.

Summer Design Workshop

All students must complete the three-week Summer Architecture Design Workshop [DFN 1000]. Students must successfully complete the workshop to start in Design Foundation [DFN 1001] that fall. Math 1111 is also a pre-requisite to the DFN 1001

The Summer Design Workshop is a primer to design, that consist of a variation of research, design, and written exercises. These exercises engage students to know the critical and applied nature of design, studio culture, and the commitment needed to successfully complete the professional degree in Architecture.

All studios are taught in sequence. The first Design Foundation studio [DFN 1001], for example, is offered only in the fall term. Missing the admissions deadline and failure to successfully complete the mandatory Summer Design Workshop will require the student to repeat and successfully complete the design workshop in order to be admitted in the Design Foundation studios [DFN 1001] in the following year.

Computer Requirements

All students in the Architecture Program must have a laptop computer for their individual use by the beginning of the second semester of first year. We recommend a computer with a minimum of 2G+ Processor and a good graphics card to run 3D Design programs. Given the pace of change in digital technology, computer requirements are subject to change.

Transfer Students

Transfer students may apply for admission to the program. All transfer students coming from an NAAB accredited program must submit a portfolio for approval by the Architecture Faculty no later than 5:00 PM on the second Friday of April for possible advanced standing in the Architecture Program in the following fall and second Friday of October for possible advanced standing for Spring.

Any transfer student who is accepted and chooses not to submit a portfolio will be required to complete the Summer Design Workshop for placement in the first DFN studio. Transfer students must have satisfactory [C or above] transferring GPA. They must seca -1.-0eple1(s TDrecs)1.8(TD2(-0.001-0.7om anD-m .0023 no laave03 Tc-0.s)1.8(T023 uo laavrD-0.00Ds)1.92[((par T023 re s2 Tw0021 g.)Tj0 -1.7606) a[( )7l..2887 c- Computer Requirements

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- Electives/Directed study courses in the Professional Program can be taken as a Minor in another Program or

ARCH 3113	Architecture Culture III	3
ARCH 3211	Architecture Structures I	4
ARCH 3212	Architecture Structures II	3
ARCH 3311	Environmental Tech I: System Selection & Materials	3
ARCH 3313	Environmental Technology II: Human Comfort and: HVAC Systems	3
ARCH 4013	Architecture Studio III	4
ARCH 4014	Architecture Studio IV	4
ARCH 4114	Architectural Cultures IV	3
ARCH 4116	Urban Planning and Design Theory	3
ARCH 4224	Environmental Technology III: Codes and Technical Documentation	3
ARCH 4225	Environmental Technology IV: Lighting and Vertical Circulation	3
ARCH 4411	Design Cost Control	2
ARCH 5313	Professional Practice and Ethics	3
ARCH 5593	Thesis Project Research	2
ARCH 5998F	Focus Studio	5
ARCH 5999T	Thesis Project	4
Electives		17
Degree Program Total		**152**

Arts

Offering the Bachelor of Science in Technical Communication – Digital Media and Graphics
(Degrees Offered: Bachelor of Science in Technical Communication—Digital Media and Graphics concentration; Bachelor of Arts in English and Professional Communication—Media, Communication, and Culture concentration)

Southern Polytechnic State University offers a variety of arts courses that may be used to satisfy core requirements, or as free electives. In addition, we offer a concentration track in our BS in Technical Communication program that allows students to develop the applied arts and information design skills needed in a world increasingly dominated by digital media arts. We also offer a concentration track in our BA in English and Professional Communication for students who are interested in applying these skills to careers in marketing communication, media arts, and entertainment.

The Faculty:

Kami Anderson, *Assistant Professor*
Carol Barnum, *Professor*

Required Research Methods Course (3 credits; choose one)

TCOM 2030	Research in Technical Communication	
	OR	3
ENGL 2030	Research in Professional and Critical Writing	

Area F Electives (6 credits; choose two)

ENGL 2xxx	Any 2000-level literature survey	3-6
COMM 2060	International Communication[1]	3
COMM 2150	Ethics and Communication	3
Any additional course in Math, Science, or Computer Science (with programming) elective[1]		3
Any foreign language, 2001 or higher		3

Basic Required Courses in the Major (15 hours)

ENGL 3030	English Grammar for Professional Writing	3
TCOM 4030	Foundations of Graphics	3
COMM 4100	Small Group Communication	3
ENGL 4160	Rhetoric: History, Theory, and Practice	3
TCOM 4800	Project Portfolio[2]	3

English and Professional Communication Electives	15

Take any 3000-level departmental course, or approved SIS, STS[2], or other electives

Free Electives	15
Concentration Courses (Professional Writing and Communication or Media, Communication and Culture) *or* Minor Courses (International Studies or Spanish)	15
Degree Program Total	**120 credits**

Concentrations:

Professional Writing and Communication **15 hours**

ARTS 3000	Visual Thinking	3
COMM 3035	Organizational Communication	3
COMM 3050	Journalism	3
ENGL 3010	Science Writing[1]	3
ENGL 3015	Environmental Writing[1]	3
ENGL 3020	Proposal Writing[1]	3
ENGL 3025	Creative Writing Workshop	3
ENGL 3040	Writer's Workshop[1]	3
TCOM 3045	Fundamentals of Information Design	3
TCOM 4035	Fundamentals of Website Design	3

Media, Communication and Culture **15 hours**

ARTS 3000	Visual Thinking	3
COMM 3060	Media, Culture, and Society	3
COMM 3160	Media Theory and Practice	3
ENGL 3180	Film as Literature	3
ENGL 4170	Media and Narrative	3
TCOM 4035	Fundamentals of Website Design	3
TCOM 4040	Applied Graphics for Technical Communicators	3
TCOM 4045	Foundations of Multimedia	3
TCOM 4170	Video Production	3

Minors:

International Studies **15 hours**

In place of a concentration, students can choose to complete the BA in English and Professional Communication with a minor in International Studies. To be eligible for a minor in International Studies, the student must complete the following with a grade of C or better:

SIS 2903	Special Topics in Studies Abroad	
	OR	3
SIS 400x	Regional Studies	
Additional approved SIS courses[3]		12

Spanish **15 hours**

In place of a concentration, students can choose to complete the BA in English and Professional Communication with a minor in Spanish. To be eligible for a minor in Spanish, the student must complete the following:

SPAN 2001	Intermediate Spanish I	3
SPAN 2002	Intermediate Spanish II	3
Additional courses in Spanish at the 3000 level		9

NOTES:

1. Students may also take cross-listed TCOM sections of these courses.
2. Students may take STS 4000 or STS 4400 but not both for TCOM Electives.
3. Courses cannot have been used to satisfy core requirements. No more than two courses can be numbered below 2900.

For additional information about the B.A. program, contact the English, Technical Communication, and Media Arts Department at 678-915-7202, or email to TCOM@spsu.edu. You can also visit our website at tc.spsu.edu.

Biology

Offering the Bachelor of Science in Biology

Visit biology.spsu.edu for more information.

The Bachelor of Science (BS) degree provides students a program of study in modern biology with optional tracks in biochemistry and molecular biology, pre-professional studies, general biology, and bioinformatics.

The fast-moving disciplines of biology and physics are generating exciting careers, from medical scientist to genetic engineer and patent prosecution attorney. At Southern Polytechnic, you will learn in small classes and work in laboratories equipped with the newest scientific instrumentation. Faculty teach both labs and classes, including core courses offered both day and night. Bring a curious mind to our programs, and we'll help you develop a broad technical base for unlimited professional opportunities.

Balancing traditional studies with the growing emphasis on biotechnology, the Biology program gives students the knowledge and experience they need for advanced degrees or immediate employment. The general track offers the most diverse course work, and three others focus on particular interests: molecular/biochemistry, pre-professional, and bioinformatics. Students can also pursue independent research in our labs, which feature high-speed centrifuges, thermal cyclers, environmental chambers, and other modern research tools.

Today the pace of technological change doubles every 18 months, and key developments are occurring in molecular science. Collaborating on experiments will prepare you for team-based work, whether your dream job is safeguarding public health, analysis of DNA samples, or creating gene therapies for "incurable" diseases. Many of our students plan on medical school, but our program prepares you for many careers that blend science with business, law, pharmacy, and other professions.

Biology students in all tracks are strongly encouraged to avail themselves of SPSU's cooperative education or internship linkages with industry as an integral part of their educational experience.

Faculty:

Michael B. Beach, Ph.D., *Associate Professor*
Jennifer Louten, Ph.D., *Assistant Professor*
Peter Sakaris, Ph.D., *Assistant Professor*
Rajnish Singh, Ph.D., *Assistant Professor*
Mark Sugalski, Ph.D., *Associate Professor*
Veronica Allen, *Laboratory Manager*

Biology career options

- Agribusiness expert
- Conservation manager
- Dentist
- Dietitian
- Drug design and developer
- Environmental lawyer
- High school teacher or university professor
- Laboratory technician
- Pharmacist
- Physician
- Physical or occupational therapist
- Research molecular biologist or biochemist
- Scientific editor
- Veterinarian

Biology BS Requirements

ENGL 1101	Composition I	3
ENGL 1102	Composition II	3
TCOM 2010	Technical Writing	3
MATH 1113 [(Phi)-4.2(och)-I g (ro)-c 1113 [(Phi)-4.2(och)-I ochochPhi		3

BIOL 3300K	Ecology	4
BIOL ELEC	At Least 6 Biology Courses Above 2108K (Excluding Track requirements), with at least one course from each of the Cellular Form and Function group and the Organismal Form and Function group	20-24
Free Electives		10-14

Cellular Form and Function group

BIOL 3100K	Microbiology	4
BIOL 3400K	Cell Physiology	4
BIOL 4410K	Immunology	4
BIOL 4470	Plant Physiology	3

Organismal Form and Function group

BIOL 4100K	Entomology	4
BIOL 4200K	Zoology	4
BIOL 4400K	Anatomy & Physiology I	4
BIOL 4440K	Botany	4

Pre-Professional Track Requirements

BIOL 3400K	Cell Physiology	4
BIOL 4400K	Anatomy & Physiology I	4
BIOL 4460K	Anatomy & Physiology II	4
BIOL ELEC	At Least 4 Biology Courses Above 2108K (Excluding Track requirements)	12-16
Free Electives		10-14

A grade of "C" or better must be earned in all courses (excluding core areas A-E and free electives).

Biology Minor Requirements

To be eligible for a minor in Biology, the student must complete:

- A minimum of 18 semester hours of Biology coursework
- 9 of the 18 hours in Biology must be upper level courses (3000 or above)
- Students who use BIOL 2107K and/or 2108K to satisfy Core D requirements cannot use these courses to satisfy requirements of the minor

Business Administration

Offering:

- The Bachelor of Applied Science
- The Bachelor of Science in Accounting
- The Bachelor of Science in Business Administration
- The Masters of Business Administration *(See the graduate catalog)*

The baccalaureate programs in Business Administration prepare students for successful careers in management and marketing. Graduates of the program advance into supervisory and management positions in service and industrial enterprises.

The **Bachelor of Applied Science** degree is designed to cap designated associate degree programs. Admission to this program requires completion of an associate of applied science or associate of applied technology degree, in a business area from an accredited school in the Technical College System of Georgia. The program covers the common professional component in Business Administration with additional com2J/F3 1u05gia traositin TcwofealoBusiness A.4(m()7.9(n)ndidfe)]Tn

MGNT 3125	Business Finance	3
MGNT 3135	Marketing Principles	3
MGNT 3145	Legal Environment	3
MGNT 3205	Management Information Systems	3
MGNT 4115	Human Resources Management	3
MGNT 4125	Technology and Public Issues	3
MGNT 4145	International Management	3
MGNT 4151	Operations Management	3
MGNT 4595	Business Strategy	3
MGNT Elective:	Select 1 additional MGNT course	3
Minor Requirements		15

Students in the Bachelor of Arts in Business Administration program are required to complete a minor in International Studies and must also complete a foreign language requirement (by exam, coursework or demonstration).

Free Electives	2
Degree Program Total	**120**

Business Administration — Bachelor of Science Requirements

ENGL 1101	Composition I	3
ENGL 1102	Composition II	3
COMM 2000	Business Communication	3
MATH 1113	Pre-Calculus	4
MATH 2240	Survey of Calculus	3
COMM 2400	Public Speaking	2
STS 2400	Science, Technology and Society	2
Area C1	Course in Literature	3
Area C2	Course in Art and Culture	3
Area D	Two courses in Laboratory Science	8
Area E1	American Perspective	3
Area E2	World History	3
Area E3	Course in Behavioral Science	3
Area E4	Course in Cultures and Societies	3
ACCT 2101	Accounting I	3
ACCT 2102	Accounting II	3
ECON 2105	Macroeconomics	3
ECON 2106	Microeconomics	3
IET 2227	Introduction to Statistics	3
IET 3356	Quality Concepts and System Design	3
IET 4405	Operations Research	3
MGNT 1000	Orientation	1
MGNT 2201	Business Computer Applications	3
MGNT 3105	Management and Organizational Behavior	3
MGNT 3125	Business Finance	3
MGNT 3135	Principles of Marketing	3
MGNT 3145	Legal Environment of Business	3
MGNT 3205	Management Information Systems	3
MGNT 4115	Human Resources Management	3
MGNT 4125	Technology and Public Issues	3
MGNT 4135	Project Management	3
MGNT 4145	International Management	3
MGNT 4151	Operations Management	3
MGNT 4595	Business Strategy	3
Option	Select one of the options below	17*
	1. Concentration + 5 hours of free electives	(minor 18)
	2. Directed Electives	
	3. Minor in another discipline	

Degree Program Total	**121 hours**

Business Administration Options

Concentration, Business Electives, Directed Electives, or a Minor in Another Discipline

Students in the Bachelor of Science in Business Administration program may complete the remaining 17 hours of credit by taking electives in a concentration (management, marketing, management of information systems), directed electives, or by completing a minor in another field. At least three courses must be at the 3000-level or above.

Option 1: Concentration

Students may complete 12 hours (four courses) in Accounting, Management, Marketing, or MIS by completing four electives in the selected area (see the elective lists that follows). At least three courses must be at the 3000-level or above.

Option 2: Business Electives

Students may complete 12 hours of elective credit from all of the business electives. At least three courses must be at the 3000-level or above.

Option 3: Directed Electives

Students may create a customized group of four electives from business and other disciplines, subject to advisor approval At least three of the courses must be at the 3000-level or above.

*Option 4: Minor in another field of study

Students may complete a Minor in another field (15-18 hours). See the catalog for requirements in a specific minor. Must complete free electives if the minor is less than 17 hours. Note that some minors require 18 hours.

Accounting Concentration Electives:

Management Concentration Electives: Select 4 courses from the list below

MGNT 4100	Business Systems Analysis and Design
MGNT 4140	Management of Networks and Telecommunications
MGNT 4185	Technology Management
MGNT 4195	Current Readings in Management of Technology
MGNT 4903	Special Topics in Management
MGNT 4103	Marketing Management
MGNT 3170	Leadership
MGNT 4190	Entrepreneurship

Management Information Systems Concentration Electives (12 credits)

IT 1113	Programming Principles
MGNT 3500	Database Applications
MGNT 4100	Business Systems Analysis and Design
MGNT 4140	Management of Networks and Telecommunications

Marketing Concentration Electives (12 credits)

MGNT 3210	Professional Selling
MGNT 3224	Business Marketing
MGNT 3228	Market Research & Demand
MGNT 4103	Marketing Management
MGNT 4903	Special Topics in Marketing

Chemistry

Offering the Bachelor of Science in Chemistry

The Chemistry Program at Southern Polytechnic State University is part of the Department of Biology, Chemistry and Physics in the School of Arts and Sciences. The Bachelor of Science degree in Chemistry was approved by the Board of Regents in August, 2007. A minor in Chemistry is also offered. The Chemistry major offers two concentrations-General Chemistry and Materials Science.

The Chemistry major is designed to prepare students for careers in the traditional chemical sciences, as well as in biotechnology, environmental chemistry, and materials chemistry. The concentration of job growth in the pharmaceutical, medical, biotechnological, scientific and technical arenas has fueled the growth of opportunities within the chemistry industry as related to the development of new drugs and products used to combat illness and disease. Chemists are also needed to monitor and measure air and water pollutants to ensure compliance with local, state, and federal environmental regulations. Graduates trained in nanotechnology, the next frontier in material science, will likely participate in the development and manufacture of new materials that will help to solve new problems.

The Faculty:

Jack Duff, *Senior Lecturer*
Alan Gabrielli, Ph.D., *Professor and Dean of Arts and Sciences*
Lu Kang, Ph.D., *Assistant Professor*
Rajnish Singh, Ph.D., *Assistant Professor*
Zvi Szafran, Ph.D., *Professor and Vice President for Academic Affairs*
Wei Zhou, Ph.D., *Assistant Professor*
Stephanie McCartney, Ph.D., *Laboratory Manager*

		TOTAL 16

Spring Semester

CHEM 2512	Organic Chemistry II	4
CHEM 3100	Analytical Chemistry	5
PHYS 2212	Physics II	4
area C2	Art & Culture	3
		TOTAL 16

Year 3

Fall Semester

BIOC 3111	Biochemistry I	4
MSCI 3101	Material Science	4
area E3	Behavioral Science	3
ENGL	21xx Literature	3
Free Elective		3
		TOTAL 14

Spring Semester

CHEM 4310	Physical Chemistry II	4
CHEM 4411	Inorganic Chemistry	3
TCOM 2010	Technical Writing	3
area E4	Cultures & Societies	3
		TOTAL 16

Year 4

Fall Semester

CHEM 4311	Physical Chemistry I	4
CHEM 4412	Adv. Inorganic Chemistry	3

Civil Engineering

Offering the Bachelor of Science in Civil Engineering

Civil engineering is the oldest of the engineering disciplines and involves the planning, design, and construction of facilities essential to modern life.

Graduates can look forward to employment by construction companies; city and county engi

Civil Engineering Technology

Offering:

- The Bachelor of Science in Civil Engineering Technology
- The Bachelor of Science in Surveying and Mapping
- Certificate in Land Surveying

Accreditation

The B.S. Civil Engineering Technology program is accredited by the Technology Accreditation Commission (TAC) of ABET, 111 Market Place, Suite 1050, Baltimore, MD 21202 (www.ABET.org).

The B.S. Surveying and Mapping program is accredited by the Applied Science Accreditation

- Design residential subdivisions including lot layout, roads, and drainage.
- Perform coordinate calculations on the State Plane Coordinate System and transformations to other coordinate systems.
- Identify the surveyor's role in a land information system (GIS).
- Identify careers in surveying and mapping and be committed to professional development, ethical responsibility, and understanding societal issues in practice.
- Effectively communicate information in these formats: written, oral, mathematical, and graphical.
- Identify and perform typical surveying business activities including project management, bidding, contracts and overhead.
- Function effectively as team members (or team leaders) on multi-disciplinary teams.

In practice Graduates of the Surveying and Mapping Program will:

- Possess a balance of technical knowledge that encompasses surveying, mapping and land development.
- Meet industry expectations for expertise in planning, execution, and development of a survey, site/subdivision design and small-scale map.
- Meet industry expectations in evaluating ethical, societal, and environmental issues in the practice of surveying and mapping.
- Practice effective professional communications in formats common to industry practice.
- Be capable of career advancement, professional development, and can pursue registration as a Professional Land Surveyor in the State of Georgia.

The Surveying and Mapping program is offered through the Civil Engineering Technology Department. Students in Surveying and Mapping are taught the principles and techniques of field measurements and adjustments, boundary, topographic, geodetic, route and construction surveys.

Students apply classroom knowledge in laboratory exercises with modern surveying equipment including theodolites, electronic total stations, robotic instrumentation, Global Positioning System (GPS) satellite receivers, and optical alignment devices. Mapping topics include Geographic Information Systems (GIS), photogrammetry and remote sensing.

In laboratories, students develop maps from field measurements, design and layout construction projects, plan subdivision developments and establish horizontal and vertical control using satellite geodesy. Computer analysis is used extensively in reducing data, planning field layoE n g (n t 9 (i n e n

SURV 3222	Surveying II	4
SURV 4410	Surveying Computations and Adjustments	4
SURV 3421	Geographic Information Systems I	4
SURV 4465	Legal Aspects of Land Surveying	4
SURV 4470	Land Development Design	4
SURV 4415	Geodetic Surveying Methods	4
SURV 4475	Land Surveying Practice	2
SURV	Elective	4
Free Elective		3
Degree Program Total		**130**

NOTE: Students are required to earn a grade of "C" or better in all CET, CE, ENGR, and SURV courses required in the major and all courses used as elective major courses. Students are required to earn a GPA of 2.0 or better in all SURV, CET, CE and ENGR courses.

Land Surveying Certificate

The Land Surveying Certificate program is designed to prepare surveyors with the basic education necessary to take the Fundamentals of Land Surveying Exam and exceeds the State of Georgia academic registration requirements to become a Registered Land Surveyor. There are six courses required in the certificate program.

Required Courses (22 - hours)

SURV 2221	Surveying I	4

Computer Game Design and Development

Offering:

- The Bachelor of Science in Computer Game Design and Development
- The Minor in Computer Game Design and Development

Why study Computer Game Design and Development at SPSU?

The Bachelors of Science in Computer Game Design and Development equips students and graduates with the skills and knowledge to apply computing and software engineering techniques to the design and production of digital media for entertainment, research, and education. As a specialization within the field of computing, game design and development builds on and applies expertise in computing hardware and software to create engaging and immersive multimedia systems.

About the program

The program exposes students to the breadth of the field in the areas of digital media, human-computer interaction, the history and theory of gaming, game design, 2D and 3D graphics, simulation, modeling, software engineering, artificial intelligence, data structures, and algorithms. Current and emerging domains including online games (and massively multiplayer games or MMOG), casual games, mobile games, and serious/educational games are explored. Students ar

Three additional upper-level CGDD courses (9+ credits)

TOTAL: 18+ credits

Computer Science

Offering:

- The Bachelor of Science in Computer Science (ABET Accredited)
- The Bachelor of Arts in Computer Science

Why study Computer Science at SPSU?

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

Combining fundamental theory with hands-on lab work in current programming languages, the Computer Science degree gives students a breadth of knowledge -- of operating systems, architecture, networks, and databases -- in a high-tech environment. Our numerous labs are equipped with the latest technology, including a real-time lab with the most current commercial-grade software tools and an IT lab with its own server for management and IT courses. And in our classrooms, professors teach using networked computers and smart boards, and technologies that allow for interactive demonstrations of programs at work, and other innovative pedagogical techniques.

About the program

As preparation for diverse employment opportunities, the Computer Science program offers a wide range of Mathematics and Computer Science courses, such as Programming Language Concepts, Data Structures, and Algorithm Analysis. Students may elect to earn a Bachelor of Science degree in Computer Science, which offers a mix of rigor and exposure to current technologies, or the Bachelor of Arts in Computer Science, which offers flexibility, e.g., with a minor in one additional area of study. For student convenience, many classes are offered in the evenings, especially as students make progress tothe mo cu-7(s8ugreMathe)8o014 12(s)3(t.sI o]TJu4-3.6(ta))]TJ-14.9507 -1.2958 TD-0.0003 TbMathe

Computer Science — Bachelor of Science Requirements

BSCS Program Objectives

I. Students: Meet the educational needs and prepare them for careers within the discipline. Computer Science students should be well-versed in not only the fundamentals but also develop skills in problem solving, logic, organization, and ethics.

- To provide graduates with a thorough grounding in key principles and practices of computing, and in the mathematical principles that underpin them
- To provide graduates with an understanding of the ethical aspects of computing within society
- To provide graduates with applicable communication and team skills to be used in computing careers
- To prepare graduates for employment in the computing profession

II. Curriculum: Maintain a challenging curriculum that is consistent with national standards and regional industrial needs.

- Maintain a curriculum that is consistent with national recommended standards (ACM & IEEE Computer Society)
- Maintain an up-to-date curriculum by taking into account significant changes within the discipline and regional industrial needs

BSCS Learning Outcomes

Each graduate of the program should be able to:

- Convey the understanding of, and ability to solve, problems through artifacts of computing such as specifications, code and other written documents.
- Demonstrate and apply their knowledge of fundamental data structures and algorithms to solve problems.
- Describe and explain the major concepts in the areas of operating systems, programming languages, architecture, and distributed computing.
- Demonstrate an ability to work effectively in teams on computing related projects.
- Demonstrate an ability to effectively communicate technical information.
- Demonstrate an understanding of social, professional and ethical issues related to computing.
- Obtain the skills and knowledge to be employable in positions that utilize their computing education.

ENGL 1101	Composition I	3
ENGL 1102	Composition II	3
TCOM 2010	Technical Writing	3
MATH 1113	Pre-calculus	4
MATH 2253	Calculus I	4
MATH 2254	Calculus II	4
MATH 2345	Discrete Math	3
MATH 2260	Probability and Statistics I	3
COMM 2400	Public Speaking	2
STS 2400	Science, Technology, and Society	2
Area C Group 1	Take One Course From the Literature Group	3
Area C Group 2	Take One Course From the Art and Culture Group	3
Area D	Two lab science courses required	8
Area E Group 1	American Context	3
Area E Group 2	World History	3
Area E Group 3	Behavioral Science	3
Area E Group 4	Cultures and Societies	3
CSE 1002	Introduction to the Computing Disciplines	2
CSE 1301	Programming & Problem Solving I	4
CSE 1302	Programming & Problem Solving II	4
CSE 2642	Professional Practices and Ethics	2
CS 3123	Programming Language Concepts	3
CS 3153	Database Systems	3
CS 3224	Computer Organization & Architecture	4
CS 3243	Operating Systems	3
CS 3424	Data Structures	4
CS 4253	Distributed Computing	3
CS 4413	Algorithm Analysis	3
CS 4893	CS Capstone	3
SWE 2313	Intro to Software Engineering	3
SWE 3613	Software System Engineering	3
Approved Science Elective		4
Approved Math Elective (MATH 2255, MATH 2306, MATH 2335, or 3000 level or above)		3
Upper-level CS Electives (or Approved UL CGDD/SWE/IT Electives)		9
Free Electives (* MATH 1111 may not be used as free elective hours)		5
Degree Program Total		**122**

Computer Science — Bachelor of Arts Requirements

BACS Program Objectives

- To meet the educational needs of the students and prepare them for careers using their computing knowledge. Students should be well versed in not only the fundamentals but also develop skills in problem solving, logic, organization, and ethics.
- To provide graduates with a thorough grounding in key principles and practices of computing.
- To provide graduates with an understanding of the ethical aspects of computing within society.
- To provide graduates with applicable communication and team skills to be used in computing careers.
- C

BACS Learning Outcomes

Each graduate of the program should be able to:

- Convey the understanding of, and ability to solve, problems

CS 3153	Database Systems	3
IT 3203	Introduction to Web Development	3

And one of the following:

SWE 2313	Introduction to Software Engineering	3
CS 3424*	Data Structures	4
IT 4203	Advanced Web Development	3
Total:		**17 - 18 hours**

**NOTE: CS 3424 has a pre-requisite of MATH 2345 Discrete Mathematics.*

Computer Science Graduate

CS 5123	Advanced Programming and Data Structures
CS 5153	Database Systems
CS 5183	Object-Oriented Programming
CS 5223	Computer Architecture
CS 5243	Operating Systems
CS 5423	Mathematical Structures for Computer Science
CS 6023	Research Methods and Presentations
CS 6103	Discrete -Time Signals and Systems
CS 6123	Theory and Implementation of Programming Languages
CS 6143	Enterprise Application Development
CS 6153	Advanced Database Systems
CS 6163	Information Retrieval and Search Engines
CS 6223	Advanced Computer System Architecture
CS 6243	Advanced Concepts in Operating Systems
CS 6263	Computer Networks
CS 6283	Real-Time Systems
CS 6293	Information Security: Implementation and Application
CS 6323	Human Factors
CS 6353	Computer Graphics and Multimedia
CS 6413	Theory of Computation
CS 6423	Algorithmic Processes
CS 6453	Simulation and Modeling
CS 6523	Survey of Artificial Intelligence
CS 6563	Digital Image Processing and Analysis
CS 6593	Selected Topics in Artificial Intelligence
CS 6703	Independent Study
CS 6901-6903	Special Topics
CS 7803	Master's Thesis

Construction Engineering

Offering the Bachelor of Science in Construction Engineering

The Construction Engineering program is part of the Division of Engineering at Southern Polytechnic State University. In this major the traditional areas of civil engineering and construction are combined to produce graduates who are able to work effectively in all aspects of the construction industry.

Construction Engineering requires rigorous training in basic engineering principles along with the development of skills in the areas of planning and management of construction projects and the associated systems and resources. Graduates in the area of Construction Engineering will be required to master technical elements and to demonstrate particular competence in the areas of communication, fiscal management, and project control. The broad-based background is tailored to develop professionals who will be able to move between the technical and managerial aspects of construction projects and to serve in

CM 6020	Ergonomics Analysis and Productivity
CM 6100	Construction Law: Contracts and Claims
CM 6110	Commercial Construction Transactions
CM 6120	Dispute Resolution
CM 6130	Case Studies in Construction
CM 6200	Strategic Bidding and Estimating
CM 6310	Advanced Scheduling and Integrated Controls
CM 6320	Construction Information Systems
CM 6330	Advanced Operations: Constructability, Value Eng., Productivity
CM 6340	Analytical Tools for Construction Managers
CM 6410	Building Failures and Defective Work
CM 6420	Tall Buildings
CM 6430	Automation and Robotics
CM 6510	Marketing of Construction Services
CM 6520	International Construction
CM 6530	Construction Markets
CM 6540	The Construction Company
CM 6600	Construction Risk Analysis and Control
CM 6800	Construction Seminar
CM 6901-6904	Special Topics
CM 7701-7704	Master's Project
CM 7801-7804	Master's Thesis

recruit out-of-state to hire graduates with construction management degrees. As a result, the program at Southern Polytechnic State University was established through the seed money of the members and associate members of the Georgia Branch of the Associated General Contractors of America, Inc. Southern Polytechnic State University is a member of Associated Schools of Construction (ASC). The fundamental objective of the ASC is to establish, advance, and sustain construction education as a unique and progressive academic discipline. The establishment and nurturing of the construction program is evidence of Southern Polytechnic State University's commitment to this objective.

The Faculty

Our faculty members belong to numerous professional organizations including the ABC, AGC, AIC, ASCE, ASEE, ASHRAE,

CM 4560	Construction Project Management	3
CM 4800	Construction Management Technique	3

Note: Specialty Prerequisite for CM 4800 is CM 4480 in addition to the other prerequisites

Construction Minor

To be eligible for a minor in Construction, the student must complete the following courses:

CM 2000*	Construction Graphics	3
CM 3000*	Computer Applications in Construction	3
CM 3160*	Commercial and Heavy Construction Methods	3
CM 3410	Quantity Surveying	3
CM 4510	Construction Scheduling	3

**Students having the prerequisite knowledge in these courses may substitute courses of greater or equal credit from the following list with the consent of the CM Department Chair:*

CM 3411	Construction Estimating Software	2
CM 3420	Construction Estimating and Bid Preparation	4
CM 4511	Construction Scheduling Software	2
CM 4560	Construction Project Management	3
CM 4760	Construction and Real Property Law	3

Construction Management Certificate Programs

Certificate programs are offered to provide training and education for students and working professionals in various areas of construction. Students can usually complete requirements in 3 to 4 terms. These courses may also be applied toward completing a B. S. degree in Construction.

Admission Requirements:

Applicants must meet all SPSU admissions requirements for undergraduate enrollment.

Certificate in Land Development

The primary objective of the Certificate in Land Development is to provide training and education to members of the real estate and land development field in construction and lad development principles and practices. Students can complete the requirements in 3-4 semesters. These courses may also be applied toward completing a B.S. degree in Construction Management upon acceptance to SPSU.

Prerequisites must be met prior to enrollment in certain certificate courses.

Required Courses: (14 semester hours)

CM 3160	Commercial & Heavy Construction Methods	3
CM 3310	Introduction to Development	3
CM 3710	Site Planning	4
CM 4570	Land Development Process I	4

*may substitute courses from electives list if competency can be demonstrated

Elective Courses: (7 semester hours)

CM 2000	Construction Graphics	3
CM 3110	Residential & Light Construction Methods	3
CM 3410	Construction Quality Surveying	3
CM 3430	Construction Estimating III	3
CM 4510	Construction Scheduling	3
CM 4620	Land Development Process II	4

Certificate in Project Management Construction

The professional Certificate in Project management is designed for working professionals who wish to further their knowledge in construction project management. The certificate will also be useful for those individuals who wish to make a career change to the construction industry, or to those people who find themselves in the construction industry without first gaining a background in construction.

Prerequisites must be met prior to enrollment in certain certificate courses.

Required Courses: (11-12 semester hours)

CM 2000	Construction Graphics	3
CM 3000	Computer Application in Construction	3
CM 3110	Residential and Light Construction Methods	3
	OR	
CM 3160	Commercial and Heavy Construction Methods	3
CM 4560	Construction Project Management	3

Elective Courses: (9 semester hours required)

CM 3410	Construction Quality Surveying	3
CM 3420	Construction Estimating and Bid Preparation	4
CM 4510	Construction Scheduling	3
CM 4710	Construction Safety	4
CM 4760	Construction and Real Property Law	3

Certificate in Land Development The primary objective of the Certificate in Land Development is to provide training and education to members of the real estate and land development

CM 4570	Land Development Process II	4

**May substitute courses from electives list if competency by Test can be demonstrated*

Elective Courses: (7 semester hours required)

CM 2000	Construction Graphics	3
CM 3110	Residential and Light Construction Methods	4
CM 3410	Construction Quality Surveying	3
CM 3430	Construction Estimating III	3
CM 4510	Construction Scheduling	3
CM 3620	Finance and Feasibility	4
CM 4620	Development Process II	3

Certificate in Specialty Construction

The primary objective of the Certificate in Specialty Construction is to provide training and education for management of mechanical and electrical construction.

Prerequisites must be met prior to enrollment in certain certificate courses.

Required Courses: (19 semester hours)

CM 3180	Mechanical and Electrical Building Systems	4
CM 3280	Mechanical, Electrical and Plumbing Codes & Loads	4
CM 3480	Estimating IV	4
CM 4480	Design/Build MEP Systems	4
CM 3190	Sustainable Construction	3

Elective Courses: (2 semester hours required)

CM 3620	Construction Finance and Feasibility	4
CM 3500	Building Codes	2
CM 4510	Construction Scheduling	3
CM 4710	Construction Safety	4

An online version of Specialty Construction certificate is also available.

Electrical and Computer Engineering Technology

Offering:

- The Bachelor of Science in Electrical Engineering Technology
- The Bachelor of Science in Computer Engineering Technology
- The Bachelor of Science in Telecommunications Engineering Technology

Accreditation

The Bachelor of Science degree programs in Electrical Engineering Technology, Computer Engineering Technology, and Telecommunications Engineering Technology are accredited by the Technology Accreditation Committee (TAC) of ABET, 111 Market Place, Suite 1050, Baltimore, MD 21202 (www.ABET.org).

Electrical and Computer Engineering Technology

Your challenge: Create a computer-aided testing system. Your solution: Write software, design circuits, and demonstrate how the two work together. Your result: Technological expertise that translates into high-powered careers.

Highly ranked and nationally respected, our three engineering technology programs provide plenty of hands-on learning. Flexible schedules give you the option of attending day or night, and our faculty bring their consulting experience into every lab. In small classes and on team projects, you learn the practical skills needed in many careers, from design and test engineering to research and development, sales, management, and telecommunications network administration. Engineering technologists could fill four

evaluate and solve complex technical and non-technical problems.
- Recognize the need for a commitment to pursue continuous self-improvement and lifelong learning.
- Be cognizant of contemporary professional, societal and global issues and be aware of and respect diverse cultures.
- Obtain and maintain a meaningful employment in their respective disciplines and attain increasing levels of responsibility and leadership in their chosen career field.

Electrical Engineering Technology

(Bachelor of Science Degree Offered)

The Electrical Engineering Technology program prepares graduates to enter the technical wo

MATH 2254	Calculus II	4
MATH 2306	Ordinary Differential Equations	3
MATH 2335	Numerical Methods I	3
PHYS 2211	Principles of Physics I	4
PHYS 2212	Principles of Physics II	4
COMM 2400	Public Speaking	2
STS 2400	Science, Technology, and Society	2
TCOM 2010	Technical Writing	3
Area C Group 1	Take One Course From the	

Area C Group 1	Take One Course From the Literature Group	3
Area C Group 2	Take One Course From the Art and Culture Group	3
Area E Group 1	American Context	3
Area E Group 2	World History	3
Area E Group 3	Behavioral Science	3
Area E Group 4	Cultures and Societies	3
ECET 1000	Orientation	2
ECET 1011	Fundamentals	3
ECET 1100	Circuits I	4
ECET 1200	Digital I	4
ECET 2110	Circuits II	4
ECET 2300	Electronics I	4
ECET 2210	Digital II	4
ECET 2310	Electronics II	4
ECET 2800	Introduction to Telecommunications	3
ECET 3400	Data Communications	4
ECET 3410	High Frequency Systems	4
ECET 3810	Applications of	

Electrical Engineering

Offering the Bachelor of Science in Electrical Engineering

The Electrical Engineering program is part of the Division of Engineering at Southern Polytechnic State University. Electrical engineering is arguably the largest discipline of engineering. It focuses on the application of the principles of electricity and its use with electrical devices and systems. In this energy conscious world, a thorough understanding of energy and its uses is essential to the success of an electrical engineer.

Nearly every industry utilizes electrical engineers. Graduates have the qualifications to enter careers in areas such as, but not limited to, telecommunications, computer engineering, manufacturing, the aerospace industry, power generation and distribution, alternative energy, robotics, and automation. Typical job titles for graduates may include electrical engineer, electronics engineer, telecommunications engineer, project engineer, planner, project supervisor, consulting engineer, and design engineer.

Electrical Engineering requires rigorous training in basic engineering principles along with the development of skills in the areas of planning and management of design projects and the associated systems and resources. Graduates in the area of Electrical Engineering will be required to master technical elements and to demonstrate particular competence in the areas of communication, fiscal management, and project control. The broad-based background is tailored to develop professionals who will be able to move between the technical and managerial aspects of electrical engineering projects and to serve in key leadership positions within the engineering profession.

The Bachelor of Science in Electrical Engineering was approved by the Board of Regents in August 2009.

Faculty:
Lance Crimm, *P.E., Professor and Program Director*
Ying Wang, *Ph.D., Assistant Professor*

Electrical Engineering

ENGL 1101	Composition I	3
ENGL 1102	Composition II	3
COMM 2400	Public Speaking	2
STS 2400	Science, Technology, and Society	2
Area C1	Course in English Literature	3
Area C2	Course in Art and Culture	3
Area E1	Course in History: American Context	3
Area E2	World History	3
Area E4	Culture and Societies	3
ECON 2107	Engineering Economics	3
CHEM 1211K	Principles of Chemistry I	4
MATH 2253	Calculus I	4
MATH 2254	Calculus II	4
MATH 2255	Calculus III	4
MATH 2306	Ordinary Differentials Equations	3
PHYS 2211K	Principles of Physics I	4
PHYS 2212K	Principles of Physics II	4
EE 1000	Foundations of Electrical Engineering	2
CSE 1301E	Programming and Problem Solving I	4
ENGR 2214	Statics	3
ENGR 2301	Circuit Analysis I	4
ENGR 2302	Circuit Analysis II	3
ENGR 2401	Electronic Devices and Systems	3
ENGR 2501	Digital Logic Design	4
MATH 2260	Probability and Statistics	3
EE 3701	Micro Embedded Systems	4
EE 3704	Electromagnetics	4
EE 4201	Control Systems	4
EE 3705	Signals and Systems	3
ENGR 4402	Engineering Ethics	1
EE 3801	Microelectronics	4
EE 3702	Communications Systems	4
EE 3703	Electric Machines	3
EE 4701	Professional Practice	3
EE 3/4XXX	Technical Electives	12
EE 3/4XXX	Engineering Science Elective	3
EE 4850	Senior Project	3
Degree Program Total		**129**

The Electrical Engineering degree requires a grade of "C" or better in all EE and ENGR courses applied to degree requirements.

Engineering

Offering:

- Bachelor of Science Degrees
- Master of Science Degrees

Southern Polytechnic State University offers a variety of engineering programs, including Civil Engineering, Construction Engineering, Electrical Engineering, Mechanical Engineering, Mechatronics Engineering, Software Engineering, and Systems Engineering at the undergraduate level, and Software Engineering and Systems Engineering at the Masters level. Individuals

	OR	3
ENGL 2030	Research in Professional and Critical Writing	

Area F Electives (6 credits; choose two)

ENGL 2xxx	Any 2000-level literature survey	3-6
COMM 2060	International Communication[1]	3
COMM 2150	Ethics and Communication	3

Any additional course in Math, Science, or Computer

Apparel Textile Technology

Fashion Design and Product Development

Bachelor of Apparel and Textiles

Fashion is clothing that is in style at a particular time. The focus of the Fashion Design and Product Development program is the "concept to distribution" design and development of fashions for the ready-to-wear clothing market. Men's wear, women's wear, active and leisure apparel, children's wear and many other sewn products are all part of the fashion/apparel industry, one of the

MGNT 3135	Marketing Principles	
MGNT 3205	Management Information Systems	
MGNT 4145	International Management	
ATT 4820	Senior Internship	
Free Electives		8
Total Degree Requirements		121

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Apparel and Textiles Minor

To be eligible for a minor in Apparel and Textile Technology, the student must complete 18 credit hours from the following courses with at least 9 hours of upper division course work.

ATT 1300	International Sourcing	3
ATT 1400	Principles of Merchandising	3
ATT 2301	Apparel Computer-Aided Design I	4
ATT 2505	Fabric Formation and Design	3
ATT 2600	Apparel Analysis & Product Dev	3
ATT 3100	Fashion Merchandising	3
ATT 3602	Apparel Computer-Aided Design II	4
ATT 3800	Fashion Forecasting & Trends	3
ATT 4444	QA for Textiles & Apparel	4
ATT 4670	Apparel/Textile Business Practices	3
ATT 4750	Advanced Design and Product Dev	3

Certificate in Apparel Product Development

The Fashion Design and Product Development program offers a Certificate in Apparel Product Development. The objective is to provide training and education to members of the apparel industry, graduates of fashion and design schools and other interested parties seeking to improve their skills. The courses may also be applied toward completing the Bachelor of Apparel and Textiles degree. All requirements for normal admissions are applicable. The course includes five classes from the following:

ATT 1300	ATT 1400
ATT 2301	ATT 2600
ATT 3602	ATT 4670
ATT 3800	ATT 2505

General Studies

Offering:

The Associate of Science Transfer Degree

General Studies Transfer Program

The Associate of Science General Studies Transfer Program is designed for students who wish to complete the core at SPSU and then transfer to another institution.

Associate of Science General Studies Transfer Degree

COMM 2400	Public Speaking	2
ENGL 1101	Composition I	3
ENGL 1102	Composition II	3
MATH 1111	College Algebra	3
MATH 1113	Pre-Calculus	4
STS 2400	Science, Technology, and Society	2
Area C Group 1	Take One Course from the Literature Group	3
Area C Group 2	Take One Course from the Art and Culture Group	3
Area D	Any Two Lab Sciences	8
Area E Group 1	American Context	3
Area E Group 2	World History	3
Area E Group 3	Behavioral Science	3
Area E Group 4	Cultures and Societies	3
Elective Courses as defined below		17
Program Total		**60**

Elective Courses:

At least one course in humanities (Area C)	3
At least one course in social sciences (Area E)	3
Any humanities, social science, math, lab science or any area F course from any program.	11

Relevant Course Descriptions:

Core Courses
Humanities: see English (ENGL), Arts (ART); Modern Languages (FREN, SPAN)
Social Sciences: (including ANTH, ECON, ES, GEOG, PSYC, RELG, SOCI, STS) see also History (HIST), Political Science (POLS)

History

Offering:

Bachelor of Science in International Studies

Concentration in History

The Bachelor of Science in International Studies

Concentration in History of Science and Technology

The Faculty:

Richard Bennett, *Associate Professor and Director of International Programs*
Albert Churella, *Associate Professor*
J. LaJuana Cochrane, *Associate Professor and Psychology Coordinator*
Jamye Hickman, *Assistant Professor*
Marianne Holdzkom, *Assistant Professor*
Julie Newell, *Professor and Chair of Department*
Thomas J. Nisley, *Assistant Professor*
Bernice Nuhfer-Halten, *Professor and Language Coordinator*
Thomas E. Rotnem*, Professor, International Studies Coordinator, and Political Science Coordinator*
William Skutans, *Lecturer*
Roger Soiset, *Lecturer*
Carl Snook, *Assistant Professor*
Mark D. Vickrey, *Senior Lecturer*

The Program:

The History program is part of the Department of Social and International Studies, in the School of Arts and Sciences at Southern Polytechnic State University. By offering an International Studies degree with concentrations in History and History of Science and Technology, SPSU seeks to produce graduates who not only understand the historical, political and economic processes of globalization, but who also possess the technological skills and knowledge that will allow them to deal with the new demands of a more global society.

The International Studies—History or **International Studies—History of Science and Technology** degree will prepare graduates for employment in:

International business
Intelligence
Graduate study
The non-profit sector
Pre-Law
Government
Public Policy

Students pursuing this degree must complete:

The Core Curriculum	60

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A grade of "C" or better is required in all courses used in the major prescribed for the bachelor degree program.

Concentration in Logistics

The primary objective of the Concentration in Logistics is to provide training and education to students interested in entering the Supply Chain industry.

Required Courses

IET 2227	Introduction to Statistics	3
IET 2449	Logistics Planning & Control	3
IET 3511	Sustainability Engineering	3
IET 4405	Operations Research	3
IET 4115	Human Resource Management	3
IET 4151	Production and Operations Management	3
Total		21

Concentration in Quality Principles

The primary objective of the Concentration in Quality Principles is to provide training and education to students interested in quality system principles, methodology, elements and standards.

Required Courses:

IET 2227	Introduction to Statistics	3
IET 3339	Statistical Quality Control	3
IET 3356	Quality Conceyselem3671em prs w(3ntrol)]TJ27.9648 -0.105	

IET 3322	Work Measurement and Analysis	4
IET 3403	Industrial Experimentation	3
IET 4422	Plant Layout and Material Handling	4
Total		**18**

NOTE: A 2.0 GPA in courses used in the major is required (excluding the international studies minor courses).

Industrial Engineering Technology Department Certificate in Logistics

The primary objective of the Certificate in Logistics is to provide training and education to members of the Supply Chain industry that need to improve skills and knowledge in the latest technology available in their field. Students can complete the requirements in 4-6 semesters. The courses may also be applied toward completing a B. S. degree in Industrial Engineering Technology. The program will be offered on campus, through distance learning, and over the Internet.

Information Technology

Offering:

Bachelor of Science in Information Technology

Bachelor of Applied Science in Information Technology

The Bachelor of Science in Information Technology (BSIT) degree has the primary objective of meeting the high demand for professional degrees in the strategy, development, and administration of integrated computing, management, and information technology systems. This offering is targeted at the metro Atlanta region, and will serve those students interested in combining computer science, management, and information technology curricula.

The Bachelor of Applied Science in Information Technology (BASIT) degree is designed to serve students who hold an associate degree in information technology from a community college or a Technical College System of Georgia (TCSG) institution, but lack the general education coursework required for a Bachelor of Science degree to continue their education in Southern Polytechnic State University.

Information Technology (IT) is the term used to describe the convergence of Computer Science, Management, and Information Systems. IT emphasizes the management and performance of information technology planning, development, implementation, and operation, and development of the infrastructure to support the processes necessary to achieve organizational objectives.

The Faculty:

Bob Brown, *Lecturer*
Richard Halstead-Nussloch, *Professor*
Fred D. Hartfield, Jr., *Associate Professor*
Svetlana Peltsverger, *Assistant ProfessotJ-eee to*

IT 4723	IT Policy and Law	
	OR	
MGNT 3145	Legal Environment	3

Systems & Administration Concentration

IT 4203	Adv Web Development	3
IT 4153	Advanced Database	3
IT 4333	Network Conf & Administration	3
IT 3653	Client Server System Administration	3

Advanced Software Development Concentration

IT 4683	Management Information Systems	3
IT 4723	IT Policy and Law	
	OR	
MGNT 3145	Legal Environment	3
SWE 4663	Software Project Management	3
SWE 4724	Software Engineering Project	3

Information Assurance & Security Concentration

IT 4833	Wireless Security	3
IT 4843	Ethical Hacking for Effective Defense	3
IT 4853	Computer Forensics	3
IT 4903	Special Topics in Information Security	3

Information Technology Bachelor of Applied Science Requirements

ENGL 1101	Composition I	3
ENGL 1102	Composition II	3
MATH 1111	College Algebra	3
COMM 2400	Public Speaking	2
STS 2400	Science, Technology, and Society	2
Area C Group 1	Take One Course from the Literature Group	3
Area C Group 2	Take One Course from the Art and Culture Group	3
MATH 1113	Pre-Calculus	4
Area D	See your advisor before you select science courses (2 science courses)	8
Area E Group 1	American Context	3
Area E Group 2	World History	3
Area E Group 3	Behavioral Science	3
Area E Group 4	Cultures and Societies	3
CSE 1301	Programming and Problem Solving I	4
IT 1324	Advanced Programming Principles	4
	OR	
CSE 1302	Programming and Problem Solving II	4
CSE 2642	Professional Practices & Ethics	2
IT 3883	Advanced Applications Development	3
IT 3123	Hardware/Software Concepts	3
CS 3153	Database Systems	3
IT 3203	Introduction to Web Development	3
IT 3223	Software Acquisition and Project Management	3
IT 3423	Operating Systems Concepts and Administration	3
IT 4323	Data Communications and Networks	3
IT 4823	Information Security Administration	3

Choose two from the following:

IT 4123	Electronic Commerce	3
IT 4683	Management Information Technology	3
IT 4723	IT Policy and Law	3
MGNT 3105	Management & Organizational Behavior	3
Technical Block (AAS major courses)		**37**

Students who have completed an AAS degree may obtain transfer credit for up to 60 credit hours from approved associate programs. If a course listed above is covered by a transferred course, students have to take another course in its place from the BSIT program at the same level or above.

Degree Program Total		**120**

Information Technology Minor

To be eligible for a minor in Information Technology, the student must complete 18 credit hours of the following courses with a grade of "C" or better:

Information Technology Minor Requirements

CSE 1301	Programming and Problem Solving I	4
IT 1324	Advanced Programming Principles	4
IT 3123	Hardware/Software Concepts	3
IT 3203	Introduction to Web Development	3

And one of the Following: (Or a course approved by the Department Chair)

IT 4123	Electronic Commerce	3
IT 3883	Advanced Applications Development	3
IT 4203	Advanced Web Development	3
MGNT 4140	Management of Networks & Telecommunications	3

International Stu-lios

Surveying Concentration (16 credits)

This concentration will give students a basic understanding of the principles and terminology involved in surveying. Students taking this option should take PHYS 1111 and PHYS 1112 to satisfy the lab science core requirements.

CE 1001	Orientation	(1)
EDG 2160	Civil Engineering Graphics	(3)
SURV 2221	Surveying I	(4)
SURV 3222	Surveying II	(4)
SURV 3421	Geographic Information Systems	(4)

Technical Communication Concentration (15 credits)

This concentration will give students a basic understanding of the principles and terminology involved in technical writing.

COMM 2000	Business Communication	(3)
TCOM 2010	Technical Writing	(3)
Any three TCOM courses numbered 3000 or above		(9)

Technology and the Law (Pre-Law) Concentration (15 credits)

One of the most common career paths chosen by students of International Studies is a legal career. Additionally, legal training in technology issues is in demand at present and is extensively needed domestically as well as internationally. This concentration will provide International Studies majors with additional coursework that will better prepare them for pursuing a career in law upon graduation with a B.S. in International Studies.

American Context Core: Take both courses not used to satisfy General Core		(6)
HIST 2111	U.S. History to 1877	
HIST 2112	U.S. History since 1877	
POLS 1101	American Government	
Technology and the Law Electives: Select three courses		(9)
CM 4760	Construction Law	
MGNT 3145	Legal Environment of Business	
POLS 3201	Constitutional and International Law	
POLS 3301	Modern Political Theory	
POLS 3401	Regulatory and Environmental Law	
POLS 3501	Intellectual Property Issues	

International Studies Minor

To be eligible for a minor in International Studies, the student must complete the following with a grade of C or better:

1. **Select one course from the following:**

SIS 2903	Special Topics in Studies Abroad
SIS 400x	Regional Studies

2. **Select four courses not used to satisfy core requirements from the following list.**

No more than two can be numbered below 2900.

ANTH 1102	Introduction to Anthropology
ECON 1101	Introduction to Economics
GEOG 1101	Introduction to Human Geography
GEOG 3101	World Regional Geography
HIST 1111	World Civilization to 1500
HIST 1112	World Civilization since 1500
HIST 3301	Diplomatic and Military History Since 1815
HIST 3401	Social and Cultural History During the 20th Century
HIST 3501	Colonization and Rebellion in the Trans-Atlantic World
HIST 3601	History of the Pacific Rim
HIST 3801	Contemporary World History Since 1945
MGNT 4145	International Management
POLS 2401	Global Issues
POLS 2801	Comparative Politics
POLS 3101	International Political Economy
POLS 3601	Contemporary World Politics
POLS 4101	Political Economy of Post-Communist Transformation
PSYC 3101	International Social Psychology
RELG 1200	World Religion
SIS 3600	Comparative Culture
SIS 3903	Special Topics in International Studies
SIS 400x	Regional Studies (must be different from course used to satisfy 1.)
SIS 4100	Cross-National Technology Policy Analysis
STS 4000	International Issues in Science and Technology
STS 4400	Topical Studies in Science and Technology

3. **Demonstrate proficienc**

Mathematics

Offering:

Bachelor of Science in Mathematics

A Bachelor of Science in Mathematics encompasses the breadth of Mathematics and its applications in a small, friendly, and supportive setting. Courses in differential equations, analysis, calculus, discrete mathematics, and linear and abstract algebra combine a theoretical and applied understanding of these areas. Additional courses in Physics and Computer Science explore how Mathematics can be used to solve real-world problems.

Programs in Mathematics - The programs in Mathematics are designed to prepare the student for further study in mathematics, education, or other subjects or for employment in a variety of fields.

Mathematics is the foundation upon which all other technical fields rest, and as such, is the perfect choice for students who have a profound mathematical curiosity, and a desire to apply their problem solving skills. The soar

Mechanical Engineering

Offering the Bachelor of Science in Mechanical Engineering

Mechanical engineering is arguably the second largest discipline of engineering. It focuses on the application of the principles of mechanics and materials to design machines and devices. In this energy conscious world, a thorough understanding of energy and its uses is essential to the success of a mechanical engineer.

Graduates have the qualifications to enter careers in areas such as, but not limited to, manufacturing, aerospace industry, power generation and distribution, automotive design, machine design, alternative energy, robotics, and automation. Typical job titles for graduates may include plant engineer, project engineer, planner, project supervisor, consulting engineer, and design engineer.

Mechanical Engineering requires rigorous training in basic engineering principles along with the development of skills in the areas of planning and management of design projects and the associated systems and resources. Graduates in the area of Mechanical Engineering will be required to master technical elements and to demonstrate particular competence in the areas of communication, fiscal management, and project control. The broad-based background is tailored to develop professionals who will be able to move between the technical and managerial aspects of mechanical engineering projects and to serve in key leadership positions within the engineering profession.

The Bachelor of Science in Mechanical Engineering was approved by the Board of Regents in August 2009.

The Faculty:

Cyril Okhio, *Ph.D., C.Eng., Associate Professor and Interim Program Director*
Mohammed S. Mayeed, *Ph.D., Assistant Professor*
Laura A. Ruhala, *Ph.D., Associate Professor*
Richard J. Ruhala, *Ph.D., Associate Professor*

Mechanical Engineering- Bachelor of Science Requirements

CHEM 1211K	Principles of Chemistry I	4
ENGL 1101	Composition I	3
ENGL 1102	Composition II	3
ENGL 21XX	Core C1-Literature	3
MATH 2253	Calculus I	4
MATH 2254	Calculus II	4
MATH 2255	Calculus III	4
MATH 2260	Probability & Statistics	3
MATH 2306	Differential Equations	3
PHYS 2211K	Principles of Physics I	4
PHYS 2212K	Principles of Physics II	4
COMM 2400	Public Speaking	2
STS 2400	Science, Technology and Society	2
TCOM 2010	Technical Writing	3
ECON 2107	Core E3- Engineering Economics	3
Core C2	Art & Culture	3
Core E1	American Context	3
Core E2	World History	3
Core E4	Culture & Societies	3
EDG 1211	Engineering Graphics I	3
ENGR 1212	Engineering Graphics II	3
ENGR 2214	Statics	3
ENGR 2501	Material Science	3
ENGR 2710	Engineering Calculations	4
ENGR 3122	Dynamics	3
ENGR 3131	Strength of Materials	3
ENGR 3132	Strength of Materials Lab	1
ENGR 3343	Fluid Mechanics	3
ENGR 3345	Fluid Mechanics Lab	1
ENGR 3650	Computer-Aided Engineering	3
ENGR 4420	Engineering Experimentation	3
ENGR 4421	Instruments and Controls	4
EE 2301	Circuits	4
ME 1000	Intro to Mechanical Engineering	1
ME 3410	Thermodynamics	3
ME 3440	Heat Transfer	3
ME 3620	Machine Dynamics & Control Theory	4
ME 4141	Machine Design	3
ME 4201	Senior Design Lab I	2
ME 4202	Senior Design Lab II	3
ME 4434	Manufacturing Engineering	4
ME 4XXX	Major Elective	3
Degree Program Total		**129**

Mechanical Engineering Technology

Offering:

Bachelor of Science in Mechanical Engineering Technology

Technology is rapidly changing machinery, systems, and the industries that produce them. If you want your career to grow just as rapidly—and offer you interesting problems to solve ever day—this program gives you plenty of hands-on experience. The Mechanical Engineering Technology degree leads to diverse, well-paid specialties, from manufacturing operations and management to systems design, sales, and plan

- an ability to conduct, analyze and interpret experiments and apply experimental results to improve processes
- an ability to apply creativity in the design of systems, components, and processes
- an ability to function effectively on teams,
- an ability to identify, analyze and solve technical problems,
- an ability to communicate effectively,
- a recognition of the need for, and an ability to engage in lifelong learning,
- an ability to understand professional, ethical and social responsibilities,
- a respect for diversity and a knowledge of contemporary professional, societal and global issues.
- a commitment to quality, timeliness, and continuous improvement.
- technical expertise in engineering materials, statics, dynamics, strength of materials, solid and fluid mechanics, thermodynamics, industrial electronics.
- technical expertise with added depth in mechanical design and computer-aided design.
- added technical depth in at least one of the following (selected by the student): analysis and design of HVAC&R systems, including economic analysis and computerized energy evaluation methods; engineering materials; or manufacturing.
- ability to use calculus to solve applied physics problems in mechanics and thermodynamics.

The Program:

General Concentration

The MET bachelor degree with a general concentration permits the selection of five elective courses in the major. It is strongly encouraged (but not required) that students concentrate these five elective courses in one of the following areas to enhance their knowledge and preparation in an

Mechatronics Engineering

Offering the Bachelor of Science in Mechatronics Engineering

Mechatronics Engineering is the integration of mechanical and electrical engineering disciplines with an infusion of computer science and software engineering. Mechatronics engineers use this integrated approach to bring higher performance to

Degree Program Total	**120**

Spanish Minor

To be eligible for a minor in Spanish, the student must complete the following:

SPAN 200146Tc.e218in Sp

Physics

Offering:

- Bachelor of Science in Physics
- Bachelor of Arts in Physics

Visit physics.spsu.edu for more information.

A Bachelor of Science degree in Physics at Southern Polytechnic State University is a good choice for students desiring positions in industry that are on the cutting edge of engineerin

Area C Group 2	Take One Course from the Art and Culture Group	3
Area D	Any Two Lab Sciences	8
Area E Group 1	American Context	3
Area E Group 2	World History	3
Area E Group 3	Behavioral Science	3
Area E Group 4	Cultures and Societies	3
MATH 1113	Pre-calculus (extra hour is applied to area F)	4
MATH 2253	Calculus I (extra hour is applied to area F)	4
MATH 2254	Calculus II	4
MATH 2255	Calculus III	4
MATH 2306	Ordinary Differential Equations	3

Political Science

Offering:

Bachelor of Science in Political Science

The Faculty:

Richard Bennett, *Associate Professor and Director of International Programs*
Albert Churella, *Associate Professor*
J. LaJuana Cochrane,

Psychology

Offering:

Bachelor of Science in Psychology

The Faculty:

Richard Bennett, *Associate Professor and Director of International Studies*
Albert Churella, *Associate Professor*
J. LaJuana Cochrane, *Associate Professor and Psychology Coordinator*
Jamye Hickman, *Assistant Professor*
Marianne Holdzkom, *Assistant Professor*
Julie Newell, *Professor and Chair of Department*
Thomas J. Nisley, *Assistant Professor*
Bernice Nuhfer-Halten, *Professor and Language Coordinator,*
Thomas E. Rotnem, Associate Professor and International Studies Coordinator
William Skutans, *Lecturer*
Roger Soiset, *Lecturer*
Carl Snook, *Assistant Professor*
Mark D. Vickrey, *Lecturer*

By offering a Psychology degree with concentrations in engineering psychology, industrial/organizational psychology, and general psycholoholoe8 TD080j-17.2042 -1.2887 TD0.0089 log2(g ps9.219.2(o28(nt)]T2.914 8.51.52 0 0 prn2(oFc)8.161.28870P9 Tw[9mt.009e.1(to)hoe8 TD

Social Science

Offering:

Bachelor of Science in International Studies

Concentration in

ANTH 1102	Introduction to Anthropology
GEOG 1101	Introduction to Human Geography
POLS 3601	Contemporary World Politics
RELG 1200	World Religions

Note: If not used to satisfy other requirements

Social Science Electives: Select any three of the following courses:	9

HIST Any 3000- or 4000- level History course
PSYC Any 3000- or 4000- level Psychology course
POLS Any 3000- or 4000- level Political Science course
SIS Any 3000- or 4000- level SIS course
SPAN 3003 Hispanic Cultures and Civilizations

Note: Only one course may be selected from each discipline.

Free Electives	12
Degree Program Total	**120**

Systems Engineering

Offering:

Bachelor of Science in Systems Engineering

Technical College System of Georgia Transfer Program

TCSG Transfer Program

Southern Polytechnic State University has implemented a system-wide articulation with the Technical College System of Georgia (TCSG). This articulation will provide the opportunity for SPSU to offer a range of B.S. and B.A.S. level technological programs on a statewide basis, with the TCSG institutions as our partners. The initial set of programs were made available in Fall, 2009 and include pathways from approximately thirty TCSG Associates degrees into Information Technology (B.A.S.) and Manufacturing Operations (B.A.S.). Future offerings are being considered in Business Administration (B.A.S.), Electrical Engineering Technology (B.S.), Industrial En

Technical Communication

678-915-7202, or email to TCOM@spsu.edu. You can also visit our website at tc.spsu.edu.

Technical Communication Minor

To be eligible for a minor in Technical Communication a student must complete 15 hours of technical communication courses. Students take TCOM 2010 plus 12 additional hours of course work, at least 9 hours of which must be at the 3000 or 4000 level.

Students can choose from:

- TCOM 2020 and/or TCOM 2030
- ARTS 3000
- STS 4000
- Any class with the TCOM course prefix
- Additional courses carrying the COMM or ENGL prefix, with departmental approval

Online Certificate in Technical Communication

To be eligible for a certificate in Technical Communication a student must complete 15 hours of online technical communication courses, including TCOM 2010, TCOM 2030, and

Arts Core Courses

ARTS 2001 Art Appreciation
Prerequisite: ENGL 1101
3-0-3
Appreciation of visual arts is developed through an introduction to the aesthetics, criticism, history, and production of visual art in the Western world. Some non-Western art will be included.

ARTS 2002 Drama Appreciation
Prerequisite: ENGL 1101
3-0-3
Survey of drama as a performing art, considering both literary and nonliterary elements. Some non-Western drama will be included. In addition, attendance at one or more live dramatic performances will be required.

ARTS 2003 Music Appreciation
Prerequisite: ENGL 1101
3-0-3
Survey of music in the Western world, including historical movements and basic musical notation. The course also covers some non-Western music, as well as contemporary, classical, and popular music.

ARTS 2004 History of Contemporary American Music
Prerequisite: ENGL 1101
3-0-3
Survey of the development of contemporary American music genres from a historical and analytical perspective from the beginnings of American contemporary styles in the late nineteenth century to the present. Additionally, the course examines the social and historical context of various cultures in the American mosaic of people in the present time, especially the two primary cultures: those of European and African ancestries. Includes a music listening component and further develops some of the topics covered in ARTS 2003. 3
n w [(m o s

ENGL 2112 World Literature II
Prerequisite: ENGL 1102
3-0-3
A survey of important works of world literature from the mid-

German Core Courses

GRMN 1001 Elementary German I
3-0-3
An introduction to the German language and the culture of the German-speaking world. Beginning of a survey of basic German grammar and the development of the four language skills of listening, speaking, reading, and writing German. Some aspects of everyday life in the German-speaking world will also be introduced. Not open to native speakers of German. Does not meet C-2 Core requirement.

GRMN 1002 Elementary German II
3-0-3
The second part of an introduction to German language and the German-speaking world. Completion of the survey of Basic German grammar and further development of the four language skills of listening, speaking, reading, and writing German. Aspects of everyday life in the German-speaking world will also be introduced. For those students who have completed GRMN 1001 or have had one year of German in high school. Not open to native speakers of German.

History Core Courses

HIST 1111 Survey of World Civilization pre 1500
3-0-3
A survey of the cultural, political, economic, intellectual, social, and scientific development of early world civilizations from prehistoric times to the Age of Exploration, ca. 1500. Also offered as an eCore (online) class.

HIST 1112 Survey of World Civilization post 1500
3-0-3
A survey of the cultural, political, economic, intellectual, social, and scientific development of civilizations from the Age of Exploration to the present.

HIST 2111 United States History to 1877
3-0-3
United States history from the colonial period through Reconstruction. Emphasis on the interpretation of American institutions and ideas. Satisfies U.S. and Georgia history and constitution requirement. Also offered as an eCore (online) class.

HIST 2112 United States History since 1877
3-0-3
The rise of the United States as in industrial power from the late 19th century to the present. Special emphasis on change and reform during this period. Satisfies U.S. and Georgia history and constitution requirement.

HIST 2911 U.S. and Georgia Constitution and History
1-0-1
A one-hour course designed to allow students with transfer credit for American history or American government from outside the University System of Georgia to meet the U.S. and Georgia history and constitution requirement. May not be taken as an elective.

Mathematics Core Courses

MATH 1111 College Algebra
Prerequisite: Placement by the Mathematics Assessment Test
3-0-3
A functional approach to algebra which incorporates the use of appropriate technology. Review of symbolic manipulation and solutions of equations and inequalities. Linear, quadratic, polynomial, exponential, and logarithmic functions, graphs and applications. A grade of C or better is required for course credit. Also offered as an eCore (online) class.

MATH 1113 Pre-calculus
Prerequisite: A grade of "C" or higher in MATH 1111 or Placement by the Mathematics Assessment Test
4-0-4
Rational and transcendental functions and graphs. Triangle and analytic trigonometry including identities, equations, and applications. Law of Sines, Law of Cosines, applications of trigonometry to vectors and complex numbers. Systems of equations using matrices. A grade of C or better is required for course credit. Also offered as an eCore (online) class (3-0-3).

MATH 2240 Survey of Calculus
Prerequisite: A grade of "C" or better in MATH 1113 or Placement by the Mathematics Assessment Test
3-0-3
Derivatives and integrals of polynomial, rational, logarithmic and exponential functions. Variable rate of change, amount of accumulated change, and graphing. Applications to problems in business, management, and economics are emphasized, with some attention to problems in the social sciences. No student may receive credit for both MATH 2240 and MATH 2253.

MATH 2253 Calculus I
Prerequisite: A grade of "C" or higher in MATH 1113 or Placement by the Mathematics Assessment Test
4-0-4
A first course in Calculus. Limits, derivatives and integrals of algebraic and trigonometric functions, tangent lines, instantaneous rate of change, maxima, minima and graphing, related rates, linear motion. Also included: definite integrals, area between curves, moments, work, and volumes of rotation. No student may receive credit for both MATH 2240 and MATH 2253.

MATH 2254 Calculus II
Prerequisite: MATH 2253
4-0-4
A continuation of MATH 2253. Topics include differentiation and integration of transcendental functions, integration techniques, indeterminate forms, infinite sequences and series, Taylor and Maclaurin series, parametric equations, L'Hopital's Rule, improper integrals, and polar coordinates.

Physics Core Courses

PHYS 1111K Introductory Physics I
Prerequisite: MATH 1113
3-3-4
An introductory course which will include material from mechanics (kinematics, dynamics, work and energy, momentum

and collisions, and rotational motion and statics), and may also include thermodynamics and waves. Elementary algebra and trigonometry will be used. Laboratory exercises supplement classroom work.

PHYS 1112K Introductory Physics II
Prerequisite: PHYS 1111K or PHYS 2211K
3-2-4
An introductory course which will include electrostatics, electric current and circuits, and electromagnetism, and may also include optics, and modern physics. Elementary algebra and trigonometry will be used. Laboratory exercises supplement classroom work.

PHYS 2211K Principles of Physics I
Prerequisite: MATH 2253
3-3-4
An introductory course which will include material from mechanics (kinematics, dynamics, work and energy, momentum and collisions, and rotational motion and statics), and may also include thermodynamics and waves. Elementary calculus will be used. Laboratory exercises supplement classroom work. This course may be substituted for PHYS 1111K in any curriculum, but credit will not be allowed for both PHYS 1111K and PHYS 2211K.

PHYS 2212K Principles of Physics II
Prerequisites: MATH 2254, PHYS 2211K
3-2-4
An introductory course which will include electrostatics, electric current and circuits, and electromagnetism, and may also include optics, and modern physics. Elementary calculus will be used. Laboratory exercises supplement classroom work. This course may be substituted in any curriculum for PHYS 1112K, but credit will not be allowed for both PHYS 1112K and PHYS 2212K.

Political Science Core Courses

POLS 1101 American Government
3-0-3
A study of the structure and function of the federal government from its historical antecedents to its contemporary challenge. Satisfies U.S. and Georgia history and constitution requirement. Also offered as an eCore (online) class.

POLS 2401 Global Issues
3-0-3
An introduction to international relations covering such issues as diplomacy, nuclear politics, war, secret intelligence, revolution, international development, debt, and dependence.

Psychology Core Courses

PSYC 1101 Introduction to General Psychology
3-0-3
An introduction to the methods, theories, and research findings in psychology. The course examines the influence of biological, cognitive, and social factors on behavior. Also offered as an eCore (online) class.

Spanish Core Courses

SPAN 1001 Elementary Spanish I
3-0-3
Introduction to listening, speaking, reading, and writing in Spanish and to the culture of Spanish speaking regions. Not open to native speakers of Spanish. Does not meet C-2 Core requirement.

SPAN 1002 Elementary Spanish II
Prerequisite: SPAN 1001 or one year of high school Spanish
3-0-3
Continued listening, speaking, reading, and writing, in Spanish with further study of the culture of Spanish speaking regions. Not open to native speakers of Spanish.

Religion Core Courses

RELG 1200 World Religion
3-0-3
Survey of world religions including Hinduism, Buddhism, Islam, Judaism, and Christianity. Attention will be paid to historical development, basic tenets, and impact on culture.

Science, Technology, Society Core Courses

STS 2400 Science, Technology, and Society
Prerequisites: ENGL 1101
2-0-2
An interdisciplinary course exploring the development and integration, both historical and contemporary, of science, technology, and society. The course seeks to help students better understand the world in which they live, the broader implications of their major course of study, and the complex social, ethical, and moral choices presented by modern science and technology.

Sociology Core Courses

SOCI 1101 Introduction to Sociology
3-0-3
This course provides an introduction to Sociology, including the basic concepts, different theoretical approaches, and the methods of analysis used by sociologists. Topics covered may include social structures, group dynamics, socialization and self, social stratification, culture and diversity, social change, global dynamics, and the interaction of society with political and economic forces in society. Also offered as an eCore (online) class.

Accounting Courses

ACCT 2101 Accounting I
3-0-3
This course is a study of the underlying theory and application of financial accounting concepts. It presents the theory and methodology of interpretation of economic transaction; and the recording, and reporting of monetary data arising from economic transactions and daily events. Although the initial emphasis is on the use of accounting information in decision-making ("user perspective"), equal attention will be devoted to the preparation of financial statements ("prepare perspective"), as well as understanding and analysis of the financial statements ("user perspective"). This is an introductory course that presupposes no prior knowledge of accounting. The emphasis with respect to business structures will be on corporations.

ACCT 2102 Accounting II
Prerequisite: ACCT 2101
3-0-3
This course is a study of the application of accounting principles to specialized problems of corporations, special reports, and formation cost of sales and manufacturing, fundamentals of management accounting, information and analysis for planning and controlling, decision analyses, cost management, and continuous improvement.

ACCT 3230 Intermediate Accounting I
Prerequisite: ACCT 2101, ACCT 2102, MGNT 3125
3-0-3
The theory and practice of financial accounting and reporting. A study of the conceptual framework and process by which accounting standards are established; preparation of financial statements and disclosures; applications of fair value concepts and present value measurements to accounting events; and accounting for current assets, plant assets, natural resources, intangible assets, current and long-term liabilities, and related income and expense elements.

ACCT 3231 Intermediate Accounting II
Prerequisite: ACCT 3230
3-0-3
The theory and practice of financial accounting and reporting. A study of stockholders' equity, dilutive securities, earning per share, investments, revenue recognition, deferred income taxes, pensions, leases, accounting changes, error analysis, the statement of cash flows and full disclosure in financial accounting.

ACCT 3530 Cost Management
Prerequisite: ACCT 3231
3-0-3
Focus on cost accounting concepts, with emphasis on developing and evaluating information that management needs to plan, make key decisions, and monitor business performance. Key topics include cost typology and behavior and how each impacts decision making process and product costing, cost-volume-profit analysis, flexible budgeting, incremental decision analysis, and performance evaluation.

ACCT 4530 Advanced Accounting
Prerequisite: ACCT 3530
3-0-3
The theory and practice of financial accounting and reporting pertaining to business combinations and consolidated financial statements, accounting for partnerships and related business forms, foreign currency transactions and financial statement translations, and other advanced accounting topics.

Anthropology Course

ANTH 1102 Introduction to Anthropology
3-0-3
Introduction to basic cultural anthropological concepts emphasizing the differences and similarities in contemporary human behavior in Western and non-Western societies. Course includes lectures and case studies.

Apparel and Textile Technology Courses

ATT 1300 International Sourcing
3-0-3
Survey of international sourcing strategies including the decision making process, transportation, domestic production, Asia/Europe/Americas operations, foreign investment, foreign purchase, turn time, competitive advantage, communications, full package production capabilities, cultural priorities, political influence, international regulations and alliances, costs, quality, and technology. The principles of marketing and distribution to a

production by planning the optimum production cycle for a product from receipt of raw materials to the finished item.

ATT 4750 Advanced Design and Product Development
Prerequisites: ATT 3602
2-3-3
Students will examine the fashion industry design techniques through the use of technology in both 2D and 3D applications. The course surveys product development software and presentation methods used in industry today.

IET 4810 Ethics and Safety
1-0-1
Students are provided information pertaining to ethics and safety regulations applicable to the textile industry.

ATT 4820 Senior Internship
3-0-3
This course focuses on the student's completing a project with a company under the supervision of the industry partner and SPSU faculty. The course requires a written and oral presentation.

ATT 4840 Textile/Apparel Business Project
Prerequisites: ATT 4670 and ATT 4750
1-4-3
This course is designed to provide the student with integrated knowledge from previous courses. The course focuses on the planning and control functions required in textile and apparel production systems, including design of facilities, inventories, and planning. A formal written report is required and an oral presentation will be evaluated by faculty members.

Architecture Courses

ARCH 3011 Architecture Studio I
Prerequisite: Acceptance into the professional program upon portfolio review
0-12-4
This course builds on the previous studio course's emphasis on space making and introduces the integration of building technology into the design process. Assignments focus on the expressive use of wood and steel within rural and light urban site contexts.

ARCH 3012 Architecture Studio II
Prerequisite: ARCH 3011
0-12-4
This course is a continuation of ARCH 3011 and the integration of technology. Students design a small scale project usually in a dense urban setting. Emphasis in placed on site context and systems and materials research in support of design intent. The first half of the semester is devoted to project design and the latter half is spent examining the construct of the design through large scale models.

ARCH 3112 Architecture Culture II - The Renaissance through 1850
3-0-3
A continuation of Architecture Culture to examining the relationship between architecture and other cultural discourses such as philosophy, aesthetics, science, religion, politics and technology. While continuing in the aim of developing an understanding of how architecture manifests the socio-cultural conditions of a given moment in aesthetic form, simultaneously examines the development of an autonomous architecture culture, one that we refer to as theory.

ARCH 3113 Architecture Culture III - 1850 through 1945
3-0-3
A continuation of the Architecture Culture series, additionally examining the relationship between architecture and other cultural discourses such as philosophy, aesthetics, science, religion, politics and technology. While continuing in the aim of developing an understanding of how architecture manifests the socio-cultural conditions of a given moment in aesthetic form, it takes as its central concern the search for a definition of 'Modernity', and how it might be translated into a style. Particular attention is paid to the various 'isms' of the Modern Movement and the key historical figures that shaped them.

ARCH 3211 Architecture Structures II: Steel and Wood
Prerequisite: DFN 2211
3-3-4
This course is a continuation of DFN 2211, with emphasis on gravity loads and basic design of wood structural components including beams, columns, and trusses. Engineered wood products, glue-laminated, and connections are also covered.

ARCH 3212 Architecture Structures III: Concrete and Lateral Loads
Prerequisite: ARCH 3211
3-0-3
This course is a continuation of ARCH 3211 with the design of steel structural members, connections and statically determinate structural steel systems. Approximate analysis of rigid frames is introduced and the student learns to use "pre-packaged" computer programs to input data and evaluate results.

ARCH 3311 Environmental Technology I: Systems Selection and Materials
2-3-3
This course introduces basic structural and enclosure systems which includes selection criteria. Emphasis is placed on wood, steel, masonry, and concrete structural systems. Enclosure Systems are explored in relation to various applications of existing and new finishes building systems within the context of sustainability.

ARCH 3313 Environmental Technology II: Human Comfort, Sustainability and HVAC Systems:
Prerequisite: ARCH 3311
A study of the connection between basic human comfort and sustainable design mechanisms: Building Orientation, sustainable mechanisms relative to envelope materials shaping building form,. Energy conservation and energy code compliance is examined. Selection and configuration of major mechanical systems is examined in the contexts of building typology, sustainability, spatial configuration, and life cycle cost.

ARCH 39X1-39X4* Special Topics
Prerequisite: Admission to the professional program
1 to 4 hours
This course provides an opportunity for a group of students to undertake in-depth study under the direction of a member of the full-time faculty or visiting faculty. Areas of study may include

and may require additional time outside of the scheduled lab hours.

BIOL 3400K Cell Physiology
Prerequisite: BIOL 2108K, BIOL 3000K
3-3-4
An overview of the structure and function of cells and their organelles. Includes membrane structure and transport, catabolism, energy metabolism, photosynthesis and biosynthesis. Laboratory exercises use modern techniques to reinforce lecture material.

BIOL 4100K Entomology
Prerequisite: BIOL 2108K
3-3-4
An overview of the study of insects including: functional anatomy and physiology, life histories, ta

MGNT 390x Special Topics
Prerequisite: Junior standing
1 to 5 hours.
Special topics offered by the department on a demand basis.

MGNT 4075 Healthcare Management
3-0-3
This course emphasizes on essential management skills in the health care industry such as planning, organizing, directing, and controlling. This course addresses the supply chain of health care services involving physicians and health care organizations. Topics include health care finance, accounting, billing, budgeting, and theories of human resources management.

MGNT 4100 Business Systems Analysis and Design
Prerequisite: CS 1113 or equivalent programming experience
3-0-3
Provides practice in structured analysis and design of business processes, with emphasis on the development of information systems for a variety of business environments. Topics include

concern and will range from ecology to health care to telecommunications.

MGNT 4595 Business Strategy
Prerequisites: Senior standing
3-0-3
An examination of the process of managing the total organization. Emphasizes innovations in structure, product, markets, and long-term organizational commitments as these relate to organizational success. Capstone course for the degree.

MGNT 490x Special Topics
Prerequisite: Senior standing
1 to 5 hours
Special topics offered by the department on a demand basis.

Chemistry Courses

CHEM 1211K Principles of Chemistry I
Prerequisite: MATH 1111
3-3-4
First course in a two-semester sequence covering the fundamental principles and applications of chemistry designed for science majors. Topics to be covered include composition of matter, stoichiometry, periodic relations, and nomenclature. Laboratory exercises supplement the lecture material. Also offered as an eCore (online) class (4-0-4).

CHEM 1212K Principles of Chemistry II
Prerequisite: CHEM 1211K
3-3-4
Second course in a two-semester sequence covering the fundamental principles and applications of chemistry designed for science majors. Laboratory exercises supplement the lecture material. Also offered as an eCore (online) class (4-0-4).

CHEM 2211K Environmental Chemistry
Prerequisite: CHEM 1211K
3-3-4
This course emphasizes the source, transport, reactions and fate of pollutants and natural chemical substances that enter or compose the aquatic, air, and soil environments. Laboratory exercises focus on water and wastewater analysis.

CHEM 2510 Survey of Organic Chemistry
Prerequisite: CHEM 1211K
3-0-3
A survey of the chemistry of the compounds of carbon. Topics include a study of the synthesis, reactions, and properties of acyclic and cyclic compounds and their derivatives.

CHEM 2511K Organic Chemistry I
Prerequisite: CHEM 1212K
3-3-4
An introduction to the chemistry of the compounds of carbon. Topics include a study of the synthesis, reactions, reaction mechanisms, and properties of acylic and cyclic compounds and their derivatives. Laboratory exercises supplement classroom work.

CHEM 2512K Organic Chemistry II
Prerequisite: CHEM 2511K
3-3-4
A continuation of the study of organic molecules. Topics include a survey of heterocycles, natural products and synthetic polymers. Laboratory
exercises supplement classroom work.

CHEM 2601 Chemical Literature
Prerequisite: CHEM 1212K
2-0-2)
This course will focus on familiarization with the scholarly literature used in the chemistry discipline. Students will study the techniques for efficient information searching, use of online data bases in locating books, journals, patents, scholarly papers, etc. Students will also focus on the MLA and the APA style for developing a list of references.

CHEM 3100K Analytical Chemistry
Prerequisite: CHEM 1212K
3-6-5
An introduction to classical and instrumental methods of quantitative analysis and their underlying principles. Laboratory exercises supplement classroom work.

CHEM 3300K Instrumental Analysis
Prerequisite: CHEM 3100K
2-6-4
Principles of operation and application of instrumental methods including ultraviolet/visible and infrared spectroscopy, atomic absorption and emission, nuclear magnetic resonance spectroscopy, chromatography, and electrochemistry. Laboratory exercises supplement classroom work.

CHEM 3901-3905 Special Topics
1 to 5 hours

CHEM 4411 Inorganic Chemistry
Prerequisite: CHEM 2512K
3-0-3
Structure of the atom, ionic and covalent bonding models; the solid state; advanced acid-base concepts; chemistry in non-aqueous solvents; structure and reactivity of coordination compounds; organometallic chemistry. Consideration of atomic structure, valence, complex compounds, and systematic study of the periodic table.

CHEM 4412 Advanced Inorganic Chemistry
Prerequisite: CHEM 4411
3-0-3
A continuation of topics covered in Inorganic Chemistry, including coordination chemistry an

CE 4901-4903 Special Topics
Prerequisites: Senior standing, consent of the Program Coordinator.
1 to 3 hours
Special topics offered by the program on a demand basis.

Civil Engineering

CE 3202 Design of Concrete Structures
3-0-3

ACI design procedures for reinforced concrete beams, columns, footings, slabs and other members, Introductory to masonry design.

CE 3501 Materials for Civil & Construction Engineering
Prerequisites: ENGR 3131
3-0-3
A study of different materials used for light and heavy construction projects, such as aggregates, woods, metals, concretes, masonry, and bituminous materials. An overview of materials science will be

CE 4103 Design of Steel Structurintr05.1972 -5 TwC3-1.3239 TD-0.0018 Tc0 T

types of engineering data then analyze the data such that statistically valid conclusions can be achieved. Emphasis will be given to standard engineering practices.

CET 3316 Structural Analysis
Prerequisites: CHEM 1211K, ENGR 3131, ENGR 3132
4-0-4
Structural loads and types of structures, analysis of determinate and indeterminate structures and deflection of beams, frames, and trusses.

CET 3321 Transportation Systems
Prerequisite: SURV 2221, MATH 2260
3-3-4
An overview of transportation engineering as it applies to land, air, and sea systems. Special emphasis is given to the design factors required in planning and constructing a highway including the planning process, traffic analysis and capacity, intersection design and signalization. The lab focuses on the preparation of highway design plans as well as data measurement techniques unique to transportation engineering.

ENGR 3324 Project Cost Analysis
Prerequisite: MATH 2253 and one of CM 3110 or CM 3160 (or concurrent enrollment)
4-0-4
A study of the project cost measurement and analysis techniques unique to the engineering profession. Cost analysis procedures and their relationship with cost estimation methodologies are examined. Emphasis is placed on techniques for economy studies of multiple alternatives, uncertainties in forecasts, increment costs, taxes, and retirement and replacement of highways, transportation systems, bridges and publics works facilities. Current economic issues are also discussed.

CET 3343 Fluid Mechanics
Prerequisite: CET 2200 or ENGR 2214.
3-3-4
A study of the basic principles of fluid mechanics and the application of these principles to practical problems. The subject matter will consist of fluid properties, fluid pressure, buoyancy, pipe flow analysis, open channel flow, and pump selection. Pressure pipe systems, flow measurement, and open channel systems are examined.

CET 3344 Fundamentals of Environmental Engineering Technology
Prerequisites: CHEM 1211K, CET 3343.
3-3-4

disposal. Consideration of legislation, regulation and management of solid wastes. Activities include field trips and a municipal solid waste landfill design with both oral and written project reports.

CET 4381 Concrete Design II
Prerequisite: CET 3381.
4-0-4
This is a continuation of the concrete design procedures covered in CET 3381. Topics include pre-stress member design, post-tensioned member design, retaining wall design, biaxial bending in short and long concrete columns, and two-way slab design.

CET 4401 Computer Methods in Structures
Prerequisite: CET 3316
3-3-4
Review of matrix algebra, structural analysis by matrix methods (Flexibility and Displacement), Slope-Deflection theory, true stiffness determination of spans with varying moments of inertia, multi-story analysis, global stiffness matrix determination as applied to trusses, beams and frames (2D, 3D). Use of commercially available software for analysis and design such as PC-STRAN, GTSTRUDL or STAAD-III emphasized.

CET 4402 Ethics of Engineering
1-0-1
A review of the theoretical and practical aspects of ethical problems in engineering, along with their suggested solutions. Specific examples, situations and limitations of ethics and ethical relationships are discussed in detail.

CET 4405 Mathematical Modeling in Civil Engineering Technology
Prerequisites: MATH 2254, CET 3343, CET 1002.
2-3-3
Applications of mathematical modeling to Civil Engineering systems. Introduction to modeling with applications of conservation laws and other proper organizing principals in engineering. Students will be expected to use basic programming and advanced spreadsheet applications to solve mathematical modeling problems in fluid mechanics, environmental engineering, structural engineering, and basic chemical engineering. The class will focus on applications or appropriate algorithms for solutions.

CET 4411 FE Exam Preparation - Civil Discipline
Prerequisite: Senior Standing or consent of the Department Chair.
4-0-4
A review of the civil engineering technology discipline and associated math and sciences in preparation for the Fundamentals of Engineering exam. (Not for credit for CET and Surveying and Mapping majors.)

CET4415 Foundation Design
Prerequisite: CET 3301.
3-0-3
Study of the evaluation of alternatives, selection and design of foundations for civil engineering facilities such as buildings, bridges, and other public works. Consideration will be given to behavior of earth materials both during and after construction. Course topics will include subsurface investigation, stress analysis, settlement, bearing capacity, structural design of footings, lateral earth pressures and earth retaining structures, slope stability, and pile foundations.

CET 4901-4904 Special Topics
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CET 4484 Hydraulic Analysis and Design
Prerequisite: CET 3343.
4-0-4
Applies principals of fluid mechanics to the design and analysis of hydraulic systems. The course emphasizes open channel flow and addresses topics of interest to the Civil Engineer. Topics include hydraulic grade line calculations, pump design, culvert analysis and design, base flood elevation studies using HEC-RAS, non-uniform flow, gutters and inlets, water distribution, open channel design.

Computer Game Design and Development (CGDD) Courses

user-generated content and participation will also be discussed. A significant, team-based project is required.

CGDD 4703 – Data Modeling and Simulation

Prerequisite: MATH2260

3-0-3

This course provides an introduction to modeling and simulation. Both the theoretical as well as applied aspects of simulation are covered. Topics include discrete-event simulation, states, transitions, model definition, model quality, input and output analysis, input distributions, experimental design, optimizing models, levels of model detail, cost-quality tradeoffs, verification, and validation. Students will be required to simulate a complex system which necessitates the creation of models. Students will explore and utilize a simulation API.

CGDD 4803 – Studio

Prerequisite: CGDD4003

1-6-3

This course begins the studio experience and explores the application of game design and development in a structured environment; teams build applications utilizing best practices in software engineering including asset, project, configuration, and requirements management. Students in this Studio course will assume an apprentice position within their teams and learn from more senior students taking the Capstone course. This course involves weekly status, design, and development meetings.

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representations (including depth- and breadth-first traversals),

Application of digital image processing. Topics include image enhancement and restoration, image transforms, geometrical image modifications, edge detection, image segmentation and classification, image coding, feature extraction, morphological image processing, and parallel image processing

CS 4543 Neural Computation
Prerequisite: MATH 2345 and CS 3424
3-0-3
Application of brain-style computing models. Topics include

Upon completion of this course, the student will understand both abstraction and advanced programming techniques of object-oriented programming in C++. This will include learning about abstract data types, multi-dimensional arrays, recursion, pointers and the STL. The student will be able to solve problems using objects, including designing and writing their own classes. The student will also understand the techniques of good programming style and software engineering concepts such as information hiding, re-use, use of symbolic debuggers, and separate compilation.

CSE 1302J Programming & Problem Solving II
Prerequisite: CSE 1301C or CSE 1301J
3-2-4
The second course in computer science provides coverage of more advanced topics of object-oriented programming. This includes the use of static variables and classes, multi-dimensional arrays, inheritance and polymorphism, text files and exception handling, recursion, and parameterized types. Elementary data structures (linked lists, stacks, and queues) are introduced to solve application problems. Graphical user interfaces and event driven programming are also introduced. Students must continue to use good programming style including proper documentation. Students use the Linux operating system in the closed lab.

CSE 2642 Professional Practices and Ethics
Prerequisite: CSE 1302 or IT 1324
2-0-2
This course covers the historical, social and economic consideration of the discipline. It includes studies of professional conduct, risks, and liabilities, and intellectual property relative to the software engineering and computing professions. Software engineering/computing case studies will be used.

Construction Course Descriptions

CM 1000 Orientation to Construction and Development
1-2-2
An introduction to construction industry careers; an overview of construction industry sectors an

structural systems and the design of columns, beams, and other structural components.

CM 3260 Temporary Structures
Prerequisite: CM 3210
2-2-3
A study of structural design and analysis concepts of temporary structures used in the construction process. Topics include formwork design, scaffolding, and material handling equipment and staging.

CM 4510 Construction Scheduling
Prerequisite: CM 3410
2-2-3
A study of the management techniques used in controlling the progress of construction projects, including development of a commercial project schedule, as well as simulation of updating and monitoring progress using critical path methodology. Commonly used commercial software packages are introduced.

CM 4511 Construction Scheduling Software
Prerequisite: CM 4510 or approval of the Department Head
1-2-2
Hands-on computer application of commonly used commercial construction scheduling software to construction projects. Instruction in use of the software.

CM 4560 Construction Project Management
Prerequisite: CM 4760, MGT 3105
3-0-3
A study of traditional, design-build and construction management delivery methods, the management of field operations and administration of the construction contracts. Contract documents, project organization, supervision, working with owners and design professionals, procurement, management of subcontractors.

CM 4760 Construction and Real Property Law
Prerequisite: MGT 3145
3-0-3
A study of Construction Contract Documents and Claims. Topics include: analyses of AIA B141, A101, A201, and contractual graphic and technical documents. Other supporting construction contract documents such as bid bonds, payment and performance bonds and construction modifications are studied. The traditional tri-union construction contract formation process is examined in relation to the owner, contractor, material men, and subcontractors. Discussions regarding damages for differing and unforeseen conditions, defective workmanship, and construction delay claims are surveyed in conjunction with AAA construction arbitration rules regarding emerging construction manager contracting processes.

CM 4570 Development Process I
Prerequisites: CM 7770, CM 3620
4-0-4
A study of development as a process with special emphasis on teams built around the developer. The various issues that must be considered by the development team will be discussed. These include conformity of the development process to sound business principles, adherence of development activities to relevant zoning and permitting requirements, and the potential environmental impact of the considered development.

CM 4620 Development Process II

The course provides an overview of the development process from project acquisition through construction/development and ultimately the management and sale of the property. For each one of the major types of commercial income producing properties, the course focuses on the preparation of development cost budgets and financial operating proformas. Property management strategies commencing with lease up/ revenue stabilization and continuing through the holding period and eventual sale are discussed. The roles of asset, portfolio and property management are reviewed. Topics in real estate finance including participants, their respective roles and risk tolerance are discussed. The three methods for traditional real property appraisals will be also covered. Finally, marketing research and analysis for each one of the major property types is discussed with a focus on developing product type, price point and absorption conclusions. The course includes lectures, readings from the texts, class discussion, problems and exercises.

CM 4710 Construction Safety
Prerequisites: CM 4760
4-0-4
A study of construction safety and loss control principles and practices. Topics include project security control, construction accident prevention, safety information sources, weather precautions, emergency planning, and OSHA procedures and regulations.

CM 4770 Development Law
Prerequisite: CM 3310
3-0-3
An examination of real property law, elements of land ownership, title of land in Georgia, eminent domain questions, estates and interest in land, zoning and easements, tenant landlord law, real property contracts, deeds, covenants, title examination and closing, and environmental regulations.

CM 4800 Construction Process Simulation
Prerequisites:
For General Concentration: CM 3420, CM 4510, CM 4560, CM 4710, CM 3620
For Specialty Concentration: CM 4510, CM 4560, CM 4710, ACCT 2101, CM 3480
1-4-3
Simulations and case studies of events that affect the construction organization and project. Topics and event simulations will include problems typically encountered in the construction industry such as changed conditions, strikes, inconsistencies in documents, and surety assumption of the contract. Presentations by prominent industry representatives pertinent to the event being simulated are included.

CM 4900 Capstone Project
Prerequisites:

skills, and managing meetings. A collaborative project and workshop activities reinforce these principles.

COMM 4160 Rhetoric: History, Theory, and Practice
Prerequisite: TCOM 2010; either TCOM 2020 or 2030 or concurrently
3-0-3
Introduction to rhetoric as the relationship between thought and expression. Examines connections between rhetoric and writing, between a public act and a personal thinking process, by exploring 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 they have available to them as communicators. Cross-listed as ENGL 4160.

Design Foundation

DFN 1000 Orientation to Architecture (Summer Design Workshop)
2-0-2
The Summer Design Workshop is a primer to design consists of varied research, design, and written exercises. These exercises engage students to know the critical and applied nature of design, studio culture, and the commitment needed to successfully complete the professional degree in Architecture.

DFN 1001 Design Foundation I
Prerequisite: MATH 1111 / Successful Completion of DFN 1000
0-12-4
DFN 1001 is the first design studio. Through exercises and projects, it introduces a variety of skills and subjects for the beginning student in architecture including but not limited to the following: drawings, model building, verbal communication, design, and building language.

DFN 1002 Design Foundation II
Prerequisites: DFN 1000, DFN 1001
0-12-4
DFN 1002 builds and elaborates upon the skills and subjects Introduced in DFN 1001. It culminates with a capstone design project that summarizes and measures the learning of the first year, and prepares students for the second year.

DFN 2003 Design Foundation III
Prerequisite: DFN 1002
0-12-4
This course concentrates on shaping, organizing, and designing arc17.029t2.001f(mma)o1 Tm0 Tc0016ummlsarce uarilsnd domploalatesgis

technique, lettering, orthographic projection, sectional views, pictorial drawings, dimensioning, and industry practices.

EDG 1211 Engineering Graphics I
3-0-3
An introduction to engineering graphics in mechanical engineering

A survey of important works of American Literature. Includes a variety of literary forms such as poetry, drama, nonfiction, short stories, and novels. The course presents literature as a reflection of culture and the history of ideas.

ENGL 2131 American Literature I
Prerequisite: ENGL 1102
3-0-3
A survey of American literature from the pre-colonial period to the mid nineteenth century. The course includes a variety of literary forms such as poetry, drama, nonfiction, short stor3-0-3
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a general audience. Students practice many in-house and external forms of writing such as news releases, feature articles, bulletins, brochures, and pamphlets. Cross-listed and COMM 3050.

ENGL 3180 Film as Literature
Prerequisite: Any 2000-level literature course
3-0-3
This course will explore film as a contemporary literary expression. Students will consider the historical development of film as a distinct genre and its relationship to the literary forms of narrative, plot, setting, and character.

ENGL 4160 Rhetoric: History, Theory, and Practice
Prerequisite: TCOM 2010; either TCOM 2020 or 2030 or concurrently
3-0-3
Introduction to rhetoric as the relationship between thought and expression. Examines connections between rhetoric and writing, between a public act and a personal thinking process, by exploring 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 they have available to them as communicators. Cross-listed as COMM 4160.

ENGL 4170 Media and Narrative
Prerequisite: Any 2000-level literature course
3-0-3
Students will explore the relationship between the form and content of narration. The course will look at a range of media within a historical perspective including (but not limited to): newspapers, novels, film, radio, television, and various digital media. Students will explore how media theory affects literary studies, and vice versa.

ENGL 4800 Project Portfolio
Prerequisites: TCOM 4030; Senior standing; completion of 24 hours of TCOM courses.
3-0-3
This course examines portfolios as professional tools for technical communicators. The course includes portfolio and writing theory along with a collaborative workshop environment. Students develop a professional portfolio of sample documents based on course project, internship experiences, and/or work history. In addition, students write a reflective paper examining their growth and maturity as technical communicators. Interviewing techniques, resume writing, and the job search process are included in the course. Cross-listed as TCOM 4800.

ENGL 4901-4903 Special Topics
Prerequisite: Consent of the Department Chair
1 to 3 hours
Special topics in literature, professional writing, and professional communication. Offered by the department at its discretion.

Economics Courses

ECON 1101 Introduction to Economics
Prerequisite: MATH 1111
3-0-3
An analysis of the economics of production in society. Particular emphasis is given to the study of fiscal and monetary policies, and their impact on industry. Topics include marginal productivity analysis, graphic models, national income analysis, and the importance of the labor market in American industry.

ECON 2105 Macro Economics
Prerequisite: MATH 1111
3-0-3
A study of economics that examines the behavior of the aggregate economy as a whole. Particular emphasis is given to the study of economy-wide phenomena such as changes in unemployment, national income, rate of growth, gross domestic product, inflation and price level.

ECON 2106 Micro Economics
Prerequisite: MATH 1111
3-0-3
An analysis of a market behavior of individual consumers and firms in an attempt to understand their decision-making in society. In particular, microeconomics focuses on patterns of supply and demand and the determination of price and output in individual markets in society.

Electrical and Computer Engineering Technology Courses

ECET 1000 Orientation
2-0-2
This course will provide an introduction to Electrical and Computer Engineering Technology and to SPSU, to include: an introduction to the ECET faculty, an overview of career opportunities, available campus facilities, student organizations, etc. Some of the skills necessary to students will also be introduced. These include: writing formal lab reports and learning basic computer skills.

ECET 1011 Fundamentals
Prerequisites: ECET 1000 or concurrently, MATH 1113 or concurrently
2-3-3
A study of several skills necessary in ECET. This is to include: lab orientation with simple circuits, critical thinking concepts, an introduction to C++ programming and other computer skills.

ECET 1100 Circuits I

implementation using standard digital IC's and programmable logic devices. Topics include: binary number systems, binary arithmetic, logic families, design techniques, logic simulation, F/F's, counters, registers, memory technologies and PLD's.

ECET 2000 Introduction to Biomedical Engineering Technology
Prerequisites: ECET 2110, BIOL 2107, Co-requisite: ECET 2310
3-0-3
An overview of Biomedical Engineering Technology .98 ew of digedical En

The student will design a single board computer (SBC) incorporating standard components such as RAM, ROM, address decode, and input/output devices such as keyboards and LCD displays. A complete software monitor system will be developed for the SBC utilizing industry standard development tools. One of the major objectives of this class is to provide an environment

ECET 4020 Biomedical Imaging
Prerequisites: ECET 3210, PHYS 2212K
3-3-4
An introduction to the principles of the major imaging equipment including x-ray radiology, x-ray computed tomography (CT), ultrasonography and magnetic resonance imaging (MRI). Includes a discussion of other emerging imaging technologies such as nuclear imaging (PET and SPECT).

ECET 4030 Bioinformatics and Telemedicine
Prerequisites: ECET 3600, ECET 3810
3-3-4
An introduction to computer-assisted technology used in the medical and health care industry. Design of communication network infrastructure related to accessing medical databases, visualizing medical techniques, and manipulation of histological medical data. Provides as introduction to wireless/wired LANs/WANs, computer-assisted surgical software, and hardware/software for medical image analysis.

ECET 4040 Biometrics
Prerequisites: MATH 2260, ECET 2310
3-3-4
An introduction to biometric recognition systems that utilize the physiological or behavioral characteristics of an individual for identification. In this course students will study the design of various biometric systems based on fingerprints, voice, face, hand geometry, palmprint, iris, retina, and other modalities. The performance of biometric systems and issues related to the security of these systems will be discussed. Multimodal biometric systems that use two or more of the above human characteristics will also be discussed.

ECET 4050 BMET Capstone (Project)
Prerequisites: Senior Standing
3-3-4
In this capstone course, the students implement the design and development of an approved bioengineering project. The project which will involve the design, fabrication, and formal demonstration of hardware and software functionality is completed during the course of the semester. A formal report and oral presentation are required

ECET 4050 BMET Capstone (Internship)
Prerequisites: Senior standing
3-3-4
This course introduces the student to an on-site learning experience at an operating biomedical equipment section of a health care facility. Supervision of the intern is shared by the working environment supervisor and a faculty advisor. Internist performance is evaluated at weekly seminars. Topics include: problem solving, use of proper interpersonal skills, interpreting work authorizations, identifying logistical support requirements, servicing biomedical instruments, evaluating operating cost, and professional development.

ECET 4320 Active Filters
Prerequisite: ECET 2310
3-3-4
A study of the characteristics, analysis, and practical topologies of active filters. The state-variable and Sallen-Key topologies are emphasized. Various filter responses are studied including Butterworth, Chebyshev, Bessel, and Cauer (elliptic). Delay, sensitivity, frequency scaling, impedance scaling, determination of pole-zero locations, and transformations of transfer functions are covered. Filter synthesis by equating coefficients of applicable transfer functions is included. The design of filters using normalized tables is presented. An introduction to switched-capacitor and digital filters is also included. Laboratory investigations include proto-boarding, designing and analyzing selected practical active filters. P-Spice, Math-Cad, and computer-aided testing are utilized in conjunction with the laboratory exercises.

ECET 4330 Audio Technology
Prerequisites: ECET 2210, ECET 2310
3-3-4
The fundamentals of specifications, standards, devices, circuits and systems used in audio are studied. Acoustics, power amplifiers, preamplifiers, frequency contouring circuits, signal processors, microphones, loudspeakers and sound reinforcement systems are covered. During the first half of the term, approximately six laboratory exercises are utilized to reinforce associated lecture topics. During the second half of the term, an audio design project is completed. Students are required to research, design, analyze, and implement the audio project. Computer based simulation software (such as PSpice) and a computer-aided-testing system are used to analyze several of the lab exercises and the audio project.

ECET 4420 Communications Circuit Applications
Prerequisites: ECET 2310, PHYS 1112K
3-3-4
A study of radio frequency and optical-wavelength communications circuits and their applications. A variety of basic transmitter and receiver circuits

systems related to networking. In the lab, students work with the protocols and devices used in local area networks and the Internet.

ECET 4432 Fiber-optic Communications Systems
Prerequisite: ECET 3410
3-3-4
A detailed study of optical-wavelength communications systems . The underlying principles, requirements, and characteristics of optic sources, detectors, and dielectric wave-guides (fibers) are studied. Heavy emphasis is placed on systems analysis, including power budgets, bandwidth budgets, and signal-to-noise ratios. Recent advances in the area of fiber-optics will be covered, as well as emerging technologies and applications. Laboratory experiences supplement the classroom discussions.

ECET 4450 RF Electronics
Prerequisites: ECET 2310, ECET 3410, PHYS 1112K
3-3-4
A study of practical RF transceiver design and fabrication techniques. Theoretical concepts underlying transmitter and receiver circuits such as oscillators, mixers, filters, amplifiers, transformers and automatic gain control are discussed. Students build and test a 7 MHz superheterodyne Morse code transceiver in the lab.

ECET 4510 Power System Analysis
Prerequisite: ECET 2110
3-3-4
This course involves the analysis of power systems starting with the calculation of line resistance, line inductance, and line capacitance of power transmission lines. These parameters are used to model power systems in order to derive the bus impedance matrix, perform network calculations and analyze systems for symmetrical and unsymmetrical faults. The laboratory will be of a problem solving nature and will involve the solution of network problems with computer software such as Math-Cad.

ECET 4520 Industrial Distribution Systems, Illumination, and the NEC
Prerequisites: ECET 2110, ECET 3500
3-3-4
This introductory design course involves the lighting, wiring and electrical protection systems in commercial and industrial buildings. This course will cover: lighting fundamentals, light sources, lighting system layouts for interior spaces, protection of electrical systems, fuses, circuit breakers, instrument transformers and protective relays, grounding and ground-fault protection, feeder design and branch circuits for lighting and motors. This course will include projects - designing lighting and

A study of the project cost measurement and analysis techniques unique to the engineering profession. Cost analysis procedures and their relationship with cost estimation methodologies are examined. Emphasis is placed on techniques for economy studies of multiple alternatives, uncertainties in forecasts, increment costs, taxes, and retirement and replacement of highways, transportation systems, bridges and publics works facilities. Current economic issues are also discussed.

ENGR 3343 Fluid Mechanics
Prerequisites: ENGR 2214: Co-requisite: MATH 2306.
3-0-3
A study of the fundamentals of fluid statics and dynamics including hydrostatic forces on submerged plates, continuity of fluid flow and fluid flow principles. Applications of turbulent and laminar flow in conduits are emphasized. The systems approach is practiced in analyzing the application of flow measuring devices, piping, pumps and turbines.

ENGR 3345 Fluid Mechanics Laboratory-Mechatronics
Corequisite: ENGR 3343, TCOM 2010
0-3-1
The laboratory reinforces the principles of fluid mechanics, studied in ENGR 3343, as they apply to hydraulic and pneumatic power, and fluid flow. Developing experimental data into effective laboratory reports is emphasized.

ENGR 4402 Engineering Ethics
1-0-1

A review of the theoretical and practical aspects of ethical problems in engineering, along with their suggested solutions. Specific examples, situations and limitations of ethics and ethical relationships are discussed in detail.

ENGR 4421 Instruments and Controls
Prerequisites: EE 2110, ENGR 3343, MATH 2306
3-3-4
Characteristics of instruments used in mechanical systems for determining parameters such as temperature, pressure, and flow are studied. The use of these devices in automated systems is covered. Furthermore, the elements of control theory, selection of control modes, and application to mechanical systems are studied. Laboratory exercises illustrating the use of pertinent instrumentation for determining the performance of mechanical equipment are conducted.

Ethnic Studies Courses

ES 1100 Ethnic Studies
3-0-3
An interdisciplinary course that introduces students to the culture and civilization (history, economy, art, architecture, etc.), literature, and religion of various ethnic groups. Instructor's choice will determine which ethnic group is the focus of the class (e.g. from Asian, African-Americ

Steps involved in apparel product development from concept through delivery will be covered from the perspective of the manufacturer and the retailer. Product creation, design, marketing, merchandising, sourcing and distribution are discussed along with a study of stitch formation and seam application.

ATT 3100 Fashion Merchandising
Prerequisites: ATT 1400
3-0-3
Application of merchandising principles as they relate to buying, problem-solving, retail math and visual presentation using standard industry practices and software. Students will learn how style, color and presentation are major ingredients to successful merchandising producing customer excitement and demand.

ATT 3602 Apparel Computer-Aided Technical Design II
Prerequisites: ATT 2301 and ATT 2505
2-4-4
Manual and computerized pattern grading theory are demonstrated and practiced by students utilizing industry standard digitizing, grading, and marker making systems. Principles and methods used in the preparation, planning, and cutting of fabrics and materials in apparel/textile products are presented including preparatory processes related to fabric cutting. Also presented are basic principles and computer methods of calculating, designing, and making pattern markers for apparel/textile products including yardage, cost estimation, and garment and fabric specifications through applied project work. Laboratory work includes developing cost and quality factors and the operation of equipment for inspecting, marking, shading, fabric defects, spreading, cutting and ply numbering. A systematic appraisal of the factors governing economical fabric use, including: in-depth study of the relationship of pattern make-up to fabric consumption; the impact of width variation to total consumption; and the relationship of all fabric defects to total utilization is presented.

ATT 3800 Fashion Forecasting, Data Analysis & Consumer Trends
3-0-3
Explore the techniques used in industry today including computer software programs to assist with consumer-driven fashion forecasting. Students will examine how to identify, track, and analyze trends in apparel and consumer products consumption. Both long-range and short-range forecasting strategies will be used for market analysis. Consumer trend research activities involve collection of information from multiple sources on a continual basis for the consumer style selection, color selection, and the fabric and trim market.

ATT 4444 Quality Assurance for Textiles and Apparel
Prerequisites: ATT 2505
3-2-4
This course is designed to introduce the student to the quality aspects fabric and apparel. Quality assurance areas are examined such as materials testing, sampling, sewability and preparing product specifications.

ATT 4670 Apparel/Textile Business Practices
Prerequisites: ATT 1300, and ATT 2600, and ATT 3602
3-0-3
Evaluation of the comprehensive factors that determine sound business practices for planning, scheduling and production of apparel products. Analysis includes the determination of production methods, equipment, personnel, materials, training, manufacturing capacities, lead times, and delivery schedules. Laboratory assignments include the use of software systems in predicting, gathering, manipulating, analyzing, and managing production by planning the optimum production cycle for a product from receipt of raw materials to the finished item.

ATT 4750 Advanced Design and Product Development
Prerequisites: ATT 3602
2-3-3
Students will examine the fashion industry design techniques through the use of technology in both 2D and 3D applications. The course surveys product development software and presentation methods used in industry today.

A study of the fundamentals of statistical quality control is provided. Topics include statistical process control with emphasis on applications and techniques including control charts for variables and attributes, and process capability. Other topics include scientific sampling fundamentals, acceptance sampling by attributes and variables, and reliability.

IET 3403 Industrial Experimentation
Prerequisite: IET 2227
3-0-3
This second of a two-course sequence will review of basic statistics, estimation, confidence intervals and hypothesis testing. Techniques for gathering, analyzing, and presenting technical and engineering data are presented. Topics include chi-squared contingency tables and goodness-of-fit tests, one- and two-way ANOVA, regression analysis, and design of experiment. Computer-based solution techniques are used where appropriate.

IET 3407 Six Sigma Concepts
3-0-3
A study of current trends in quality as it relates to Six Sigma, Black Belt and lean on manufacturing

IET 3410 Principles of Team Dynamics
3-0-3
Students will learn the skills and techniques to succeed as a team member in the workplace. Topics include leadership and communication skills, social influences, decision making, problem solving techniques, and team development.

IET 3424 Engineering Economy
Prerequisite: MATH 1113
3-0-3
As an introduction to the effect of the time value of money this course will use equivalent annual cost, present worth, internal rates of return, and benefit to cost ratios in making economic analysis. Tax consequences, replacement theory and economic life will be examined in the analysis of engineering problems.

IET 3433 Engineering Product and Process Cost Estimating II
Prerequisites: ACCT 2101
3-0-3
This second course in a two-course sequence is devoted to a study of cost measurement related to manufacturing and non-manufacturing sectors through cost measurement and control in job order, process, standard and variable costing systems. Content includes the recording and control of material, labor and overhead costs, absorption and direct costing, budgeting, and cost volume profit and analysis.

IET 3320 Advanced Logistics
Pre-requisite: IET 2449
3-0-3
This course will expand on the topics covered in IET 2449, leading students to a deeper understanding of logistics and supply chain systems. Special emphasis will be given to current trends in the field such as global logistics, reverse logistics, nontraditional supply chains and risk assessment/disaster recovery. Each student will also research in more depth a single topic that interest them.

IET 3501
3-0-3
An overview of the major service industries in the United States, including Health Care, Distribution, Banking, and Retail will emphasize the engineers' role in these industries. Case studies

Topics include an overview of computer organization and architecture, machine language and modern language.

IT 3203 Introduction to Web Development
Prerequisite: IT 1324 or CSE 1302
3-0-3
This introduction course covers applications for the world wide web. Topics include current languages (such as HTML and JavaScript), basic web protocols, and human-computer interfaces for the web.

IT 3223 Software Acquisition and Project Management
Prerequisite: CS 3153
3-0-3
A study of the software acquisition process, focusing on the use of packaged solutions that emphasize the importance of the user. Students will also study software development processes. Topics include COTS (Commercial, off-the-shelf), SA-CMM (Software Acquisition Capability Maturity Model), problem definition, systems analysis, requirements gathering, design and development, testing and deployment. This course provides students with the opportunity to develop an in-depth understanding of the challenges and problems associated with the development or purchase and implementation of software products. Team projects will be done.

IT 3423 Operating Systems Concepts & Administration
Prerequisites: IT 1324, IT 3123 and CS 3153
3-0-3
This course is an introduction to basic operating system principles. Topics include memory management, peripheral device management, file system management and process management. Different types of operating systems and their administrations are studied. Projects are carried out with simulations.

IT 3653 Client Server System Administration
Prerequisites: CS 3153 and IT 3123
3-0-3
This course covers the concepts of client server systems. Topics include aligning client server systems with business; client server methodologies; infrastructure; end users; communication tools; architectures; security; privacy; web development for client servers systems.

IT 3883 Advanced Applications Development
Prerequisite: IT 1324 or CSE 1302
3-0-3
This course will allow the student to learn a second programming language and application development. Topics include review of language fundamentals, features of the programming language and development environment, and software development processes. This course will include course projects for hands-on experience with processes and tools.

IT 4123 Electronic Commerce
Prerequisite: IT 1324 or CSE 1302
3-0-3
This course will examine the aspects of electronic commerce. Topics include internet development, EDS, security, network connectivity and privacy. Basic business practices using electronic commerce will also be covered.

IT 4063 Political Issues in Electronic Government
Prerequisite: POLS 3701
3-0-3
This course examines a variety of issues, e.g., identity, security, privacy issues, citizen participation, constitutional rights, etc., in electronic government using a comparative international perspective.

IT 4153 Advanced Database
Prerequisite: CS 3153
3-0-3
This course will study how databases are used with programming applications. Topics include advanced PL/SQL (or similar database programming language), database transaction, database security, database maintenance, and distributed and web databases.

IT 4203 Advanced Web Development
Prerequisite: IT 3203
3-0-3
This course covers more advanced topics on web server site design and development including server pages, programming, database integrations, and web server systems and security administrations.

IT 4323 Data Communications & Networks
Prerequisite: IT 3123
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 4333 Network Configuration & Administration
Prerequisite: IT 4323
3-0-3
This course continues the study of networks. Topics include design and implementation of networks including synchronization, scheduling, exception and deadlock resolution, client server and web based collaborative systems. Network security will also be covered. Cost estimates and speed are examined from a management perspective.

IT 4683 Management of Information Technology
Prerequisite: CS 3153
3-0-3
A study of the information needs in a formal organization and the information systems required to meet those needs within the planning, control, operating and decision-making processes.

IT 4723 IT Policy and Law
Prerequisites: IT 3123 and IT 3223
3-0-3
This course covers current issues in IT including the law, ethics and social values. Topics include copyright, patents, trademarks, trade secrets, computer ethics, computer crime, computer abuse, cultural impact, web issues, information warfare and current legislation.

IT 4823 Information Security Administration
Prerequisites: CS 3153, IT 3123 and MATH 2345
3-0-3

The student develops knowledge of the principles of information assurance at the policy, procedural, and technical levels to

calculations of tooling forces and costs as well as complete production drawings of the tool design.

MET 3400 Survey of Thermodynamics
Prerequisites: MATH 2253, PHYS 1111K or PHYS 2211K
3-0-3
A study of the fundamental laws of thermodynamics and heat transfer for non-MET students. Properties of ideal gases, mixtures of ideal gases, real substances as related to heat engines, heat pumps, refrigerators, and heat exchangers are covered. Basic applications of thermodynamics in the study of power plants, internal combustion engines, refrigeration systems and air conditioning systems are included. Heat transfer topics are introduced with applications for conduction, convection, and radiation. (This course may not be taken for credit by MET students).

MET 3401 Thermodynamics I
Prerequisites: MATH 2253, PHYS 1111K or PHYS 2211K
3-0-3
Covers the fundamentals of thermodynamics. Use of steam and gas tables is introduced. Property relations for ideal gases and incompressible liquids are introduced. Applications of the First and Second Laws to closed and open systems are studied. Heat engines, refrigerators, heat pumps, availability and irreversibility are studied.

MET 3402 Thermodynamics II
Prerequisites: ENGR 3101, MET 3401
3-0-3
Continuation of Thermodynamics I with emphasis on applications. Transient flow analysis, combustion, internal and external combustion cycles, gas turbines, compressors, refrigeration and

cycle, load calculations and selection of components for refrigeration systems are covered.

MET 4412 Air Conditioning
Prerequisites: MET 3402 or concurrently, ENGR 3101
3-0-3
The basic principles of residential and commercial air conditioning systems are introduced including the calculation of cooling and heating loads, and psychrometric processes. The student is exposed to relevant topics in heating, ventilating and air conditioning (HVAC) such as equipment selection, duct design, piping design, indoor air quality, energy code, HVAC systems, energy conservation options, automatic controls, and testing, adjusting and balancing (TAB) of air conditioning systems.

MET 4421 Instruments and Controls
Prerequisites: ECET 3000 or concurrently; CS 2123, MATH 2306, ENGR 3131
3-3-4
This course covers the principles of engineering experimentation and process control. Students are instructed in current methods of data gathering, data regression, graphical analysis, result compilation, and report writing. Data gathering will include both manual techniques and computer data acquisition systems. An understanding of sensor selection, interfacing, and implementation is provided through lecture and laboratory assignments. The fundamentals of uncertainty analysis along with the application of dimensional analysis and similitude are coves andfu(d balan)5.2(c)-3.5roug18 Tccs inmable Logicunde Tc(8)t instructe.0007 Tc0.0011 T

An introduction to the fundamentals of discrete mathematics. Topics include sets, formal logic, methods of proof, counting, relations, functions, graphs and trees, and finite state automata.

MATH 2901-2905 Special Topics
1 to 5
Special topics in mathematics. Either a course taught on a

continuity, differentiation, and integration, Taylor and Laurent series.

MATH 4440 Abstract Algebra
Prerequisite: MATH 3312
4-0-4
A first course in abstract algebra. Topics include operations, the concept of homomorphism, and a standard approach to groups, rings, and fields.

MATH 4451 Capstone Mathematics Project
Prerequisites: MATH 2306, MATH 3256;
Prerequisites or Co-requisites: MATH 3321, MATH 4440
3-0-3

An introduction to computational physics problem solving, primarily using Windows-based MathCad but also including an introduction to Maple. Topics include equation solving, the use of vectors and matrices, 2-D and 3-D graphics, differential equation solving, simple programming, and the analysis and simulation of physical processes. Both numeric and symbolic methods are covered.

PHYS 3710 Modern Physics
Prerequisite:a grade of C or better in PHYS 2212K
4-0-4
An introduction to the concepts and calculations involved in understanding the structure of matter and the world of the quantum. Topics include the Planck theory of radiation, particle/wave duality, Schrodinger equation solutions for simple potentials, and properties of the one-electron atom. Applications of quantum principles to atomic, molecular, and nuclear structure are also considered as time permits.

PHYS 3720L Modern Physics Laboratory
Prerequisite: PHYS 3710 or concurrently
0-3-1
A selection of experiments from Modern Physics that complement the material in PHYS 3710, Modern Physics.

PHYS 3730 Relativity
Prerequisite:a grade of C or better in PHYS 2212K
2-0-2
A thorough exposition of the principles of Special Relativity and an introduction to the General Theory of Relativity.

PHYS 3901-3905 Special Topics
Prerequisite: Junior standing
1 to 5 hours
Special topics selected by the department. Offered on a demand basis.

PHYS 4210 Quantum Physics
Prerequisite: PHYS 3710
4-0-4
A systematic development of quantum mechanical laws, emphasizing solutions to Schrodinger's equation.

PHYS 4220 Electromagnetism II
Prerequisite: PHYS 3220
3-0-3
A study of electromagnetic fields in matter, and of electromagnetic waves and their propagation. Emphasis will be given to calculational techniques.

PHYS 4230 Thermal Physics
Prerequisite: PHYS 2213K, a grade of C or better in PHYS 2212K
4-0-4
A study of the principles of thermal equilibrium, physical statistics, irreversible processes, and the approach to equilibrium.

PHYS 4240 Solid State Physics
Prerequisite: PHYS 3710
3-0-3
Application of quantum mechanics to molecules and solids including such topics as molecular bonding, spectra of diatomic molecules, binding forces and bonding theory in solids, and application to solid state devices.

PHYS 4410K Advanced Measurements Laboratory
Prerequisite: PHYS 3410K
1-3-2
An introduction to instrument control, data acquisition, and data analysis of the type used in research labs. The student w ill then incorporate these techniques in the design of experiments important to classical and/or contemporary physics. This course will be writing intensive and will require extensive formal reports.

PHYS 4430 Capstone Physics Project
Prerequisite: Approved petition for graduation
1-0-1
Students will complete a capstone physics project during the last year on campus. The content and subject of this project will be negotiated between the student and the faculty supervisor of the project.

PHYS 4901-4905 Special Topics
Prerequisite: PHYS 1112K or PHYS 2212K
1 to 5 hours
Special topics selected by the department. Offered on a demand basis.

Professional Program: Architecture

ARCH 3011 Architecture Studio I
Prerequisite: Acceptance into the professional program upon portfolio review
0-12-4
This course builds on the previous studio course's emphasis on space making and introduces the integration of building technology into the design process. Assignments fo401 Tmptancetc0 0 the

religion, politics and technology. While continuing in the aim of developing an understanding of how architecture manifests the socio-cultural conditions of a given moment in aesthetic form, it takes as its central concern the search for a definition of 'Modernity', and how it might be translated into a style. Particular attention is paid to the various 'isms' of the Modern Movement and the key historical figures that shaped them.

ARCH 3211 Architecture Structures II: Steel and Wood
Prerequisite: DFN 2211
3-3-4
This course is a continuation of DFN 2211, with emphasis on gravity loads and basic design of wood structural components including beams, columns, and trusses. Engineered wood products, glue-laminated, and connections are also covered.

ARCH 39X1-39X4* Special Topics
Prerequisite: Admission to the professional program
1 to 4 hours
This course provides an opportunity for a group of students to undertake in-depth study under the direction of a member of the full-time faculty or visiting faculty. Areas of study may include extension and enhancement of material offered in required architecture courses or exploration in an area of professional interest not covered by, but directly related to, material covered in third year architecture courses.

ARCH 3212 Architecture Structures III: Concrete and Lateral Loads
Prerequisite: ARCH 3211
3-0-3

configurations, building typologies while exploring means to defray life cycle costs.

ARCH 4411 Design Cost Control
Prerequisite: ARCH 4224
2-0-2
The primary intent of this course is to help future architects methods to create realistic Estimates of Probable Costs for construction projects. It is not the intent of this course to focus on becoming a construction cost estimator, but rather to enable the architectural student to effectively create realistic Estimates of Probable Cost for their clients and thereby work as a team member with the Owner and General Contractor to establish and maintain a project budget throughout the process of project design and construction.
The course will introduce methods commonly used to create budgets for the construction cost of commercial building projects from conceptual discussions with the Owner and the early stage of development of the drawings and specifications. The methods that will be reviewed are typically used by architects and general contractors for feasibility and value engineering studies.

ARCH 49X1-49X4* Directed Study
Prerequisite: Admission to the professional program
1 to 4 hours
This course provides an opportunity for a group of students to undertake in-depth study under the direction of a member of the full-time faculty or visiting faculty. Areas of study may include extension and enhancement of material offered in required architecture courses or exploration in an area of professional interest not covered by, but directly related to, material covered in fourth year architecture courses.

An introduction to international relations covering such issues as diplomacy, nuclear politics, war, secret intelligence, revolution, international development, debt, and dependence.

POLS 2801 Comparative Politics
Prerequisite: POLS 2401
3-0-3
Provides a generalized overview of the political systems and policymaking processes in several important countries. Included are country case studies from both the developed and developing worlds, as well as communist and post-communist realms.

POLS 3100 Intermediate Quantitative Research Methods
Prerequisite: SIS 2100
3-0-3

This course builds upon the material learned in SIS 2100, such as the basics of data analysis in the social sciences, including measures of central tendencies and dispersion, graphical summaries of variables, probability distribution, confidence intervals, t-tests , and hypothesis testing. This course will expand upon many of these ideas and provide an in-depth understanding of the linear model - the workhorse of statistical inference in political science. Students will conduct analysis using datasets from the General Social Science Survey, National Elections Study, Correlates of War Project, and/or other datasets relevant to political science.

POLS 3101 International Political Economy
Prerequisite: POLS 2401
3-0-3
Discusses the major international governmental and non-governmental organizations that are involved in global trade, finance and development. Besides introducing the student to various theoretical frameworks in international political economy, the course examines the interrelationships among political, economic and social forces through the use specific case studies.

POLS 3201 Constitutional and International Law
3-0-3
This course provides students with an in-depth discussion and case history of the origins, development, and evolution of the U.S. Constitution, focusing in particular upon such themes as separation of powers, federalism, private property rights, civil rights and civil liberties, as well as the important role that organized interests have played in shaping the meaning of the constitutional rights. In addition, the course will examine some of these themes in the background of the growing (and often contradictory) body of international legal principles developed by a variety if international governmental organizations.

POLS 3301 Modern Political Theory
3-0-3
An examination of the most important theorists, political philosophies, and ideologies from the seventeenth century to the present. The course discusses the role and nature of the individual, the relationship between the individual and the group, the characteristics of political authority (its source and its limits), the goals and mechanics of economic organization, as well as the issue of material and economic equality as it relates to individual freedom.

POLS 3401 Regulatory and Environmental Law
3-0-3
A study of trends in American regulatory policy, including the developmental, regulatory, and "new regulation" phases of business-government relations; comparisons between American regulatory policies and those of other nations; a discussion of the economic, social, cultural, and political forces that have shaped regulatory policy and environmental law; contemporary issues in environmental regulation; comparisons between American environmental polJ-15 -1.2887 746 0 TD2 0 rp-0.0014 Tweppg-1.8(tal p)J/TT6

PSYC 3305 Developmental Psychology
Prerequisite: PSYC 1101
3-0-3

Human development from conception to death, emphasizing biological, cognitive emotional, social and personality development. Theories of development and applications to real-world problems will provide a context for understanding human change during the life-cycle.

PSYC 390x Special Topics
Prerequisites: Consent of the Department Head
Special Topics in psychology. Offered by the department on a demand basis.

PSYC 4000 International Psychology
Prerequisite: PSYC 1101.
3-0-3

The course will examine mainstream as well as alternative theoretical, methodological, and applied approaches that are relevant to the study and practice of international psychology. The topics discussed will emphasize psychology's relevance to the understanding and solution of global problems, as well as of how psychology itself is affected by events and cultures around the world.

PSYC 4050 History and Systems of Psychology
Prerequisite: PSYC 1101
3-0-3

A review of the history of psychology from ancient to modern times. The rise and fall of psychological systems such as structuralism, functionalism, behaviorism, gestaltism, and psychoanalysis. The characteristics of contemporary psychology.

PSYC 4130 Psychology of Aging
3-0-3

Course focuses on gerontology, with emphasis on learning, personality, attitudes, perception, ability, and adjustment in the aged.

PSYC 4220 Psychoactive Drugs, Behavior, and Society
3-0-3

This course addresses how psychoactive drugs work int he central nervous system to affect behavior. Stimulants, depressants, hallucinogens, analgesics and psychotropic drugs will be discussed primarily in terms of their pharmacological action in the brain. Substance abuse and treatment will also be discussed.

PSYC 4600 Conflict Resolution
3-0-3

Styles of negotiation as a tool used to resolve conflicts and disputes. Also studied are alternative dispute resolution (ADR) systems used at the local, regional, national, and international levels.

PSYC 4800 Psychology Capstone Seminar
Prerequisite: Completion of Psychology upper division core and senior status OR permission of the instructor.
3-0-3

This seminar course serves as the capstone course for the student majoring in Psychology. Students will research and complete self-directed project in which they will integrate the various aspects of their program.

Regents' Remedial Courses

RGTR 0198 Reading for the Regents' Test
(Institutional Credit Only)
3-0-3
Prepares the student for taking

SPAN 3003 Hispanic Cultures and Civilizations
Prerequisite: SPAN 2002 or equivalent, but SPAN 3001 and 3002 recommended.
3-0-3
A background for technical and international trade purposes. The social values, institutions, customs and historical/cultural movements. Readings, writings, and discussions in Spanish

SPAN 3901-3905 Special Topics
Prerequisite: SPAN 2002 or equivalent, but SPAN 3001 and 3002 recommended.
1-5 hours
Arranged through agreement with and permission of instructor. This might include an internship abroad, Spanish for business,

This course provides an introduction to Sociology, including the basic concepts, different theoretical approaches, and the methods of analysis used by sociologists. Topics covered may include social structures, group dynamics, socialization and self, social stratification, culture and diversity, social change, global dynamics, and the interaction of society with political and economic forces in society. Also offered as an eCore (online) class.

Software Engineering Courses

SWE 2313 Introduction to Software Engineering
Prerequisite: CSE 1302C or CSE 1302J or CSE 1302E
3-0-3
This course provides an overview of the software engineering discipline, introducing the student to the fundamental principles and processes of software engineering. This course highlights the need for an engineering approach (both personal and team) to software with understanding of the activities performed at each stage in the development cycle. In this course, students will perform requirements analysis, design, implementation and testing. The course presents software development processes at the various degrees of granularity. Students will become aware of libraries of standards (IEEE, ACM, SWEBOK, etc.).

SWE 3613 Software System Engineering
Prerequisite: CS 3424 and junior standing
3-0-3
Students practice and complete all the significant activities of software engineering development through various case studies and system projects. Cross-cutting aspects (e.g., security, reliability, performance) are considered while performing major software phases. A major component of the course includes planning and developing a team-based system project. Various structured analysis and design tools are used by students.

SWE 3623 Software Systems Requirements
Prerequisite: (SWE 2313 or IT 3223) and MATH 2345
3-0-3
This course covers engineering activities related to the definition and representation of software system requirements. Topics include the elicitation, analysis, specification and validation of software system requirements. Emphasis is on the application of processes and techniques of requirements engineering. Projects focus on current analysis methods and supporting tools for specification, organization, change management, traceability, prototyping, and validating requirements.

SWE 3633 Software Architecture & Design
Prerequisites: SWE 2313
3-0-3
This course covers the fundamental design principles and strategy for software architecture and design. Architectural styles, quality attributes, notations and documents, reference architecture, domain-specific architecture in architecture process and pattern-oriented design, component-oriented design, and interface design in detail design process are discussed.

SWE 3643 Software Testing and Quality Assurance
Prerequisite: SWE 2313
3-0-3
This course will show how software quality assurance and configuration management is performed and how software process improvement is maintained in order to assure the highest

SURV 4420 Remote Sensing
Prerequisite: SURV 3320.
3-3-4
Remote sensing systems; ground truthing; mapping applications; satellite imagery integration into GIS.

SURV 4422 Geographic Information Systems II
Prerequisite: SURV 3421.
3-3-4
Continuation of GIS I; data collection techniques; advanced systems and macro programming.

SYE 3700 Manufacturing and Production Systems
Prerequisites: SYE 2600, SYE 3400
An analysis of decision making in the current production environment and the tools and optimization models needed for finding solutions to problems relating to production planning and scheduling, inventory, and warehouse design.

SYE 3710 Logistics and Supply Chain Systems
Prerequisites: SYE 2600, SYE 3400
An analysis of decision making in the current logistics environment and the tools and optimization models needed for finding solutions to problems relating to supply chain design and strategy, transportation, and warehouse management.

SYE 4400 Engineering Optimization II: Stochastic Decision Models
Prerequisites: SYE 2600, SYE 3400
Modeling and solution of decision problems under uncertainty. Topics include Markov Chains, stochastic programming, stochastic dynamic programming, queuing theory, utility theory and simulation. Computer solution techniques are emphasized.

SYE 4500 System Modeling and Simulation
Prerequisite: SYE 2600
Modeling and simulation of systems. Topics include basic simulation and system modeling techniques, random sampling procedures, input analysis, output analysis and system evaluation. Practical implementations using common modeling languages and simulation software are emphasized.

SYE 4900 System Design Project
Prerequisite: student must be in his/her last .021t8Tpl-em Dl5qgl6(mul)8 YE 4901lfc-0.00ssgesgnhast7.9(ntory,)]TJ39 473.52 2 Tm-0.ctto product15 Tjsil

essays, give an oral report, and complete a research project on

basic HTML knowledge will be expected to learn the basics of HTML on their own.

TCOM 4170 Video Production
Prerequisites: TCOM 2010, TCOM 4030; either TCOM 2020 or 2030 or concurrently
3-0-3
Introduction to the role and use of video production for technical and professional communication. Topics include scripts, storyboards, shot selection, continuity, lighting, sound, in-camera editing, and fundamental post-production techniques. Students will complete at least two assigned videos as individual or team projects. 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.

TCOM 4175 Animation Design, 2D
Prerequisite: TCOM 4030 Foundations of Graphics
Co-Requisite: TCOM 4035 Fundamentals of Website Design
3-0-3

This course will examine the application of design principles to motion graphics. Students will learn basic techniques for creating animated and interactive graphics. The focus of the course will be on design principles and aesthetics pertaining to the moving image. Discussions will center on aesthetics of interface design with moving graphics, 2D space, user-centric design and working with digital imagery as information. Students will complete a number of small animations projects designed to familiarize them with the application of design principles and aesthetics to animation. Students will be required to complete a larger final project that unifies the topics presented throughout the semester in a coherent animated layout.

TCOM 4600 Independent Study
Prerequisites: 21 hours of TCOM course work and a 3.0 or higher GPA
3-0-3
A directed study for an undergraduate student who wishes to pursue a special interest in technical and professional communication not covered in the curriculum. The student submits to the TCOM Undergraduate Program Coordinator a proposal that clearly defines the course of study and the benefits to be obtained. The proposal, which must be submitted at least one semester prior before taking the course, must be approved by the student's advisor and the TC

M. Arch., Tulane University
B. Arch., Tulane University

Rizzuto, Anthony
Associate Professor
M. Arch., University of Illinois
BA of Design, University of Florida
Assoc A.I.A.

Sargent, Kenneth L., Jr.

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

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

Makarechi, Shariar
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Ph.D., Georgia Institute of Technology (Expected 2006)
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B.S., Aryamehr University of Technology, Iran
P.E., California, D.C, Georgia, Maryland, Virginia, West Virginia

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B.S.E.E. University of South Carolina
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Kang, Lu
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Ph.D., Wesleyan University

B.S., Shijiazhuang Railway Institute

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Andrews, Robert H., Associate Professor Emeritus
Gordon, John T., Professor Emeritus
Haddle, Gillian P., Professor Emeritus
Hall, Kathleen A., Professor Emerita
Kropa, James C., Professor Emeritus
Stricklen, Simon A., Jr., Professor Emeritus
Stone, Ernest R., Associate Professor Emeritus
Vinelli, Jose L., Associate Professor Emeritus
Young, Donald F., Professor Emeritus
Youngblood, Ralph P., Professor Emeritus

Department of Social and International Studies Faculty

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Graduate Certificate in Historical Geography of the Ancient Neareast, Jerusalem University College
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B.S., Stevens Institute of Technology

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Institutions of the University System of Georgia

Research Universities

Georgia Institute of Technology	Atlanta
Georgia State University	Atlanta
Medical College of Georgia	August
University of Georgia	Athens

Regional Universities

Georgia Southern University	Statesboro
Valdosta State University	Valdosta

State Universities

Albany State University	Albany
Armstrong Atlantic State University	Savannah
Augusta State University	August
Clayton State University	Morrow
Columbus State University	Columbus
Fort Valley State University	Fort Valley
Georgia College & State University	Milledgeville
Georgia Southwestern State University	Americus
Kennesaw State University	Kennesaw
North Georgia College & State University	Dahlonega
Savannah State University	Savannah
Southern Polytechnic State University	Marietta
University of West Georgia	Carrolton

State Colleges

Abraham Baldwin Agricultural College	Tifton
Dalton State College	Dalton
Gainesville State College	Gainesville
Georgia Gwinnett College	Lawrenceville
Gordon College	Barnesville
Macon State College	Macon
Middle Georgia College	Cochran

Two-Year Colleges

Atlanta Metropolitan College	Atlanta
Bainbridge College	Bainbridge
Coastal Georgia Community College	Brunswick
Darton College	Albany
East Georgia College	Swainsboro
Georgia Highlands College	Rome
Georgia Perimeter College	Decatur
South Georgia College	Douglas
Waycross College	Waycross

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