ACCELERATED LAW CURRICULUM

(58 HOURS)

1. Students interested in the Accelerated Law Curriculum must complete the requirements for the General Social Science Concentration and the courses outlined in Area V of General Studies by the end of the third year of study at Troy University (or semester prior to attending partnered institution).

2. Students interested in the Accelerated Law Curriculum must meet the admission requirements and be accepted to a partnered institution. Students must take the LSAT exam as part of the admissions requirement.

3. Students must successfully complete 30 semester hours of law courses outlined by the partnered institution in order to receive Troy University credit.

4. Students are strongly recommended to take PHI 2204 Ethics and Modern World within Area II of General Studies.

5. Upon the successful completion of the designated 30 semester hours of courses at the partnered institution, students may be awarded a Bachelor of Science in Social Science with a minor in Legal Studies.

For additional information, interested students should see the chair of the Department of Social Science and interested students must meet with the Pre-Law Advisor.

Area V

IS 2241 (3) Computer Concepts & Applications
TROY 1101 (1) University Orientation

Requirements for the Major (15 hours)

SS 3375 (3) Introduction to Social Science Inquiry
SS 3376 (3) Statistical Applications of Social Science Inquiry
SS 3377 (3) Spatial Applications of Social Science Inquiry
SS 4498 (3) Social Science Theory
SS 4499 (3) Senior Seminar

General Social Science Concentration:
Select at least 21 hours of additional 3000/4000-level courses from anthropology, economics, geography, history, political science, psychology, sociology criminal justice, or as approved by department chair. Six (6) hours may be used from ECO 2251, ECO 2252, GEO 2210, ANT 2200, POL 2241, or SOC 2275 in at least three disciplines.

Legal Studies Minor (Accelerated Law Curriculum)

Required Courses (9 hours)

LGL 2200 (3) Introduction to Legal Studies
LGL 3300 (3) Legal Research and Writing
LGL 4400 (3) Seminar in Legal Studies

The remaining nine (9) hours of Legal Studies Minor will consist of courses successfully completed in Law School.

AIR FORCE ROTC/AEROSPACE STUDIES MINOR

(18 HOURS)

AS 3312 (3) Air Force Leadership Studies I
AS 3313 (3) Air Force Leadership Studies II
AS 4412 (3) National Security Affairs/Preparation for Active Duty I
AS 4413 (3) National Security Affairs/Preparation for Active Duty II

Select two three-hour courses from upper-level political science (POL) courses, or substitute upper-level courses from history (HIS), geography (GEO), or social science (SOC) courses with the approval of the Department of Aerospace Studies chair.

*Students pursuing an Air Force ROTC Commission must also take the following Labs:

AS L312 (1) Leadership Laboratory I
AS L313 (1) Leadership Laboratory II
AS L412 (1) Leadership Laboratory I
AS L413 (1) Leadership Laboratory II

ANTHROPOLOGY MAJOR (36 HOURS)

Area IV

Anthropology majors should take Area IV electives appropriate for their major.

Major Requirements:

ANT 3305 (3) Introduction to Archaeology
ANT 3310 (3) Cultural Anthropology
ANT 3311 (3) Physical Anthropology
ANT 3340 (3) Language in Culture and Society
ANT 4499 (3) Anthropology Theory
SS 3376 (3) Statistical Applications of Social Science Inquiry

Select at least 18 hours of additional 3000/4000 level anthropology courses as approved by your faculty adviser

ANTHROPOLOGY MINOR (18 HOURS)

ANT 3310 (3) Cultural Anthropology
ANT 3311 (3) Physical Anthropology

Select at least 12 hours of additional 3000/4000-level anthropology courses as approved by your faculty adviser.
AVIATION OPERATIONS MINOR (18 HOURS) AND ADVANCED PROFESSIONAL FLIGHT MINOR (18 HOURS)

These two programs are only available as concentrations for students pursuing the ASGE degree and for students in the BAS/RTM program. The Advanced Professional Flight concentration is only available at Troy University’s Hawaii location. Specific questions regarding these two concentrations should be directed to the Office of the Dean of the College of Arts and Sciences.

For concentration requirements, see the Aviation Operations and Advanced Professional Flight link at http://troy.edu/catalogs/1718undergraduate/index.html.

BACHELOR OF APPLIED SCIENCE: RESOURCE AND TECHNOLOGY MANAGEMENT MAJOR (36 HOURS)

Area III Requirements
SCI 2233 (3) Physical Science
SCI L233 (1) Physical Science Lab

Area IV Requirements
ECO 2251 (3) Principles of Macroeconomics
ECO 2252 (3) Principles of Microeconomics

Area V Requirements (24 hours)
TROY 1101 (1) University Orientation
IS 2241 (3) Computer Concepts & Applications
GEO 2210 (3) World Regional Geography
POL 2260 (3) World Politics
PSY 2200 (3) General Psychology
SOC 2275 (3) Introduction to Sociology
SCI 2224 (3) Earth and Space Science
SCI L234 (1) Earth and Space Science Lab
Electives (5 hours)

Resource & Technology Management Major (36 hours)
Required Core courses (18 hours)
BIO 4465 (3) Occupational Safety and Health
MKT 3300 (3) Principles of Marketing
MGT 3300 (3) Principles of Management
SCI 3365 (3) Principles of Applied Science
SOC 3370 (3) Society and Environment
SS 3375 (3) Introduction To Social Science Inquiry
Select a minimum of 18 semester hours from the courses listed below:
BIO 4460 (3) Critical Issues of Environmental Mgmt.
CJ 3335 (3) Private & Public Security Administration
CS 3310 (3) Foundations of Computer Science
PSY 4410 (3) Business and Industrial Science
SCI 3366 (3) Survey of Electronic Technology
SCI 3370 (3) Toxic, Radioactive, & Hazardous Material
SCI 4450 (3) Science in a Regulatory Environment
SOC 4413 (3) Minorities in U.S. Social Structure

OR
Transfer of *Specialized technical courses. (not to exceed 18 semester hours.)

*Specialized technical courses.
Credit will be awarded for specialized technical knowledge based upon American Council of Education (A.C.E.) credit recommendations or transfer work from regionally accredited (Southern Association of Colleges and Schools, Middle States Association of Colleges and Schools, etc.) post-secondary community college, or technical schools as approved by the Academic Council. Specializations are not available in fields of study that are offered through Troy University as majors, programs, or minors, e.g., nursing, computer science, information systems, or education. Exceptions to the use of a Troy University minor are the programs in Aviation Operations and Advanced Professional Flight. Program requirements for either minor may be used to satisfy the 18 hours of specialized technical courses.

Eligibility
Eligibility for enrollment in one of the applied science degree programs is dependent upon prior education and/or experience. Before enrollment in one of the programs, official documentation of prior learning must be submitted to determine eligibility. All post-secondary technical school transfer students must complete all courses required in the institution’s curriculum and earn (if appropriate) a diploma or certificate before being granted admission into the resources management degree program. No additional credit will be awarded for the possession of a license (i.e., all credit awarded is based on documentation of training and evaluation leading to the issue of a license, not the mere possession of a license). All credit from the Community College of the Air Force (CCAF), accredited post secondary technical schools, and/or American Council on Education (ACE) recommendations will be considered junior college credit except where specifically recommended by ACE for upper-division credit. No credit will be awarded until six semester hours of academic credit has been earned at Troy University. At least 50 percent of the degree program must be traditional academic credit at the 3300/4400 level. Curriculum: The academic curricula taught by the university have been developed to supplement, not duplicate, the vocational/technical training or other experiential learning the individual may possess in a manner designed to provide these individuals greater career opportunities.

BIODEVIOLOGY EEDUCATION

Students seeking Alabama teacher certification should select biology as a first major and education as a second major. Students should consult with their advisers concerning all certification requirements.

BIODYOLOGY MAJOR (44 HOURS)

*Special Topics in Biology (BIO 4476), Guided Independent Studies (BIO 4491/4492) and Guided Independent Research (BIO 4493, 4494) may only be taken for a maximum of 6 semester hours.

Specialized General Studies Requirements
General studies requirements for the biology, environmental science, biomedical sciences, and marine biology programs and the biology major total 64 semester hours. See the General Studies section of this catalog for complete general studies information.

Area III
BIO 1100 (3) Principles of Biology
BIO L100 (1) Principles of Biology Lab
CHM L142 (3) General Chemistry I Lab
CHM L143 (1) General Chemistry I Lab
MTH 1125 (4) Calculus I

Area V Requirements
BIO 1101 (3) Principles of Biology
BIO L101 (1) Principles of Biology Lab
CHM L142 (3) General Chemistry I Lab
CHM L143 (1) General Chemistry I Lab
IS 2241 (3) Computer Concepts and Applications
TROY 1101 (1) University Orientation

Select one sequence:
PHY 2252 (3) General Physics I
PHY L252 (1) General Physics I Lab
PHY 2253 (3) General Physics II
PHY L253 (1) General Physics II Lab

OR
PHY 2262 (3) Physics I with Calculus
PHY L262 (1) Physics I with Calculus Lab
PHY 2263 (3) Physics II with Calculus
PHY L263 (1) Physics II with Calculus Lab

Major Requirements
BIO 2220 (3) Principles of Cell Biology
BIO L220 (1) Principles of Cell Biology Lab
BIO 2229 (3) General Ecology
BIO L229 (1) General Ecology Lab
Complete 10 to 12 additional semester hours of approved upper level biology courses with corresponding labs.

- BIO 3320 (3) Genetics
- BIO L320 (1) Genetics Lab
- BIO 4484 (1) Senior Seminar in Biological & Environmental Sciences
- CHM 3342 (3) Organic Chemistry I
- CHM L342 (1) Organic Chemistry I Lab
- CHM 3343 (3) Organic Chemistry II
- CHM L343 (1) Organic Chemistry II Lab
- MTH 2210 (3) Introductory Statistics

**Complete one botany course with its corresponding lab:**
- BIO 3325 (3) Plant Form and Function
- BIO L325 (1) Plant Form and Function Lab
- BIO 4425 (4) Field Botany

**Complete one zoology course with its corresponding lab:**
- BIO 3307 (3) Invertebrate Zoology
- BIO L307 (1) Invertebrate Zoology Lab
- BIO 4405 (3) Entomology
- BIO L405 (1) Entomology Lab
- BIO 4420 (4) Field Vertebrate Zoology
- BIO 4447 (3) Ornithology
- BIO L447 (1) Ornithology Lab
- BIO 4471 (3) Parasitology
- BIO L471 (1) Parasitology Lab

**Complete one ecology/environmental course with its corresponding lab:**
- BIO 4413 (3) Limnology
- BIO L413 (1) Limnology Lab
- BIO 4416 (3) Microbial Ecology
- BIO L416 (1) Microbial Ecology Lab
- BIO 4421 (3) Population Ecology
- BIO L421 (1) Population Ecology Lab
- BIO 4479 (3) Environmental Assessment
- BIO L479 (1) Environmental Assessment Lab

**Complete one physiology/cell/molecular course with its corresponding lab:**
- BIO 3347 (3) Human Anatomy and Physiology I
- BIO L347 (1) Human Anatomy and Physiology I Lab
- BIO 3348 (3) Human Anatomy and Physiology II
- BIO L348 (1) Human Anatomy and Physiology II Lab
- BIO 3372 (3) Microbiology
- BIO L372 (1) Microbiology Lab
- BIO 3382 (3) Immunology
- BIO L382 (1) Immunology Lab
- BIO 3386 (3) Hematology
- BIO L386 (1) Hematology Lab
- BIO 4443 (3) Food Microbiology
- BIO L443 (1) Food Microbiology Lab
- BIO 4451 (3) Toxicology
- BIO L451 (1) Toxicology Lab
- BIO 4480 (3) Histology
- BIO L480 (1) Histology Lab
- BIO 4482 (3) Molecular Biology
- BIO L482 (1) Molecular Biology Lab

**Complete one upper-level adviser-approved biology course and its corresponding lab.**

**BIOLOGY MINOR (18-20 HOURS)**

Lectures and the corresponding labs must be taken together:
- BIO 1101 (3) Organismal Biology
- BIO L101 (1) Organismal Biology Lab
- BIO 2220 (3) Principles of Cell Biology
- BIO L220 (1) Principles of Cell Biology Lab

Complete 10 to 12 additional semester hours of approved upper-level (3300 or above) biology courses with corresponding labs.

**BIOLOGY PROGRAM (56 HOURS)**

*Special Topics in Biology (BIO 4476), Guided Independent Studies (BIO 4491/4492) and Guided Independent Research (BIO 4493, 4494) may only be taken for a maximum of 6 semester hours

**Specialized General Studies Requirements**

**Area III**
- BIO 1100 (3) Principles of Biology
- BIO L100 (1) Principles of Biology Lab
- CHM L142 (3) General Chemistry I Lab
- CHM L143 (3) General Chemistry II Lab
- MTH 1125 (4) Calculus I

**Area V Requirements**
- IS 2241 (3) Computer Concepts and Applications
- TROY 1101 (1) University Orientation
- BIO 1101 (3) Organismal Biology
- BIO L101 (1) Organismal Biology Lab
- CHM L143 (3) General Chemistry II Lab
- CHM L143 (3) General Chemistry II Lab

**Complete one sequence (Physics sequence not required for medical technology concentration):**
- PHY 2252 (3) General Physics I
- PHY L252 (1) General Physics I Lab
- PHY 2253 (3) General Physics II
- PHY L253 (1) General Physics II Lab
- OR
- PHY 2262 (3) Physics I with Calculus
- PHY L262 (1) Physics I with Calculus Lab
- PHY 2263 (3) Physics II with Calculus
- PHY L263 (1) Physics II with Calculus Lab

**Requirements**
- BIO 2220 (3) Principles of Cell Biology
- BIO L220 (1) Principles of Cell Biology Lab
- BIO 2229 (3) General Ecology
- BIO L229 (1) General Ecology Lab
- BIO 3320 (3) Genetics
- BIO L320 (1) Genetics Lab
- BIO 4484 (1) Senior Seminar in Biological & Environmental Sciences

**Complete one of the five concentrations shown below (biomedical sciences, food safety, general biology, or medical technology):**

**Biomedical Sciences Concentration:**
- BIO 3347 (3) Human Anatomy and Physiology I
- BIO L347 (1) Human Anatomy and Physiology I Lab
- BIO 3348 (3) Human Anatomy and Physiology II
- BIO L348 (1) Human Anatomy and Physiology II Lab
- BIO 3372 (3) Microbiology
- BIO L372 (1) Microbiology Lab
- BIO 3382 (3) Immunology
- BIO L382 (1) Immunology Lab
- BIO 3386 (3) Hematology
- BIO L386 (1) Hematology Lab
- BIO 4443 (3) Food Microbiology
- BIO L443 (1) Food Microbiology Lab
- BIO 4451 (3) Toxicology
- BIO L451 (1) Toxicology Lab
- BIO 4480 (3) Histology
- BIO L480 (1) Histology Lab
- BIO 4482 (3) Molecular Biology
- BIO L482 (1) Molecular Biology Lab

**Complete 16 hours from the courses listed below. One upper level botany, ecology/environmental or zoology course with its corresponding lab may be used towards this requirement. The 16 hours chosen should be based on the student’s future plans for employment, graduate school or professional school.**

- BIO 3340 (3) Evolution
- BIO 3382 (3) Immunology
- BIO L382 (1) Immunology Lab
- BIO 4414 (3) Food Microbiology
- BIO L414 (1) Food Microbiology Lab
- BIO 4416 (3) Microbial Ecology
- BIO L416 (1) Microbial Ecology Lab
- BIO 4451 (3) Toxicology
- BIO L451 (1) Toxicology Lab
- BIO 4471 (3) Parasitology
BIO L471 (1) Parasitology Lab
BIO 4476 (1-3) Special Topics in Biology
BIO 4480 (3) Histology
BIO L480 (1) Histology Lab
BIO 4488/ (1-3) Internship in Biological

OR
4489/4490 Environmental Science
BIO 4491/92 (1-3) Guided Independent Research
BIO 4493/94 (1-3) Guided Independent Study
CHM 3353 (3) Biochemistry
CHM L352 (1) Biochemistry Lab

Food Safety Concentration:
BIO 3372 (3) Microbiology
BIO L372 (1) Microbiology Lab
BIO 4414 (3) Food Microbiology
BIO L414 (1) Food Microbiology Lab
BIO 4451 (3) Toxicology
BIO L451 (1) Toxicology Lab
BIO 4418 (3) Food Laws and Regulations
CHM 3352 (3) Biochemistry
CHM L352 (1) Biochemistry Lab
HSTM 4466 (3) Restaurant Management
NSG 2211 (3) Human Nutrition

Complete seven or more hours from the courses listed below. Lectures and their corresponding labs must be taken together.
BIO 3340 (3) Evolution
BIO 3382 (3) Immunology
BIO L382 (1) Immunology Lab
BIO 4416 (3) Microbial Ecology
BIO L416 (1) Microbial Ecology Lab
BIO 4471 (3) Parasitology
BIO L471 (1) Parasitology Lab
BIO 4476 (1-3) Special Topics in Biology*
BIO 4482 (3) Molecular Biology
BIO L482 (1) Molecular Biology Lab
BIO 4488/ (1-8) Internship in the Biological

OR
4489/4490 Environmental Sciences
BIO 4491/92 (3) Guided Independent Research
BIO 4493/94 (3) Guided Independent Study*
CHM 4455 (3) Instrumental Analysis
CHM L455 (1) Instrumental Analysis Lab
HSTM 3372 (3) Hospitality Management
HSTM 4465 (3) Hospitality Service

General Biology Concentration:
Complete one botany course with its corresponding lab:
BIO 3325 (3) Plant Form and Function
BIO L325 (1) Plant Form and Function Lab
BIO 4425 (4) Field Botany

Complete one zoology course with its corresponding lab:
BIO 3307 (3) Invertebrate Zoology
BIO L307 (1) Invertebrate Zoology Lab
BIO 4405 (3) Entomology
BIO L405 (1) Entomology Lab
BIO 4420 (4) Field Vertebrate Zoology
BIO 4447 (3) Ornithology
BIO L447 (1) Ornithology Lab
BIO 4471 (3) Parasitology
BIO L471 (1) Parasitology Lab

Complete one ecology/environmental course with its corresponding lab:
BIO 4413 (3) Limnology
BIO L413 (1) Limnology Lab
BIO 4416 (3) Microbial Ecology
BIO L416 (1) Microbial Ecology Lab
BIO 4421 (3) Population Ecology
BIO L421 (1) Population Ecology Lab

BIO 4479 (3) Environmental Assessment
BIO L479 (1) Environmental Assessment Lab

Complete one physiology/cell/molecular course with its corresponding lab:
BIO 3347 (3) Human Anatomy and Physiology I
BIO L347 (1) Human Anatomy and Physiology I Lab
BIO 3348 (3) Human Anatomy and Physiology II
BIO L348 (1) Human Anatomy and Physiology II Lab
BIO 3372 (3) Microbiology
BIO L372 (1) Microbiology Lab
BIO 3382 (3) Immunology
BIO L382 (1) Immunology Lab
BIO 3386 (3) Hematology
BIO L386 (1) Hematology Lab
BIO 4414 (3) Food Microbiology
BIO L414 (1) Food Microbiology Lab
BIO 4451 (3) Toxicology
BIO L451 (1) Toxicology Lab
BIO 4480 (3) Histology
BIO L480 (1) Histology Lab
BIO 4482 (3) Molecular Biology
BIO L482 (1) Molecular Biology Lab

Complete 16 additional semester hours of Biology or Marine Biology courses. The 16 hours chosen should be based on the student's future plans for employment, graduate school or professional school.

Medical Laboratory Science Concentration
Students must complete 29 semester hours on the Troy Campus prior to applying for an internship.

Lectures and their corresponding labs must be taken together.
BIO 3347 (3) Human Anatomy and Physiology I
BIO L347 (1) Human Anatomy and Physiology I Lab
BIO 3348 (3) Human Anatomy and Physiology II
BIO L348 (1) Human Anatomy and Physiology II Lab
BIO 3372 (3) Microbiology
BIO L372 (1) Microbiology Lab
BIO 3382 (3) Immunology
BIO L382 (1) Immunology Lab

Complete one course with its corresponding lab:
BIO 3386 (3) Hematology
BIO L386 (1) Hematology Lab
BIO 4471 (3) Parasitology
BIO L471 (1) Parasitology Lab

In addition to the above courses, including core courses, students must complete 33 semester hours of hospital internship MLS 4400-4413 courses.

BIOLOGY, PRE-PROFESSIONAL PROGRAM (56 HOURS)

Specialized General Studies Requirements

Area III (12 Hours)
BIO 1100 (3) Principles of Biology
BIO L100 (1) Principles of Biology Lab
CHM 1142 (3) General Chemistry I
CHM L142 (1) General Chemistry I Lab
MTH 1125 (4) Calculus I

Area V Requirements (20 Hours)
BIO 1101 (3) Organismal Biology
BIO L101 (1) Organismal Biology Lab
CHM 1143 (3) General Chemistry II
CHM L143 (1) General Chemistry II Lab
IS 2241 (3) Computer Concepts and Applications
TROY 1101 (1) University Orientation

Complete one sequence:
PHY 2252 (3) General Physics I
PHY L252 (1) General Physics I Lab
PHY 2253 (3) General Physics II
**Requirements for the major**

Lectures and their corresponding labs must be taken together.

- BIO 2220 (3) Principles of Cell Biology
- BIO L220 (1) Principles of Cell Biology Lab
- BIO 2229 (3) General Ecology
- BIO L229 (1) General Ecology Lab
- BIO 3320 (3) Genetics
- BIO L320 (1) Genetics Lab
- CHM 3342 (3) Organic Chemistry I
- CHM L342 (1) Organic Chemistry I Lab
- CHM 3343 (3) Organic Chemistry II
- CHM L343 (1) Organic Chemistry II Lab
- MTH 2210 (3) Introductory Statistics
- BIO 4484 (1) Senior Seminar in Biological & Environment Sciences

**Select 32 semester hours from the courses listed below:**

- BIO 3347 (3) Human Anatomy & Physiology I
- BIO L347 (1) Human Anatomy & Physiology I Lab
- BIO 3348 (3) Human Anatomy & Physiology II
- BIO L348 (1) Human Anatomy & Physiology II Lab
- BIO 3382 (3) Immunology
- BIO L382 (1) Immunology Lab
- BIO 3386 (3) Hematology
- BIO L386 (1) Hematology Lab
- BIO 4414 (3) Food Microbiology
- BIO L414 (1) Food Microbiology Lab
- BIO 4451 (3) Toxicology
- BIO L451 (1) Toxicology Lab
- BIO 4471 (3) Parasitology
- BIO L471 (1) Parasitology Lab
- BIO 4480 (3) Histology
- BIO L480 (1) Histology Lab
- BIO 4482 (3) Molecular Biology
- BIO L482 (1) Molecular Biology Lab
- BIO 4485 (1-2) Principles & Methods for the Lab Assistant
- CHM 3352 (3) Biochemistry
- CHM L352 (1) Biochemistry Lab

**Electives**

- BIO 3372 (3) Microbiology
- BIO L372 (1) Microbiology Lab
- BIO 4416 (3) Microbial Ecology
- BIO L416 (1) Microbial Ecology Lab
- BIO 4476 (1-4) Special Topics in Biology
- BIO 4491-92 (1-3) Guided Independent Research
- BIO 4493-94 (1-3) Guided Independent Study

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**CHEMISTRY MAJOR (36 HOURS)**

**Area III**

- BIO 1100 (3) Principles of Biology
- BIO L100 (1) Principles of Biology Lab
- CHM 1142 (3) General Chemistry I
- CHM L142 (1) General Chemistry I Lab
- MTH 1125 (4) Calculus I

**Area IV**

- CHEMISTRY Core (36 Hours)
- Complete 6 hours of the following electives:
- Select four additional hours of advanced chemistry courses, such as

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**CHEMISTRY MINOR (20 HOURS)**

**Area III**

- BIO 1100 (3) Principles of Biology
- BIO L100 (1) Principles of Biology Lab

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**COMPREHENSIVE GENERAL SCIENCE PROGRAM (54 HOURS)**

**Area III**

- BIO 1100 (3) Principles of Biology
- BIO L100 (1) Principles of Biology Lab
- CHM 1142 (3) General Chemistry I
- CHM L142 (1) General Chemistry I Lab
- MTH 1125 (4) Calculus I
Area V
IS 2241 (3) Computer Concepts/Applications
PHY 2262 (3) Physics I w/Calculus
PHY L262 (1) Physics I w/Calculus Lab
SCI 2234 (3) Earth & Space Science
SCI L234 (1) Earth & Space Science Lab
TROY 1101 (1) University Orientation

Required Courses:
BIO 1101 (3) Organismal Biology
BIO L101 (1) Organismal Biology Lab
BIO 2220 (3) Principles of Cell Biology
BIO L220 (1) Principles of Cell Biology Lab
BIO 3320 (3) Genetics
BIO L320 (1) Genetics Lab
BIO 3347 (3) Human Anatomy & Physiology
BIO L347 (1) Human Anatomy & Physiology Lab
CHM 1143 (3) General Chemistry II
CHM L143 (1) General Chemistry II Lab
CHM 3342 (3) Organic Chemistry I
CHM L342 (1) Organic Chemistry I Lab
CHM 3343 (3) Organic Chemistry II
CHM L343 (1) Organic Chemistry II Lab
CHM 3381 (3) Physical Chemistry I
CHM L381 (1) Physical Chemistry I Lab
MTH 1126 (4) Calculus II
MTH 2210 (3) Calculus II
MTH 2211 (3) Introductory Statistics
PHY 2263 (3) Physics II w/Calculus
PHY L263 (1) Physics II w/Calculus Lab
PHY 3310 (3) Modern Physics
PHY L310 (1) Modern Physics Lab
PHY 3359 (3) Waves and Optics
PHY L359 (1) Waves and Optics Lab
PHY 4420 (3) Mechanics

COMPUTER SCIENCE MINOR (18 HOURS)
CS 2250 (3) Computer Science I
CS 2255 (3) Computer Science II

Select 12 semester hours of computer science courses with at least one course being at the 4000 level.

COMPUTER SCIENCE PROGRAM (48 HOURS)

Specialized General Studies Requirements
Area III
MTH 1125 (4) Calculus I, in lieu of MTH 1110

Select a four hour course/lab combination from the following:
(Students must complete an eight hour sequence in chemistry or physics. Also see Area V Requirements.)
CHM 1142 (3) General Chemistry I
CHM L142 (1) General Chemistry I Lab
PHY 2252 (3) General Physics I
PHY L252 (1) General Physics I Lab

Select remaining Area III courses as shown in the General Studies section of this catalog.

Area V Requirements
CS 2250 (3) Computer Science I
MTH 1126 (4) Calculus II
TROY 1101 (1) University Orientation

Select a four hour course/lab combination from the following:
(Students must complete an eight hour sequence in chemistry or physics. Also see Area III)
CHM 1143 (3) General Chemistry II
CHM L143 (1) General Chemistry II Lab
PHY 2253 (3) General Physics II
PHY L253 (1) General Physics II Lab

Required Courses:
CS 2255 (3) Computer Science II
CS 3310 (3) Foundations of Computer Science
CS 3323 (3) Data Structures
CS 3329 (3) Analysis of Algorithms
CS 3332 (3) Software Engineering I
CS 3360 (3) Concepts of Object-Oriented Programming I
CS 3361 (3) Concepts of Object-Oriented Programming II
CS 3370 (3) Nature of Programming Languages
CS 3372 (3) Formal Languages and the Theory of Computation
CS 4420 (3) Introduction to Database Systems
CS 4445 (3) Data Communication and Networking
CS 4448 (3) Operating Systems
MTH 2210 (3) Introductory Statistics
MTH 2215 (3) Applied Discrete Mathematics

Select two of the following:
CS 3320 (3) Business Systems Programming
CS 3325 (3) Operations Research
CS 3331 (3) Fundamentals of Artificial Intelligence
CS 3361 (3) Concepts of Objected Oriented Programming II
CS 4401 (3) Advanced Artificial Intelligence
CS 4443 (3) Web Based Software Development
CS 4447 (3) Systems Analysis and Design
CS 4451 (3) Computer Security and Reliability
CS 4461 (3) Software Engineering II
CS 4462 (3) Special Topics in Object-Oriented Technology
CS 4495 (3) Special Topics in Computer Science

COMPUTER SCIENCE, APPLIED MAJOR (36 HOURS)

Specialized General Studies Requirements
Area III
MTH 2201 (3) Calculus NS Its Applications
Select additional Area III requirements as shown in the General Studies section of this catalog.

Area V Requirements
IS 2241 (3) Computer Concepts and Applications
MTH 2215 (3) Applied Discrete Mathematics
TROY 1101 (1) University Orientation

Major Requirements:
CS 2250 (3) Computer Science I
CS 2255 (3) Computer Science II
CS 2265 (3) Advanced Programming I
CS 3330 (3) Data Structures and Algorithms
CS 4420 (3) Introduction to Database Systems
CS 4443 (3) Web-Based Software Development
CS 4445 (3) Data Communications and Networking
CS 4447 (3) Systems Analysis and Design
CS 4448 (3) Operating Systems

Select three of the following:
CS 3320 (3) Business Systems Programming
CS 3332 (3) Software Engineering I
CS 3347 (3) Advanced Programming II
CS 4449 (3) Applied Networking
CS 4451 (3) Computer Security
CS 4495 (3) Special Topics in Computer Science

COMPUTER SCIENCE A.S. DEGREE (60 HOURS)

Associate of Science Degree
See the academic regulations section of this catalog for additional information regarding associate degrees.

General Studies Requirements
Area I
ENG 1101 (3) Composition and Modern English I
ENG 1102 (3) Composition and Modern English II
Criminal justice majors are encouraged to take two semesters of Spanish or another foreign language as part of their general studies requirements.

Select 9 hours of free electives.

CRIMINAL JUSTICE MAJOR (36 HOURS)

Criminal justice majors are encouraged to take two semesters of Spanish or another foreign language as part of their general studies requirements.

CRIMINAL JUSTICE MAJOR (36 HOURS)

Select one of the following:

**Area II**

- ENG 2205 (3) World Literature before 1660
- ENG 2206 (3) World Literature after 1660
- ENG 2211 (3) American Literature before 1875
- ENG 2212 (3) American Literature after 1875
- ENG 2244 (3) British Literature before 1785
- ENG 2245 (3) British Literature after 1785

Select one of the following:

**Area III**

- ART 1133 (3) Visual Arts
- THE 1130 (3) Introduction to Theatre
- MUS 1131 (3) Music Appreciation

Select one science course and corresponding lab:

- BIO 1100 (3) Principles of Biology
- BIO L100 (1) Principles of Biology Lab
- SCI 2233 (3) Physical Science
- SCI L233 (1) Physical Science Lab
- SCI 2234 (3) Earth and Space Science
- SCI L234 (1) Earth and Space Science Lab

Select one of the following:

**Area IV**

- HIS 1101 (3) Western Civilization I
- HIS 1102 (3) Western Civilization II
- HIS 1111 (3) U.S. to 1877
- HIS 1112 (3) U.S. since 1877
- HIS 1122 (3) World History to 1500
- HIS 1123 (3) World History from 1500

**Area V**

- IS 2241 (3) Computer Concepts and Applications
- TROY 1101 (1) University Orientation

Additional requirements

- CS 2250 (3) Computer Science I
- CS 2255 (3) Computer Science II
- CS 3310 (3) Foundations of Computer Science
- CS 3323 (3) Data Structures
- CS 3329 (3) Analysis of Algorithms
- CS 3332 (3) Software Engineering I
- CS 3365 (3) Introduction to Computer Organization and Architectures
- MTH 2215 (3) Applied Discrete Mathematics

Select 12 additional hours from the following as approved by the adviser:

**Area V**

Select 12 additional hours from the following as approved by the adviser:

- CJ 1101 (3) Introduction to Criminal Justice
- CJ 4475 (3) Seminar in Cyber Security
- CS 3310 (3) Foundations of Computer Science
- CJ 3305 (3) Foundations of Emergency Management
- CJ 3335 (3) Security Operations

**C. Digital Forensics concentration.**

Select 12 additional hours from the following as approved by the adviser:

- CJ 3380 (3) Digital Forensics I
- CJ 3382 (3) Social Media Investigation
- CJ 4480 (3) Digital Forensics II
- CJ 4481 (3) Operating and File System Forensics
- CJ 4482 (3) Digital Evidence Practicum
- CJ 4472 (3) Cyber Crime
- CJ 4475 (3) Seminar in Cyber Crime

**BS/MSCJ Accelerated Honors Requirements:**

- *CJ 6610 (3) Principles of Administration in Criminal Justice*
- *CJ 6620 (3) Current Trends in Criminal Law*
- *CJ 6622 (3) Seminar in the Administration of Criminal Justice*

Select an additional 3 hours of upper level (3000-4000) criminal justice courses, as approved by your academic advisor.

*Registration for courses marked with an asterisk is restricted to students who have been admitted to BS/MS in Criminal Justice Accelerated Honors Option, have completed at least 90 credit hours, and 18 hours of criminal justice courses, and have a GPA of 3.4 or above. Students must also meet requirements for the graduate program.

*Students who major in Criminal Justice with Homeland Security Concentration must add Homeland Security as a Minor to be eligible for BS/MS in Criminal Justice Accelerated Honors Option consideration.

*Students who major in Criminal Justice with Digital Forensics Concentration must add Digital Forensics as a Minor to be eligible for BS/MS in Criminal Justice Accelerated Honors Option consideration.

CRIMINAL JUSTICE MINOR (18 HOURS)

- CJ 1101 (3) Introduction to Criminal Justice

Select 15 additional hours of upper-level criminal justice courses as approved by the adviser.

**CYBER SECURITY MINOR/ CERTIFICATE (21 HOURS)**

**Requirements for Minor (9)**

- CJ 1101 (3) Introduction to Criminal Justice
- CJ 4475 (3) Seminar in Cyber Security
- CS 3310 (3) Foundations of Computer Science

**Select 12 hours from the following:**

See Course Descriptions for pre-requisites and restrictions:

- CJ 3352 (3) Constitutional Law in Criminal Justice
- CJ 4473 (3) Computer Forensics
- CJ 4472 (3) Cyber Crime
- CS 3375 (3) Foundations of Networking
- CS 4445 (3) Data Communication and Networking
- CS 4449 (3) Applied Networking
- CS 3380 (3) Cyber Security
- CS 4451 (3) Computer Security
should contact the Department of Computer Science for information about the certificate program. All other students interested in the certification program should contact the Department of Criminal Justice. Students seeking the certificate in Cyber Security must be admitted to Troy University.

**DIGITAL FORENSICS MINOR / CERTIFICATE (18 HOURS)**

Select 18 hours from the following:

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Credits</th>
<th>Course Name</th>
</tr>
</thead>
<tbody>
<tr>
<td>CJ 3380</td>
<td>3</td>
<td>Digital Forensics I</td>
</tr>
<tr>
<td>CJ 3382</td>
<td>3</td>
<td>Social Media Investigation</td>
</tr>
<tr>
<td>CJ 4472</td>
<td>3</td>
<td>Cyber Crime</td>
</tr>
<tr>
<td>CJ 4475</td>
<td>3</td>
<td>Seminar in Cyber Crime</td>
</tr>
<tr>
<td>CJ 4480</td>
<td>3</td>
<td>Digital Forensics II</td>
</tr>
<tr>
<td>CJ 4481</td>
<td>3</td>
<td>Operating and File System Forensics</td>
</tr>
<tr>
<td>CJ 4482</td>
<td>3</td>
<td>Digital Evidence Practicum</td>
</tr>
</tbody>
</table>

**Area III:**

**ECONOMICS MAJOR (36 HOURS)**

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Credits</th>
<th>Course Name</th>
</tr>
</thead>
<tbody>
<tr>
<td>MTH 1125</td>
<td>4</td>
<td>Calculus I</td>
</tr>
</tbody>
</table>

The following courses must be completed with a “C” or better within Area V of the General Studies.

**Area V:**

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Credits</th>
<th>Course Name</th>
</tr>
</thead>
<tbody>
<tr>
<td>ECO 2251</td>
<td>3</td>
<td>Principles of Macroeconomics</td>
</tr>
<tr>
<td>ECO 2252</td>
<td>3</td>
<td>Principles of Microeconomics</td>
</tr>
<tr>
<td>SS 3375</td>
<td>3</td>
<td>Introduction to Social Science Inquiry</td>
</tr>
<tr>
<td>SS 3376</td>
<td>3</td>
<td>Application of Social Science Inquiry</td>
</tr>
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</table>

**Requirement for the Major**

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Credits</th>
<th>Course Name</th>
</tr>
</thead>
<tbody>
<tr>
<td>ECO 3351</td>
<td>3</td>
<td>Intermediate Macroeconomics</td>
</tr>
<tr>
<td>ECO 3352</td>
<td>3</td>
<td>Intermediate Microeconomics</td>
</tr>
</tbody>
</table>

Select 30 hours of approved 3000/4000 level Economics courses.

**ENVIRONMENTAL SCIENCE MINOR (18-20 HOURS)**

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Credits</th>
<th>Course Name</th>
</tr>
</thead>
<tbody>
<tr>
<td>BIO 1120</td>
<td>3</td>
<td>Survey of Environmental Sciences</td>
</tr>
<tr>
<td>BIO L120</td>
<td>1</td>
<td>Survey of Environmental Science Lab</td>
</tr>
<tr>
<td>BIO 3328</td>
<td>3</td>
<td>Environmental Pollution and Control</td>
</tr>
<tr>
<td>BIO L328</td>
<td>1</td>
<td>Environmental Pollution and Control Lab</td>
</tr>
</tbody>
</table>

Complete 12 hours from the following:

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Credits</th>
<th>Course Name</th>
</tr>
</thead>
<tbody>
<tr>
<td>BIO 4479</td>
<td>3</td>
<td>Environmental Assessment</td>
</tr>
<tr>
<td>BIO L479</td>
<td>1</td>
<td>Environmental Assessment Lab</td>
</tr>
<tr>
<td>BIO 4420</td>
<td>4</td>
<td>Field Vertebrate Zoology (combined lecture and lab)</td>
</tr>
<tr>
<td>BIO 4425</td>
<td>4</td>
<td>Field Botany or BIO 4402 (combined lecture and lab)</td>
</tr>
<tr>
<td>BIO 4476</td>
<td>1-4</td>
<td>Special Topics (combined lecture and lab)</td>
</tr>
<tr>
<td>BIO 4491</td>
<td>1-4</td>
<td>Guided Independent Research (combined lecture and lab)</td>
</tr>
<tr>
<td>CHM 3350</td>
<td>3</td>
<td>Principles of Physical Chemistry</td>
</tr>
<tr>
<td>CHM L350</td>
<td>1</td>
<td>Principles of Physical Chemistry Lab</td>
</tr>
<tr>
<td>CHM 3352</td>
<td>3</td>
<td>Biochemistry</td>
</tr>
<tr>
<td>CHM L352</td>
<td>1</td>
<td>Biochemistry Lab</td>
</tr>
<tr>
<td>CHM 4445</td>
<td>3</td>
<td>Instrumental Analysis</td>
</tr>
<tr>
<td>CHM L445</td>
<td>1</td>
<td>Instrumental Analysis Lab</td>
</tr>
</tbody>
</table>

**ENVIRONMENTAL SCIENCE & FIELD BIOLOGY PROGRAM (56 HOURS)**

*Special Topics in Biology (BIO 4476), Guided Independent Studies (BIO 4491/4492) and Guided Independent Research (BIO 4493, 4494) may only be taken for a maximum of 6 semester hours.

**Specialized General Studies Requirements**

**Area III**

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Credits</th>
<th>Course Name</th>
</tr>
</thead>
<tbody>
<tr>
<td>BIO 1100</td>
<td>3</td>
<td>Principles of Biology</td>
</tr>
<tr>
<td>BIO L100</td>
<td>1</td>
<td>Principles of Biology Lab</td>
</tr>
<tr>
<td>CHM 1142</td>
<td>3</td>
<td>General Chemistry I</td>
</tr>
<tr>
<td>CHM L142</td>
<td>1</td>
<td>General Chemistry I Lab</td>
</tr>
</tbody>
</table>

Select one of the following:

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Credits</th>
<th>Course Name</th>
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</thead>
<tbody>
<tr>
<td>MTH 1114</td>
<td>3</td>
<td>Pre-Calculus Trigonometry</td>
</tr>
<tr>
<td>MTH 1125</td>
<td>4</td>
<td>Calculus I*</td>
</tr>
</tbody>
</table>

*Required for Field Biology Concentration

**Area V Requirements:**

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Credits</th>
<th>Course Name</th>
</tr>
</thead>
<tbody>
<tr>
<td>IS 2241</td>
<td>3</td>
<td>Computer Concepts and Applications</td>
</tr>
<tr>
<td>TROY 1101</td>
<td>1</td>
<td>University Orientation</td>
</tr>
<tr>
<td>BIO 1101</td>
<td>3</td>
<td>Organismal Biology</td>
</tr>
<tr>
<td>BIO L101</td>
<td>1</td>
<td>Organismal Biology Lab</td>
</tr>
<tr>
<td>CHM 1143</td>
<td>3</td>
<td>General Chemistry II</td>
</tr>
<tr>
<td>CHM L143</td>
<td>1</td>
<td>General Chemistry II Lab</td>
</tr>
<tr>
<td>GEO 2299</td>
<td>3</td>
<td>Basic GIS</td>
</tr>
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</table>

Complete one:

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Credits</th>
<th>Course Name</th>
</tr>
</thead>
<tbody>
<tr>
<td>PHY 2252</td>
<td>3</td>
<td>General Physics I</td>
</tr>
<tr>
<td>PHY L252</td>
<td>1</td>
<td>General Physics I Lab</td>
</tr>
</tbody>
</table>

OR

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Credits</th>
<th>Course Name</th>
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</thead>
<tbody>
<tr>
<td>PHY 2262</td>
<td>3</td>
<td>Physics I with Calculus</td>
</tr>
<tr>
<td>PHY L262</td>
<td>1</td>
<td>Physics I with Calculus Lab</td>
</tr>
</tbody>
</table>

**Program Requirements:**

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Credits</th>
<th>Course Name</th>
</tr>
</thead>
<tbody>
<tr>
<td>BIO 2220</td>
<td>3</td>
<td>Principles of Cell Biology</td>
</tr>
<tr>
<td>BIO L220</td>
<td>1</td>
<td>Principles of Cell Biology Lab</td>
</tr>
<tr>
<td>BIO 2229</td>
<td>3</td>
<td>General Ecology</td>
</tr>
<tr>
<td>BIO L229</td>
<td>1</td>
<td>General Ecology Lab</td>
</tr>
<tr>
<td>BIO 3320</td>
<td>3</td>
<td>Genetics</td>
</tr>
<tr>
<td>BIO L320</td>
<td>1</td>
<td>Genetics Lab</td>
</tr>
<tr>
<td>BIO 4484</td>
<td>1</td>
<td>Senior Seminar in Biological &amp;</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Environmental Sciences</td>
</tr>
<tr>
<td>CHM 3342</td>
<td>3</td>
<td>Organic Chemistry I</td>
</tr>
<tr>
<td>CHM L342</td>
<td>1</td>
<td>Organic Chemistry I Lab</td>
</tr>
<tr>
<td>CHM 3343</td>
<td>3</td>
<td>Organic Chemistry II</td>
</tr>
<tr>
<td>CHM L343</td>
<td>1</td>
<td>Organic Chemistry II Lab</td>
</tr>
<tr>
<td>MTH 2210</td>
<td>3</td>
<td>Introductory Statistics</td>
</tr>
</tbody>
</table>

Complete one of the following concentrations:

**Environmental Science Concentration (32 semester hours)**

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Credits</th>
<th>Course Name</th>
</tr>
</thead>
<tbody>
<tr>
<td>BIO 1120</td>
<td>3</td>
<td>Survey of Environmental Science</td>
</tr>
<tr>
<td>BIO L120</td>
<td>1</td>
<td>Survey of Environmental Science Lab</td>
</tr>
<tr>
<td>BIO 3328</td>
<td>3</td>
<td>Environmental Pollution and Control</td>
</tr>
<tr>
<td>BIO L328</td>
<td>1</td>
<td>Environmental Pollution and Control Lab</td>
</tr>
<tr>
<td>BIO 4413</td>
<td>3</td>
<td>Limnology</td>
</tr>
<tr>
<td>BIO L413</td>
<td>1</td>
<td>Limnology Lab</td>
</tr>
<tr>
<td>BIO 4479</td>
<td>3</td>
<td>Environmental Assessment</td>
</tr>
<tr>
<td>BIO L479</td>
<td>1</td>
<td>Environmental Assessment Lab</td>
</tr>
</tbody>
</table>

Complete 16 hours of adviser-approved upper-level courses in biology, marine biology, chemistry or mathematics.

**Field Biology Concentration (32 semester hours)**

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Credits</th>
<th>Course Name</th>
</tr>
</thead>
<tbody>
<tr>
<td>BIO 4420</td>
<td>4</td>
<td>Field Vertebrate Zoology</td>
</tr>
<tr>
<td>BIO 4421</td>
<td>3</td>
<td>Population Ecology</td>
</tr>
<tr>
<td>BIO L421</td>
<td>1</td>
<td>Population Ecology Lab</td>
</tr>
<tr>
<td>BIO 4425</td>
<td>4</td>
<td>Field Botany</td>
</tr>
</tbody>
</table>

Complete 12 hours (three courses with labs) from the three categories below. At least one course must be taken from each of the three categories.

**Zoology:**

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Credits</th>
<th>Course Name</th>
</tr>
</thead>
<tbody>
<tr>
<td>BIO 3320</td>
<td>3</td>
<td>Invertebrate Zoology</td>
</tr>
<tr>
<td>BIO L307</td>
<td>1</td>
<td>Invertebrate Zoology Lab</td>
</tr>
<tr>
<td>BIO 4405</td>
<td>2</td>
<td>Entomology</td>
</tr>
<tr>
<td>BIO L405</td>
<td>2</td>
<td>Entomology Lab</td>
</tr>
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</table>

**Botany:**

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Credits</th>
<th>Course Name</th>
</tr>
</thead>
<tbody>
<tr>
<td>BIO 3325</td>
<td>3</td>
<td>Plant Form and Function</td>
</tr>
<tr>
<td>BIO L325</td>
<td>1</td>
<td>Plant Form and Function Lab</td>
</tr>
</tbody>
</table>

**Ecology:**

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Credits</th>
<th>Course Name</th>
</tr>
</thead>
<tbody>
<tr>
<td>BIO 4473</td>
<td>3</td>
<td>Limnology</td>
</tr>
<tr>
<td>BIO L413</td>
<td>1</td>
<td>Limnology Lab</td>
</tr>
<tr>
<td>BIO 4479</td>
<td>3</td>
<td>Environmental Assessment</td>
</tr>
<tr>
<td>BIO L479</td>
<td>1</td>
<td>Environmental Assessment Lab</td>
</tr>
</tbody>
</table>

Complete an additional eight hours of adviser-approved biology or marine biology courses.
FIRE SCIENCE AND EMERGENCY MANAGEMENT
MINOR (18 HOURS)

<table>
<thead>
<tr>
<th>Course</th>
<th>Hours</th>
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<tbody>
<tr>
<td>FS 3300</td>
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</tr>
<tr>
<td>FS 3305</td>
<td>3</td>
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<tr>
<td>FS 3310</td>
<td>3</td>
</tr>
<tr>
<td>CJ 3305</td>
<td>3</td>
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</table>

Select 6 hours from the following courses:

<table>
<thead>
<tr>
<th>Course</th>
<th>Hours</th>
</tr>
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<tbody>
<tr>
<td>FS 3315</td>
<td>3</td>
</tr>
<tr>
<td>FS 3320</td>
<td>3</td>
</tr>
<tr>
<td>CJ 3335</td>
<td>3</td>
</tr>
<tr>
<td>CJ 3345</td>
<td>3</td>
</tr>
<tr>
<td>CJ 4440</td>
<td>3</td>
</tr>
<tr>
<td>CJ 4470</td>
<td>3</td>
</tr>
</tbody>
</table>

COM 4460 | 3 |

GENERAL EDUCATION A.A. DEGREE (60 HOURS)

Associate of Arts Degree

See the academic regulations section of this catalog for additional information regarding associate degrees.

Note: Students who pursue a baccalaureate degree with Troy University following the completion of the Associate of Arts in General Education must meet the minimum grade requirements in mathematics.

General Studies Requirements

Area I

<table>
<thead>
<tr>
<th>Course</th>
<th>Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>ENG 1101</td>
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</tr>
<tr>
<td>ENG 1102</td>
<td>3</td>
</tr>
</tbody>
</table>

Area II

Select one of the following:

<table>
<thead>
<tr>
<th>Course</th>
<th>Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>ART 1133</td>
<td>3</td>
</tr>
<tr>
<td>THE 1130</td>
<td>3</td>
</tr>
<tr>
<td>MUS 1131</td>
<td>3</td>
</tr>
</tbody>
</table>

Select one of the following:

<table>
<thead>
<tr>
<th>Course</th>
<th>Hours</th>
</tr>
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<tbody>
<tr>
<td>ENG 2205</td>
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</tr>
<tr>
<td>ENG 2206</td>
<td>3</td>
</tr>
<tr>
<td>ENG 2211</td>
<td>3</td>
</tr>
<tr>
<td>ENG 2212</td>
<td>3</td>
</tr>
<tr>
<td>ENG 2244</td>
<td>3</td>
</tr>
<tr>
<td>ENG 2245</td>
<td>3</td>
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Select six hours of one foreign language.

Area III

Select one of the following:

<table>
<thead>
<tr>
<th>Course</th>
<th>Hours</th>
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</thead>
<tbody>
<tr>
<td>MTH 1110</td>
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</tr>
<tr>
<td>MTH 1112</td>
<td>3</td>
</tr>
</tbody>
</table>

Select one science course and corresponding lab:

<table>
<thead>
<tr>
<th>Course</th>
<th>Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>BIO 1100</td>
<td>3</td>
</tr>
<tr>
<td>BIO L100</td>
<td>1</td>
</tr>
<tr>
<td>SCI 2233</td>
<td>3</td>
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<tr>
<td>SCI L233</td>
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<tr>
<td>SCI 2234</td>
<td>3</td>
</tr>
<tr>
<td>SCI L234</td>
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Area IV

Select one of the following:

<table>
<thead>
<tr>
<th>Course</th>
<th>Hours</th>
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<tbody>
<tr>
<td>HIS 1101</td>
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<tr>
<td>HIS 1102</td>
<td>3</td>
</tr>
<tr>
<td>HIS 1111</td>
<td>3</td>
</tr>
<tr>
<td>HIS 1112</td>
<td>3</td>
</tr>
<tr>
<td>HIS 1122</td>
<td>3</td>
</tr>
</tbody>
</table>

Area V

<table>
<thead>
<tr>
<th>Course</th>
<th>Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>IS 2241</td>
<td>3</td>
</tr>
<tr>
<td>TROY 1101</td>
<td>1</td>
</tr>
</tbody>
</table>

Additional requirements

Select any minor or area of concentration.

Select additional free electives to complete a total of 60 hours.

GENERAL EDUCATION A.S. DEGREE (60 HOURS)

Associate of Science Degree

See the academic regulations section of this catalog for additional information regarding associate degrees.

Note: Students who pursue a baccalaureate degree with Troy University following the completion of the Associate of Science in General Education must meet the minimum grade requirements in mathematics.

General Studies Requirements

Area I

<table>
<thead>
<tr>
<th>Course</th>
<th>Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>ENG 1101</td>
<td>3</td>
</tr>
<tr>
<td>ENG 1102</td>
<td>3</td>
</tr>
</tbody>
</table>

Area II

Select one of the following:

<table>
<thead>
<tr>
<th>Course</th>
<th>Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>ART 1133</td>
<td>3</td>
</tr>
<tr>
<td>THE 1130</td>
<td>3</td>
</tr>
<tr>
<td>MUS 1131</td>
<td>3</td>
</tr>
</tbody>
</table>

Select one of the following:

<table>
<thead>
<tr>
<th>Course</th>
<th>Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>ENG 2205</td>
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</tr>
<tr>
<td>ENG 2206</td>
<td>3</td>
</tr>
<tr>
<td>ENG 2211</td>
<td>3</td>
</tr>
<tr>
<td>ENG 2212</td>
<td>3</td>
</tr>
<tr>
<td>ENG 2244</td>
<td>3</td>
</tr>
<tr>
<td>ENG 2245</td>
<td>3</td>
</tr>
</tbody>
</table>

Area III

Select one of the following:

<table>
<thead>
<tr>
<th>Course</th>
<th>Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>MTH 1110</td>
<td>3</td>
</tr>
<tr>
<td>MTH 1112</td>
<td>3</td>
</tr>
</tbody>
</table>

Select one science course and corresponding lab:

<table>
<thead>
<tr>
<th>Course</th>
<th>Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>BIO 1100</td>
<td>3</td>
</tr>
<tr>
<td>BIO L100</td>
<td>1</td>
</tr>
<tr>
<td>SCI 2233</td>
<td>3</td>
</tr>
<tr>
<td>SCI L233</td>
<td>1</td>
</tr>
<tr>
<td>SCI 2234</td>
<td>3</td>
</tr>
<tr>
<td>SCI L234</td>
<td>1</td>
</tr>
</tbody>
</table>

Area IV

Select one of the following:

<table>
<thead>
<tr>
<th>Course</th>
<th>Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>HIS 1101</td>
<td>3</td>
</tr>
<tr>
<td>HIS 1102</td>
<td>3</td>
</tr>
<tr>
<td>HIS 1111</td>
<td>3</td>
</tr>
<tr>
<td>HIS 1112</td>
<td>3</td>
</tr>
<tr>
<td>HIS 1122</td>
<td>3</td>
</tr>
</tbody>
</table>

Area V

<table>
<thead>
<tr>
<th>Course</th>
<th>Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>IS 2241</td>
<td>3</td>
</tr>
<tr>
<td>TROY 1101</td>
<td>1</td>
</tr>
</tbody>
</table>

Additional requirements

Select any minor or area of concentration.

Select additional free electives to complete a total of 60 hours.

GEOGRAPHIC INFORMATION SYSTEMS (GIS) MINOR (18 HOURS)

Required Courses: (9 Hours)

<table>
<thead>
<tr>
<th>Course</th>
<th>Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>GIS 3301</td>
<td>3</td>
</tr>
</tbody>
</table>

COLLEGE OF ARTS AND SCIENCES · 57
History Majors/Minors will receive credit for no more than six American courses in addition to either HIS 3316 or 4406. Select an additional 9 hours of upper level American/Latin American history courses in addition to HIS 4451.

Select 15 hours of upper level European/Asian/African history courses. GEO 3375 may not be counted toward both general geography and the geography minor.

Select 18 hours of approved upper level American/Latin American courses. Select 12 hours of approved upper level European/Asian/African courses.

Select 15 additional hours from the following as approved by the adviser:

**HISTORY MAJOR (36 HOURS)**

History Majors/Minors will receive credit for no more than six hours of 3000-level and 4000-level history courses taken before or concurrently with HIS 3375.

Select one emphasis below:

**American/Latin American History Emphasis:**

Specialized General Studies Requirements

Area IV

Select a six hour sequence in Western Civilization or World History. Select additional Area IV courses as specified in the General Studies section of this catalog.

Area V Requirements

Select 15 hours of upper-level American/Latin American courses in addition to either HIS 3316 or 4406.

Select an additional nine hours of upper-level European/Asian/African courses in addition to HIS 4451.

**European/Asian/African History Emphasis:**

Select 15 hours of upper-level European/Asian/African courses in addition to HIS 4451.

Select an additional 9 hours of upper-level American/Latin American courses in addition to either HIS 3316 or 4406.

**HISTORY MINOR (18 HOURS)**

History Majors/Minors will receive credit for no more than six hours of 3000-level and 4000-level history courses taken before or concurrently with HIS 3375.

Select one emphasis below:

**American/Latin American History Emphasis:**

Specialized General Studies Requirements

Area IV

Select a six hour sequence in Western Civilization or World History. Select additional Area IV courses as specified in the General Studies section of this catalog.

Area V Requirements

Select 15 hours of upper-level American/Latin American courses in addition to either HIS 3316 or 4406.

Select an additional nine hours of upper-level European/Asian/African courses in addition to HIS 4451.

**European/Asian/African History Emphasis:**

Select 15 hours of upper-level European/Asian/African courses in addition to HIS 4451.

Select an additional 9 hours of upper-level American/Latin American courses in addition to either HIS 3316 or 4406.

**GEOGRAPHY MINOR (18 HOURS)**

Select an additional 12 hours of approved, upper-level geography courses. GEO 2210 may not be counted toward both general studies and the geography minor.

**HISTORY EDUCATION (36 HOURS)**

Students seeking Alabama teacher certification should select history as a first major and education as a second major. Students should consult with their advisers concerning all certification requirements.

Specialized General Studies Requirements

Area IV

Select one six-hour sequence:

<table>
<thead>
<tr>
<th>Course</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>HIS 1101 (3)</td>
<td>Western Civilization I, or placement</td>
</tr>
<tr>
<td>HIS 1102 (3)</td>
<td>Western Civilization II, or placement</td>
</tr>
<tr>
<td>HIS 1122 (3)</td>
<td>World History to 1500</td>
</tr>
<tr>
<td>HIS 1123 (3)</td>
<td>World History from 1500</td>
</tr>
</tbody>
</table>

Area V Requirements

Select 15 hours of upper-level American/Latin American courses. Select 12 hours of approved upper-level European/Asian/African courses.

Select 15 additional hours from the following as approved by the adviser:

**HOMELAND SECURITY MINOR (18 HOURS)**

Select 15 additional hours from the following as approved by the adviser:

<table>
<thead>
<tr>
<th>Course</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>CJ 1101 (3)</td>
<td>Introduction to Criminal Justice</td>
</tr>
</tbody>
</table>

**Notes:**

1. HIS 1111 and HIS 1112 or permission of instructor are prerequisites for upper-level American/Latin American history courses. HIS 1101 and HIS 1102 or HIS 1122 and 1123 or permission of instructor are prerequisite for upper-level European/Asian/African history courses.

2. History Majors/Minors will receive credit for no more than six hours of 3000-level and 4000-level history courses taken before or concurrently with HIS 3375.
**HUMANITIES MINOR (18 HOURS)**

- ART 3302 (3) History of the Arts
- CLA 2260 (3) Classical Mythology
- CLA 2290 (3) Classical Literature in English Translation
- PHI 2203 (3) Introduction to Philosophy
- PHI 3301 (3) Western Philosophy
- REL 2280 (3) World Religions

**LEGAL STUDIES MINOR (18 HOURS)**

**Required Courses (9 hours)**
- LGL 2200 (3) Introduction to Legal Studies
- LGL 3300 (3) Legal Research and Writing
- LGL 4400 (3) Seminar in Legal Studies

**Elective Courses (9 hours)**

Select any two (2) courses from the following:
- NJ 2241 (3) Survey of Law and Criminal Procedure
- NJ 4447 (3) Current Issues in Legal Systems Operation and Administration
- LAW 2221 (3) Legal Environment of Business
- POL 3342 (3) Judicial Branch
- POL 4472 (3) Administrative Law

Select one (1) course from the following:
- NJ 2241 (3) Survey of Law and Criminal Procedure
- NJ 3352 (3) Constitutional Law in Criminal Justice

**Behavioral Studies (select at least six hours):**
- ANT 3360 (3) Magic, Witchcraft, and Religion
- COM 3324 (3) Gender Communications
- ENG 3305 (3) Folklore/Mythology
- ENG 4405 (3) History of the English Language
- GEO 3301 (3) Principles of Cultural Geography
- GEO 4402 (3) Political Geography

**Selective 21 hours from the following:**

- ANT 3310 (3) Cultural Anthropology
- ECO 4456 (3) The Economics and Moral Foundations of Capitalism
- ENG 3305 (3) Folklore/Mythology
- ENG 4405 (3) History of the English Language
- GEO 3301 (3) Principles of Cultural Geography
- GEO 4402 (3) Political Geography
- HIS 4466 (3) Renaissance and Reformation
- POL 3300 (3) Foundations of Political Science
- POL 3330 (3) Political Theory
- PSY 3370 (3) Comparative Psychology
- PSY 3380 (3) Social Psychology
- SOC 3300 (3) Social Institutions
- SOC 3301 (3) Social Change

Select at least six hours from each of the following for a total of 30 hours:

**Societal Studies (select at least six hours):**
- ANT 4411 (3) High Civilization of the Old World
- ECO 4451 (3) International Trade and Finance
- HIS 4462 (3) Age of Absolutism
- HIS 4463 (3) Europe in the Age of Enlightenment
- HIS 4466 (3) Renaissance and Reformation
- POL 3333 (3) Comparative Government
- SOC 3300 (3) Social Institutions
- SOC 3301 (3) Social Change
- SOC 4420 (3) Sociological Theory

**Behavioral Studies (select at least six hours):**
- ANT 3360 (3) Magic, Witchcraft, and Religion
- COM 3324 (3) Gender Communications
- ENG 3305 (3) Folklore/Mythology
- ENG 4405 (3) History of the English Language
- GEO 3301 (3) Principles of Cultural Geography
- GEO 4402 (3) Political Geography
- HIS 4466 (3) Renaissance and Reformation
- POL 3333 (3) Comparative Government
- PSY 3370 (3) Comparative Psychology
- PSY 3380 (3) Social Psychology
- SOC 3332 (3) Family Violence
- SOC 4409 (3) Political Sociology

**Cognitive and Language Studies (select at least six hours):**
- ANT 3340 (3) Language in Culture and Society
- COM 3341 (3) American Public Address
- ENG 3305 (3) Folklore/Mythology
- ENG 3320 (3) Introduction to Linguistics
- ENG 4405 (3) History of the English Language
- ENG 4433 (3) Literary Criticism
- PSY 4460 (3) Cognitive Psychology

**Global Studies (select at least six hours):**
- ANT 3310 (3) Cultural Anthropology
- ANT 3320 (3) Prehistory of North American Indians
- ANT 4410 (3) High Civilization of the Old World
- ANT 4411 (3) High Civilization of the New World
- ECO 4455 (3) Comparative Economic Systems
- ENG 4465 (3) African American Literature
- GEO 3301 (3) Principles of Physical Geography
- GEO 4402 (3) Political Geography
- POL 3351 (3) International Relations
- POL 4410 (3) International Political Economy
- POL 4433 (3) Comparative Governments
**MARINE BIOLOGY PROGRAM (56 HOURS)**

*Specialized Topics in Biology (BIO 4476), Guided Independent Studies (BIO 4491/4492) and Guided Independent Research (BIO 4493, 4494) may only be taken for a maximum of 6 semester hours.*

Students must take courses at both Troy University and Dauphin Island Sea Lab.

**Specialized General Studies Requirements**

**Area III**
- BIO 1100 (3) Principles of Biology
- BIO L100 (1) Principles of Biology Lab
- CHM 1142 (3) General Chemistry I
- CHM L142 (1) General Chemistry I Lab
- MTH 1125 (4) Calculus I

**Area V Requirements**
- IS 2241 (3) Computer Concepts and Applications
- TROY 1101 (1) University Orientation
- BIO 1101 (3) Organismal Biology
- BIO L101 (1) Organismal Biology Lab
- CHM 1143 (3) General Chemistry II
- CHM L143 (1) General Chemistry II Lab
- MTH 1126 (4) Calculus II

**Complete one sequence (physics sequence not required for medical technology concentration):**
- PHY 2252 (3) General Physics I
- PHY L252 (1) General Physics I Lab
- PHY 2253 (3) General Physics II
- PHY L253 (1) General Physics II Lab

**OR**
- PHY 2262 (3) Physics I with Calculus
- PHY L262 (1) Physics I with Calculus Lab
- PHY 2263 (3) Physics II with Calculus
- PHY L263 (1) Physics II with Calculus Lab

**Requirements for the Program**

Lectures and corresponding labs must be taken together.
- BIO 2220 (3) Principles of Cell Biology
- BIO L220 (1) Principles of Cell Biology Lab
- BIO 2229 (3) General Ecology
- BIO L229 (1) General Ecology Lab
- BIO 3320 (3) Genetics
- BIO L320 (1) Genetics Lab
- BIO 4484 (1) Senior Seminar in Biological & Environmental Sciences
- CHM 3342 (3) Organic Chemistry I
- CHM L342 (1) Organic Chemistry I Lab
- CHM 3343 (3) Organic Chemistry II
- CHM L343 (1) Organic Chemistry II Lab
- MTH 2220 (3) Introductory Statistics

**Troy University Courses:**
- BIO 3307 (3) Invertebrate Zoology
- BIO L307 (1) Invertebrate Zoology Lab

Complete 12 additional semester hours of adviser-approved biology or marine biology (MB) courses.

**Dauphin Island Sea Lab (DISL) Courses (16 semester hours):**

DISL courses are offered during the summer term. Students need to take the following prerequisites before attending DISL:
- CHM 1143, L143, BIO 1101, L101, BIO 2229, L229.
- Students must also comply with all DISL catalog prerequisites for individual courses.

Complete 16 semester hours of MB courses approved by the DISL liaison and Department Chair.

**MATHMATICS EDUCATION**

Students seeking Alabama teacher certification should select mathematics as a first major and education as a second major. Students should consult with their advisers concerning all certification requirements.

**MATHMATICS MAJOR (38 HOURS)**

**Specialized General Studies Requirements**

**Area III**
- MTH 1125 (4) Calculus I

**Area V Requirements**
- TROY 1101 (1) University Orientation
- MTH 2210 (3) Introductory Statistics
- MTH 2220 (3) Computer Programming for Mathematics

**Requirements for the Major**
- MTH 1126 (4) Calculus II
- MTH 2227 (4) Calculus III
- MTH 3311 (3) Differential Equations
- MTH 3318 (3) Introduction to Advanced Mathematics
- MTH 3331 (3) Linear Algebra
- MTH 4424 (3) Real Analysis I
- MTH 4441 (3) Abstract Algebra I

**Select one of the following:**
- MTH 4425 (3) Real Analysis II
- MTH 4442 (3) Abstract Algebra II

**OR both of the following:**
- MTH 4451 (3) Mathematical Statistics I
- MTH 4452 (3) Mathematical Statistics II

Students selecting MTH 4451 and MTH 4452: select nine more hours of mathematics courses at the 3000 level and above (excluding MTH 4481).

Students selecting MTH 4425 or MTH 4442: select 12 hours of mathematics courses at the 3000 level and above (excluding MTH 4481).

Students seeking Alabama teacher certification must select MTH 3325, MTH 4451 and MTH 4452.

**MATHEMATICS AND PHYSICS DOUBLE MAJOR**

Students seeking a double major in Mathematics and Physics should consult with their advisers in both the Mathematics and Physics Departments.

**MATHEMATICS MINOR (18 HOURS)**
- MTH 1125 (4) Calculus I
- MTH 1126 (4) Calculus II
- MTH 2227 (4) Calculus III
- MTH 3331 (3) Linear Algebra

Select an additional three hours of math courses at the 3000 level and above, other than those courses whose catalog description declares that they do not count toward the major or minor.

**STATISTICS MINOR (18 HOURS)**
- MTH 2210 (3) Introductory Statistics
- MTH 3350 (3) Statistical Methods and Computations
- MTH 4451 (3) Mathematical Statistics I

**MILITARY OPERATIONS MINOR (18 HOURS)**

Military electives may be taken from credit earned through the American Council on Education (ACE) recommendations, Community College of the Air Force (CCAF) or military credit from regionally accredited institutions.

**MILITARY SCIENCE LEADERSHIP MINOR (19-22 HOURS)**
Area II Requirements:
COM 2241 (3) Fundamentals of Speech

Area IV Requirements:
Select one 2000 level 3-hour course from one of the following areas: Psychology, Sociology, or Political Science.

MLO 3301 (3) Leadership and Problem Solving
MLO 3302 (3) Leadership and Ethics
MLO 3304 (1) Military Advanced Leadership Lab 111-A
MLO 3306 (1) Military Advanced Leadership Lab 111-B
MLO 4401 (3) Leadership and Management
MLO 4402 (3) Officership
MLO 4404 (1) Military Advanced Leadership Lab IV-A
MLO 4405 (1) Military Advanced Leadership Lab IV-B
MLO 4497 (1-3) Senior Seminar in Military Science

Select a three-hour military history course approved by the professor of military science.

PHILOSOPHY AND RELIGION MINOR (18 HOURS)
Select 9 hours from the following:
PHI 2201 (3) Introduction to Political Philosophy
PHI 2203 (3) Introduction to Philosophy
PHI 2204 (3) Ethics and the Modern World
PHI 2205 (3) Introduction to Logic
PHI 2210 (3) Critical Thinking
REL 2280 (3) World Religions

Select 9 hours from the following upper division courses. At least 6 hours must be philosophy (PHI) courses.
ANT 3340 (3) Language in Culture and Society
ANT 3360 (3) Magic, Witchcraft, and Religion
CLA 3311 (3) Civilization of Greece
HIS 3302 (3) History of Religion in the United States
HIS 3331 (3) Western Thought since the 17th Century
HIS 3356 (3) History of the Middle East
HIS 4463 (3) Europe in the Age of Enlightenment
PHI 2280 (3) Travel Study in Philosophy
PHI 3301 (3) Western Philosophy
PHI 3310 (3) Applied Ethics
PHI 3320 (3) Non-Western Philosophies
PHI 3322 (3) Philosophy of Religion
PHI 3365 (3) Bioethics in Historical Context
PHI 4493-94 (3) Guided Independent Study
PHI 4495 (3) Selected Topics in Philosophy
REL 2285 (3) Travel Study in Religion

PHYSICS MAJOR (37 HOURS)

Area III
MTH 1125 (4) Calculus I
PHY 2262 (3) Physics I with Calculus
PHY 2262 (1) Physics I with Calculus Lab

Area V
CS 2250 (3) Computer Science I
MTH 1126 (4) Calculus II*

Note: *Students selecting a minor in Mathematics or a second major in Mathematics will meet the Calculus II requirement in the Mathematics Major/Minor rather than in Area V.

Required courses (20 hours)
PHY 2263 (3) Physics II with Calculus
PHY 2263 (1) Physics II with Calculus Lab
PHY 3310 (3) Modern Physics

PHY L310 (1) Modern Physics Lab
PHY 3325 (3) Thermodynamics
PHY 4420 (3) Mechanics
PHY 4435 (3) Electricity & Magnetism
PHY 4445 (3) Quantum Mechanics II

Select a minimum of 17 semester hours from the following courses listed below:
MTH 2227 (4) Calculus III
MTH 3364 (3) Vector Calculus
PHY 3320 (3) Mathematical Methods for Physicists
PHY 3321 (3) Equations of Mathematical Physics
PHY 3359 (3) Waves and Optics
PHY L359 (1) Waves and Optics Lab
PHY 4438 (3) Electromagnetic Fields
PHY 4440 (3) Dynamics of Particles & Systems
PHY 4446 (3) Quantum Mechanics II
PHY 4460 (3) Relativity I
PHY 4470 (3) Nuclear Physics
PHY 4475 (3) Particle Physics
PHY 4476 (3) Relativity II
PHY 4482-85 (1) Introduction to String Theory
PHY 4483-85 (1) Seminar in Relativity
PHY 4495 (3) Topics in Physics
PHY 4491-92 (3) Guided Independent Research
PHY 4493-94 (3) Guided Independent Study

PHYSICS AND MATHEMATICS DOUBLE MAJOR

Students seeking a double major in Physics and Mathematics should consult with their advisers in both the Physics and Mathematics Departments.

Area V Requirements
IS 2241 (3) Computer Concepts and Applications
TROY 1101 (1) University Orientation
POL 2241 (4) American National Government or placement in POL 2240
POL 2260 (3) World Politics

Major Requirements
POL 3300 (3) Foundations of Political Science
POL 3330 (3) Political Theory
POL 3390 (3) The Art of Political Science Research

Select one of the following concentrations:
American Politics and Public Administration Concentration
POL 3340 (3) U.S. Government—Executive Branch
POL 3341 (3) U.S. Government—Legislative Branch
POL 3342 (3) U.S. Government—Judicial Branch

Select six hours from the following:
POL 3343 (3) American Political Processes
POL 3355 (3) Southern Politics
POL 3364 (3) State and Local Politics
POL 3338 (3) Women in Politics
POL 3339 (3) African-American Politics
POL 4405 (3) Political Behavior and Public Opinion
POL 4420 (3) Constitutional Law
POL 4421 (3) Introduction to Public Administration
Select three of the following courses (9 hours)

- POL 3342 (3) Public Policy Making
- POL 4424 (3) Contemporary American Foreign Policy
- POL 4432 (3) Comparative Public Policy
- POL 4451 (3) Public Personnel Administration
- POL 4453 (3) Bureaucratic Politics
- POL 4469 (3) Religion in Politics
- POL 4472 (3) Administrative Law

Select an additional 12 hours of upper-level (3000-4000) political science courses, as approved by your academic adviser.

**INTERNATIONAL RELATIONS MINOR (18 HOURS)**

Required course (9 hours)
- POL 3351 (3) International Relations
- POL 4410 (3) International Political Economy
- POL 4433 (3) Comparative Government

Select three hours from the following courses (9 hours)
- POL 3300 (3) Foundations of Political Science
- POL 4405 (3) Political Behavior and Public Opinion
- POL 4415 (3) International Conflict
- POL 4424 (3) Contemporary American Foreign Policy
- POL 4445 (3) Comparative Public Policy
- POL 4447 (3) Latin American Politics
- POL 4448 (3) Arab-Israeli Conflict
- POL 4451 (3) International Law
- POL 4468 (3) Middle Eastern Politics
- POL 4469 (3) Asian Politics
- POL 4470 (3) Russian Politics
- POL 4471 (3) European Politics
- POL 4472 (3) Politics of the Developing World
- POL 4474 (3) Terrorism and Political Violence
- POL 4476 (3) Politics of Southeast Asia

Select an additional 12 hours of upper-level (3000-4000) political science courses, as approved by your academic adviser.

**SCIENCE EDUCATION**

Students seeking Alabama teacher certification should select the comprehensive science program as a first major and education as a second major. Students should consult with their advisers concerning all certification requirements.

**SOCIAL SCIENCE EDUCATION**

Students seeking Alabama teacher certification should complete the social science major with a general social science concentration and select education as a second major. Students should consult their education advisers concerning all certification requirements and with their academic discipline adviser for requirements in the major. Education students will need to take coursework to include the following disciplines: Geography, History, Political Science, and Economics.

**SOCIAL SCIENCE MAJOR (36 HOURS)**

Specialized General Studies Requirements

**AREA IV**

- NOTE: Social Science major with a concentration should take Area IV electives appropriate for their concentration.

**Requirements for the Major**

- SS 3375 (3) Introduction to Social Science Inquiry
- SS 3376 (3) Statistical Applications of Social Science Inquiry
- SS 3377 (3) Spatial Applications of Social Science Inquiry
- SS 4498 (3) Social Science Theory
- SS 4499 (3) Senior Seminar

**Select one of the following concentrations:**

**General Social Science Concentration:**
Select at least 21 hours of additional 3000/4000-level courses in at least three disciplines from anthropology, economics, geography, history, political science, psychology, sociology, criminal justice, or as approved by department chair. (Six hours may be used from ECO 2251, ECO 2252, GEO 2210, ANT 2200, POL 2241, or SOC 2275.) *Education students will need to take ECO 2251, POL 2241, and HIS 3375.

**Geography Concentration:**
- GEO 3300 (3) Principles of Physical Geography
- GEO 3301 (3) Principles of Cultural Geography

Select at least 15 hours of additional 3000/4000-level courses as approved by your faculty adviser:

**Leadership Development Concentration:**
- LDR 1100 (3) Introduction to Leadership
- LDR 2200 (3) Tools for Leaders
- LDR 3300 (3) Leadership Theory
- LDR 4400 (3) Leadership Seminar

Select an additional 9 hours from the following:
- AS 3312 (3) Air Force Leadership Studies I
- AS 3313 (3) Air Force Leadership Studies II
- COM 3345 (3) Group Discussion and Leadership
- HIS 4415 (3) Contemporary America
- LDR 3310 (3) Leadership and Interpersonal Skills
- LDR 3320 (3) Great Leaders
- MGT 3300 (3) Principles of Management
- MSL 2202 (2) Leadership and Teamwork
- POL 4422 (3) Public Policy Making
- POL 3351 (3) Foundations of International Relations
- POL 4421 (3) Introduction to Public Administration
- PSY 4410 (3) Business and Industrial Psychology
- SOC 3301 (3) Collective Behavior and Social Movements
- SOC 3302 (3) Small Groups

**SOCIAL SCIENCE MINOR: GENERAL SOCIAL SCIENCE (18 HOURS)**
- SS 4498 (3) Social Science Theory

Select an additional 15 hours from at least three of the following: anthropology, economics, geography, history, political science, psychology, social science, or sociology. At least 12 hours must be 3000/4000 level.

**SOCIOLGY MAJOR (36 HOURS)**

**Area IV Requirements**
- SOC 2275 (3) Introduction to Sociology

**Area V Requirements**
- IS 2241 (3) Computer Concepts and Applications
- TROY 1101 (1) University Orientation
- SOC 2280 (3) Social Problems in Contemporary Society

Requirements for the Major
- SOC 4420 (3) Sociological Theory
- SS 3375 (3) Introduction to Social Science Inquiry
- SS 3376 (3) Statistical Applications of Social Science Inquiry
- SS 4499 (3) Senior Seminar

Select an additional 24 hours of approved upper-level sociology courses.

**SOCIOLOGY MINOR (18 HOURS)**

Select 18 hours of approved, upper-level Sociology courses. SOC 2280 may be applied toward the minor.

**SURVEYING AND GEOMATICS SCIENCES PROGRAM (53 HOURS)**

**Area II:**
- ART 2201 (3) Introductory Drawing

Select an additional 24 hours of approved upper-level courses.

**Area III Requirements**
- MTH 1125 (4) Calculus I

Select an 8 hour physics sequence with labs:
- PHY 2252 (3) General Physics I
- PHY L252 (1) General Physics I Laboratory
- PHY 2253 (3) General Physics II
- PHY L253 (1) General Physics II Laboratory
- OR
- PHY 2262 (3) Physics I with Calculus
- PHY L262 (1) Physics I with Calculus Laboratory
- PHY 2263 (3) Physics II with Calculus
- PHY L263 (1) Physics II with Calculus Laboratory

**Area V Requirements**
- CS 2250 (3) Computer Science I
- IS 2241 (3) Computer Concepts & Application
- MTH 1126 (4) Calculus II
- MTH 2210 (3) Introductory Statistics
- TROY 1101 (1) University Orientation

**Program Requirements**
- GEM 1100 (2) Computer-Aided Drafting I
- GEM 1101 (2) Computer-Aided Drafting II
- GEM 2220 (3) Basics of Surveying
- GEM L220 (1) Basics of Surveying Lab
- GEM 3309 (3) Land Survey Principles
- GEM L309 (1) Land Survey Principles Lab
- GEM 3310 (3) Land Survey Practice
- GEM L310 (1) Land Survey Practice Lab
- GEM 3330 (3) Advanced Measurement Analysis
- GEM L330 (1) Advanced Measurement Analysis Lab
- GEM 3366 (3) Photogrammetry and Remote Sensing
- GEM 3379 (3) Introduction to Least Squares Adjustment
- GEM 3390 (3) Fundamentals of Geographic Information and Analysis
- GEM 3391 (3) Application of Geospatial Information Science
- GEM 4405 (3) Route & Construction Surveying
- GEM L405 (1) Route & Construction Surveying Lab
- GEM 4407 (3) Land Development
- GEM L407 (1) Land Development Lab
- GEM 4408 (3) Geodesy & Geodetics
- GEM 4409 (3) Hydrology
- GEM L409 (1) Hydrology Lab
- GEM 4410 (3) Introduction to Global Positions
- GEM 4490 (1) Geomatics Capstone

Select two hours below:
- GEM 4499 (2) Geomatics/GIS Projects
- OR
- GEM 3395 (1) Cooperative Work Experience I and
- GEM 4496 (1) Cooperative Work Experience II