# DEPARTMENT OF NURSING

The BSN Program is approved by the Georgia Board of Nursing and both the BSN and MSN programs are accredited by the National League for Nursing Accrediting Commission (NLNAC) and the Southern Association of Colleges and Schools (SACS).

The student who meets the criteria for general admission to Albany State University is enrolled in the core curriculum designated by the University. The student who has declared nursing as a major is admitted to the core each semester. The student is admitted to the professional nursing program during the fall semester of each year.

## SPECIFIC ADMISSION CRITERIA TO THE GENERIC NURSING PROGRAM

Admission into the Nursing Program, the following are required:

1. Completion of approximately 30 hours of the core curriculum with a minimum grade of "C" in each course and in institutional requirements.

2. A cumulative GPA of 2.75 in core courses.

3. Current enrollment in the last of (or completion of) all required basic science courses including anatomy and physiology, microbiology, and Area D science sequence with a grade of "C" or higher in each course, and no more than one (1) failure in any one of the sciences courses. (Only one failure in science courses is allowed. If the science failure occurred more than 5 years ago, the student has the opportunity to repeat the course one time.)

4. Generic nursing students considered for admission must have Anatomy and Physiology course(s) that are less than 6 years old at the time of potential admission into the nursing program. If the Anatomy and Physiology course(s) is/are older than 6 years, the student must retake the course(s) and pass with a "C" or better. The student can elect to challenge the course(s) by passing a national standardized exam on the content at the national average/percentile.

5. Students seeking admission into the Nursing Program must have passed the Regents exams with no more than two (2) attempts on each component of the Exams.

6. Completion of Standardized Nursing admissions diagnostics test with reading and math scores at the percentile approved by the Nursing Faculty. This exam is scheduled during the spring semester. The exam may also be scheduled once during the summer.

7. A completed health record on file in the Student Health Services indicating that all current health policies in the Department of Nursing have been met.

8. A current CPR (cardiopulmonary resuscitation/basic cardiac life support (BCLS) card. All students must be certified by the American Heart Association (AHA) in Child and Adult BCLS for health care providers. This certification must be maintained throughout the program (renewed every two years). An outdated CPR certification will prohibit the student from attending clinical practice experiences.

## OPTION:

Students who do not meet the admission requirements or whose admission has been denied may request an interview (appeal) with the Nursing Admission Committee for a review of his/her entire collegiate academic record. All students should see their advisor prior to completing an application to the Nursing Program. Eligible students who do not meet admission criteria are encouraged to enroll in the Elective Foundations courses: For example, NURS 2112 – Foundations of Professional Nursing or NURS 2121: Foundations of Pathophysiology while working to meet admission requirements. These courses will prepare students for progression in the nursing program once they have met the pre-requisites.

## TRANSFER ADMISSION POLICY

A. A student transferring into the nursing curriculum from an accredited four-year institution will be required to meet the above admission criteria and will follow the generic curriculum pattern including completion of required courses prior to clinical nursing course entry. Credit for any nursing courses taken will be evaluated on an individual basis.

B. A student transferring from another program with one failure in a nursing course may be considered for admission to upper level nursing, but must obtain a core GPA of 3.0 for 2 semesters in courses recommended by faculty, before admission. The failure will count as the first nursing failure.

C. A student who has failed (D or less) two nursing courses, whether at a two-year institution or at a four-year institution, will be ineligible for admission.

Appeals must be made in writing to the Nursing Admissions Subcommittee and submitted to the Department at the time of admission or after the second failure.

## Appeal Policy for Readmission

This policy affects the student whose second failure in a nursing course is in NURS 4345/NURS 4344.

1. Student's record will be reviewed for progression by the appropriate faculty committee.
2. Student may be allowed to retake the course the next time that it is offered, pending decision by faculty committee.
3. Approval must be supported by the Departmental Chair and Dean of the College.

## RN Student Admission

Specific Admission Criteria to the RN-BSN Nursing Program

The Albany State University Bachelor of Science in Nursing Degree program follows the collaborative Georgia RN-BSN Articulation Model for Registered Nursing Students

1. Nursing credits accepted as advanced standing from prior college credits include the following with a "C" or better:
   - Nutrition
   - Pharmacology
2. The Georgia RN-BSN Articulation Model is followed for RNs. No validation testing for prior nursing content is required for students who meet the appropriate criteria of the model.
3. During registration of RN students for NURS 4240 (Community Health Nursing) and NURS 4344 (Senior Seminar), the nursing faculty will verify the RN's original Georgia license and subsequently will sign a form indicating that the license is current. Student must also present a copy of the signed license during the admission process and each subsequent year of nursing education until graduation.

(Criteria of articulation model on file in the Department Chair's Office or at the Georgia Board of Nursing, 237 Coliseum Drive, Macon, GA 31217-3858.) Website: http://www.sos.state.ga.us

## Bachelor of Science in Nursing Degree
## Core A-F and Above the Core Requirements

Each student must complete the Core Curriculum. The Core consists of 9 hours in Area A (Essential Skills), 5 hours in Area B (Institutional Options), 6 hours in Area C (Humanities/Fine Arts), 10-11 hours in Area D (Science, Mathematics and Technology), 12 hours in Area E (Social Science), 18 hours in Area F (Courses related to program of study), and 6 hours above the Core.

**Area F courses:**

| | |
|---|---|
| NURS 2120 Human Growth and Development in the Health Professions | 3 hours |
| BIOL 2411/2412 Anatomy and Physiology I and II | 8 hours |
| BIOL 2211 Microbiology | 4 hours |
| NURS 2601 Introduction to Geriatric Nursing | 3 hours |

## Additional Requirements

Each student must maintain a "C" average in order to progress in the nursing major. The minimum score for obtaining a "C" is 75. A student who fails a nursing course will be allowed to repeat this nursing course one time when it is offered again in the curriculum; however, this failure means that the student will be unable to progress in the nursing program until the same course is satisfactorily completed. A second failure of a nursing course will constitute grounds for dismissal from the nursing program. (An appeal for readmission may be initiated after one year.)

### RE-ENTRY INTO PROGRAM

All undergraduate nursing students who experience any interruption that results in non-completion of a Nursing Course will be required to successfully complete the appropriate NURS Remediation Course prior to re-entry into the Nursing Program. The course will be listed as NURS 4111 with the appropriate hours for the class needed to re-enter the nursing program. Students who have an interruption in matriculation of any nursing course must have a second criminal background check prior to re-enrollment. All background checks will be submitted before the last day of the university's registration period for the semester.

Each student is responsible for an approved uniform, selected equipment, health and liability insurance, a criminal background check,, standardized testing (required with most nursing courses), transportation, yearly physical examinations, immunizations, chest X-rays and selected laboratory tests. The curriculum is designed for approximately four years of study. Courses in clinical nursing will begin in the sophomore year and continue through the remainder of the program

Clinical experiences are provided in home/community settings, hospitals, clinics, rehabilitation centers, nursing homes, primary health care centers, community health and social agencies, schools, industries and other selected settings.

## Requirements for Bachelor of Science in Nursing Degree

1. Completion of 123 semester hours in the required program of study.
2. A grade point average (GPA) of 2.0 or better.

# Program of Study for a Bachelor of Science in Nursing Degree

**Freshman Year** **Fall, Spring & Summer**

| | | | |
|---|---|---|---|
| ENGL | 1101 | English Composition I | 3 |
| MATH | 1111 | College Algebra or | |
| MATH | 1101 | Math Modeling | 3 |
| AREA D | Area D | Science Course I | 4 |
| COMM | 1100 | Public Speaking | 3 |
| COHP | 2120 | Growth & Development/Health Professions | 2 |
| ASU | 1201 | Foundations of College Success | 3 |
| COHP | 2110 | Nutrition | 3 |
| | | | 1 |
| ENGL | 1102 | English Composition II | 3 |
| BIOL | 2411 | Anatomy & Physiology I | 4 |
| PSYC | 1101 | General Psychology | 3 |
| AREA D | | Area D Science II | 4 |
| COHP | 1231 | Professional Nursing Orientation Seminar (Elective) | 1 |
| NURS | 2600 | Health & Medical Terminology | 3 |
| BIOL | 2211 | Microbiology | 4 |
| **Total** | | | **40** |

**Sophomore Year**

| | | | |
|---|---|---|---|
| BIOL | 2412 | Anatomy & Physiology II | 4 |
| NURS | 3510 | Health Assessment | 3 |
| NURS | 2210 | Pharmacology | 3 |
| NURS | 2231 | Fundamentals of Professional Nursing Practice | 5 |
| NURS | 2331 | Adult Health Nursing I | 5 |
| COMM | 1100 | Public Speaking | 5 |
| SOCI | 2011 | Principles of Sociology | 3 |
| NURS | 3320 | Pathophysiology | 3 |
| PEDH | | Activity PE | 1 |
| **Total** | | | **30** |

**Junior Year**

| | | | |
|---|---|---|---|
| NURS | 3134 | Pediatric Nursing | 5 |
| POLS | 1101 | US & GA Government | 3 |
| MATH | 2411 | Basic Statistics | 3 |
| NURS | 2601 | Introduction to Geriatric Nursing | 3 |
| PEDH | | Activity | 1 |
| HIST | | History Option | 3 |
| *NURS | 3312 | Orientation to Phil. Concepts (RN-BSN) | 5 |
| NURS | 3136 | Women's Health Nursing | 5 |
| NURS | 3335 | Mental Health Nursing | 5 |
| AREA C | Area C | Fine Arts Option | 3 |
| **Total** | | | **31** |

**Senior Year**

| | | | |
|---|---|---|---|
| PEDH | | Activity | 1 |
| ENGL | 2111 | World Literature I | 3 |
| NURS | 4140 | Leadership | 2 |
| NURS | 4342 | Adult Health Nursing II | 5 |
| NURS | 4131 | Research | 3 |
| NURS | 4240 | Community Health Nursing | 5 |
| *NURS | 4344 | Senior Seminar (RN-BSN) | 3 |
| NURS | 4345 | Senior Comprehensive Nursing | 5 |
| HIST | 1002 | Introduction to African Diaspora | 2 |
| **Total** | **26** | | |

**Total required for graduation** **127**

*Courses for RN students

**Nursing Electives available:**

| | | | |
|---|---|---|---|
| NURS | 4111 | Directed Study | Hours vary |
| NURS | 3010 | Junior Externship | 1 (1:VAR) |
| NURS | 4010 | Senior Externship | 1 (1:VAR) |
| NURS | 2112 | Foundations of Professional Nursing | 3 |
| NURS | 2121 | Foundations of Pathophysiology | 3 |
| NURS | 2212 | Foundations of Health Assessment | 3 |

**Total required for graduation** **127**

## DEPARTMENT OF CRIMINAL JUSTICE AND FORENSIC SCIENCE

The Department of Criminal Justice offers Bachelor of Science degrees in Criminal Justice and Forensic Science and the Master of Science degree in Criminal Justice. These degree programs prepare students for professional employment in the criminal justice system, Forensic Science and/or for graduate studies in criminal justice, Forensic Science and law. The curriculum is both broad and flexible enough to permit students to pursue course work in a wide variety of criminal justice and Forensic Science topics cutting across law enforcement, courts, corrections, research, policy analysis, planning and operations and laboratory analysis/management.. Students are encouraged to take internships in criminal justice, Forensic Science labs, social service and/or human service agencies.

A minor in Criminal Justice studies, requiring 18 hours of designated study, is also offered with a concentration in the core curriculum.

The Criminal Justice and Forensic Science Department also has established 2+2 programs that permit students at selected area two-year colleges to transfer to the baccalaureate program in Criminal Justice and Forensic Science at Albany State University without loss of credit.

| **Area A: Essential Skills** | | | **(9 hours)** |
|---|---|---|---|
| ENGL | 1101 | English Composition I or | 3 |
| HONR | 1111 | Honors Humanities I (H) | 3 |
| ENGL | 1102 | English Composition II or | 3 |
| HONR | 1112 | Honors Humanities II (H) | 3 |
| MATH | 1111 | College Algebra | 3 |
| MATH | 1101 | Math Modeling (Non-Science Majors) | 3 |
| MATH | 1113 | Pre-Calculus (Required for the following majors: Math, Computer Science, Chemistry & Biology) | 3 |
| MATH | 1211 | Calculus I (Required for Pre-Engineering Majors | 4 |

| **Area B: Institutional Options** | | | **(5 hours)** |
|---|---|---|---|
| COMM | 1101 | Public Speaking | 3 |
| HIST | 1002 | Introduction to African Diaspora | 2 |

| **Area C: Humanities/Fine Arts** | | | **(6 hours)** |
|---|---|---|---|
| ENGL | 2111 | World Literature I or | 3 |
| HONR | 2111 | Honors Humanities III (H) | 3 |
| ARAP | 1100 | Art Appreciation | 3 |
| ENGL | 2112 | World Literature II | 3 |
| MUSC | 1100 | Music Appreciation | 3 |
| FREN | 2201 | Intermediate French | 3 |
| GERM | 2221 | Intermediate German | 3 |
| SPAN | 2231 | Intermediate Spanish | 3 |
| FIAR | 1100 | Introduction to Fine Arts | 3 |
| HONR | 2112 | Honors Humanities IV (H) | 3 |

Regents' Test Remediation Courses
ENGL 0075 Writing
Practicum (I) ENGL 0077
Basic Reading Skills (I)
Regents' Test
Reading Date Passed _____

Essay Date Passed _____

| | | | |
|---|---|---|---|
| **Area D: Science, Math & Tech** | | | **(10-11 hours)** |
| BIOL | 1111 | Intro to Biological Science | 4 |
| BIOL | 1112 | Intro to Biological Science | 4 |
| BIOL | 1114 | Survey of Biotechnology | 3 |
| BIOL | 1115 | Intro. to Environmental Biology | 3 |
| CHEM | 1151 | Survey of Chemistry I | 4 |
| CHEM | 1152 | Survey of Chemistry II | 4 |
| PHYS | 1001 | Physical Science I | 4 |
| PHYS | 1002 | Physical Science II | 4 |
| PHYS | 1020 | Survey of Modern Science & Tech | 3 |
| **Select One** | | | |
| CSCI | 1003 | Intro to Technology | 2 |
| MATH | 1201 | Survey of Calculus | 3 |
| MATH | 2411 | Basic Statistics | 3 |
| CSCI | 1100 | Intro to Computers | 3 |
| PHYS | 2100 | Computer Applications | 3 |
| MATH | 1113 | Pre-Calculus | 3 |
| CHEM | 1211 | General Chemistry I | 4 |
| CHEM | 1212 | General Chemistry II | 4 |
| PHYS | 1111 | Introductory Physics | 4 |
| PHYS | 1112 | Introductory Physics | 4 |
| PHYS | 2221 | Principles of Physics I | 4 |
| PHYS | 2222 | Principles of Physics II | 4 |
| **Select One** | | | |
| MATH | 1113 | Pre-Calculus | 3 |
| MATH | 1211 | Calculus I 4 | |
| MATH | 2212 | Calculus II | 4 |
| PHYS | 2100 | Computer Applications | 3 |
| **Area E: Social Science** | | | **(12 hours)** |
| POLS | 1101 | U.S. & Georgia Government or | 3 |
| HONR | 1161 | Honors American Government | |
| ECON | 2105 | Macro economics | 3 |
| ECON | 2106 | Micro economics | 3 |
| ECON | 2201 | Survey of Economics | 3 |
| PSYC | 2203 | Advanced General Psychology | 3 |
| GEOG | 1101 | Introduction to Human Geography | 3 |
| HIST | 1111 | Survey of World History I | 3 |
| HIST | 1112 | Survey of World History II | 3 |
| HIST | 2111 | Survey of American History I | 3 |
| HIST | 2112 | Survey of American History II | 3 |
| HIST | 2113 | Minorities in America | 3 |
| HONR | 1151 | Honors World History I (H) | 3 |
| HONR | 1152 | Honors World History II (H) | 3 |
| PHIL | 2101 | Introduction to Philosophy | 3 |
| POLS | 2101 | Introduction to Political Science | 3 |
| POLS | 2102 | Introduction to Law | 3 |
| CRJU | 2800 | American Correctional Systems | 3 |
| PSYC | 1101 | General Psychology | 3 |
| SOCI | 2011 | Principles of Sociology | 3 |
| SOCI | 2031 | Introduction of Anthropology | 3 |

| | | | |
|---|---|---|---|
| **Above the Core:** | | | **(6 hours)** |
| ASU | 1200 | Freshmen Seminar & Service to Leadership | |

Select Three

| | | | |
|---|---|---|---|
| PEDH | 1001 | Team Sports | 1 |
| PEDH | 1002 | Fitness | 1 |
| PEDH | 1003 | Recreational Skills I | 1 |
| PEDH | 1004 | Recreational Skills II | 1 |
| PEDH | 1005 | Lifetime Skills I | 1 |
| PEDH | 1006 | Lifetime Skills II | 1 |
| PEDH | 1007 | Aquatics | 1 |
| HEDP | 1001 | Introduction to Wellness | 1 |

**Area F: Program of Study Related** **Courses (18 hours)**

| | | | |
|---|---|---|---|
| CRJU | 1100 | Introduction to Criminal Justice | 3 |
| SSCI | 2402 | Microcomp. in the Soc. Sciences | 3 |
| CRJU | 2400 | Report Writing& Research Skills | 3 |
| CRJU | 2210 | Introduction to Criminal Procedure and Law | 3 |

**Select SIX hours**

| | | | |
|---|---|---|---|
| SOCI | 2601 | Urban Social Problems | 3 |
| PSYC | 2203 | Advanced General Psychology | 3 |
| ECON | 2201 | Survey of Economics | 3 |
| ENGL | 2112, 2204, 2298, 3305 | | 3 |
| POLS | 2102 | Introduction to Law | 3 |
| POLS | 2101 | Introduction to Political Science | 3 |
| Any | Language | | 3 |
| SOWK | 2411-2211 | The Social Welfare Institution | 3 |

**Area G:** **(42 hours)**

| | | | |
|---|---|---|---|
| CRJU | 2200 | Intro. to Law Enforcement | 3 |
| CRJU | 2600 | Juvenile Delinquency & Justice | 3 |
| CRJU | 2800 | American Correctional Systems | 3 |
| CRJU | 2900 | Criminology | 3 |
| CRJU | 3410 | Criminal Justice Research | 3 |
| CRJU | 3530 | Criminal Justice Ethics & Prof. | 3 |
| CRJU | 4650 | U.S. Court Systems | 3 |
| CRJU | 4999 | Senior Capstone Seminar | 3 |
| CRJU | 2500 | Constitution Procedure | 3 |
| CRJU | 2700 | Police Community Relations | 3 |
| CRJU | 2910 | Organization and Administration | 3 |
| CRJU | 3000 | Global Terrorism | 3 |
| CRJU | 3300 | Comp. International Legal System | 3 |
| FOSC | 3030 | Criminal Evidence and Court Proc | 3 |
| CRJU | 4130 | Law Enforcement & Legal Proces | 3 |
| CRJU | 4210 | Philosophy of Law& Punishment | 3 |
| CRJU | 4340 | Corrections & Legal Process | 3 |
| CRJU | 4350 | Treat & Evaluations in Corrections | 3 |
| CRJU | 4360 | Community-Based Corrections | 3 |

**Sophomore Fall**

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| HIST | 1111 | Survey of World History I | 3 | PSYC | 1101 | General Psychology | 3 |
| SOCI | 2011 | Principles of Sociology | 3 | ENGL | 2111 | World Literature I | 3 |
| CRJU | 2400 | Report Writing & Research | 3 | Area C | | Choice | 3 |
| CRJU | 2210 | Intro. to Crim. Procedure | 3 | Area D | | Choice | 3 |
| SSCI | 2402 | Micro. In the Soc. Sciences | 3 | PEDH | | | 1 |
| PEDH | | | 2 | | | | |
| | | | | **Total** | | | **13** |

**Total** **17**

**Sophomore Spring**

| | | | |
|---|---|---|---|
| CRJU | 4510 | Organized and White Collar Crimes | 3 |
| CRJU | 4520 | Drugs and Crimes | 3 |
| CRJU | 4530 | Comparative Criminology | 3 |
| CRJU | 4610 | Internship (3-12 hours) | 3 |
| CRJU | 4620 | Special Topics in CRJ | 3 |
| CRJU | 4630 | Race, Gender and CRJ System | 3 |

**Area H: (18 hours)**

| | | |
|---|---|---|
| SOCI | Upper Level Courses (3000-4000) SOCI 3370 & 3371 will NOT fulfill upper level | 3 |
| POLS | requirements. Upper Level Courses (3000-4000) | 3 |
| Statistics Course | ECON, SOCI, PSYC or SOWK 4300 OR CRJU 3420 | 3 |

General Electives (9 hours)

# Program of Study for Bachelor of Science Degree in Criminal Justice

**Freshman Year**

| **Fall** | | | | **Spring** | | | |
|---|---|---|---|---|---|---|---|
| ENGL | 1101 | English Composition | 3 | ENGL | 1102 | English Composition II | 3 |
| MATH | 1111 | College Algebra | 3 | HEDP | | Intro. to Wellness | 1 |
| COMM | 1101 | Public Speaking | 3 | HIST | 1002 | Intro. to the African Diaspora | 2 |
| ASU | 1200 | Freshman Seminar & Service to Leadership | 3 | BIOL | 1112K | Intro. to Biological Sciences | 4 |
| BIOL | 1111K | Intro. to Bio. | 4 | POLS | 1101 | U.S. & GA Government | 3 |
| | | | | CRJU | 1100 | Intro. to Criminal Justice | 3 |
| **Total** | | | **16** | **Total** | | | **16** |

**Junior**

| **Fall** | | | | **Spring** | | | |
|---|---|---|---|---|---|---|---|
| CRJU | 2500 | Constitutional | 3 | Upper Criminal Justice | | Choice | 15 |
| CRJU | 2900 | Criminology | 3 | PEDH | | | 1 |
| CRJU | 2910 | Organization & | 3 | | | | |
| CRJU | 3410 | Criminal Justice | 3 | | | | |
| **Total** | | | **12** | **Total** | | | **16** |

**Senior Year**

| **Fall** | | | | **Spring** | |
|---|---|---|---|---|---|
| Upper Sociology | | | 3 | General | 9 |
| POLS Choice | | | 3 | Statistics | 3 |
| General Electives | | | 3 | Upper CRJU | 3 |
| CRJU | 3530 | Ethics & Prof. | 3 | | |
| CRJU | 4999 | Sr. Capstone Seminar | 3 | | |
| **Total** | | | **15** | **Total** | **15** |

## FORENSIC SCIENCE DEGREE PROGRAM

The Bachelor of Science degree in Forensic Science is the only four-year degree program in Georgia and is housed in the Department of Criminal Justice and Forensic Science. Forensic Science is the application of scientific methods to crime scene investigation and criminal prosecution. The program is interdisciplinary and is based on the natural sciences; chemistry, physics and biology. This program prepares students for professional careers in crime laboratories as criminalists, trace evidence specialists, serologists, DNA specialists, toxicologists, drug analysts, firearms and fingerprint examiners, staff photographers and evidence technicians.

# BACHELOR OF SCIENCE IN FORENSIC SCIENCE

| **AREA A: ESSENTIAL SKILLS (9 hours)** | | | **Credit Hrs.** |
|---|---|---|---|
| ENGL | 1101 | English Composition I or | 3 |
| HONR | 1111 | Honors Humanities I (H) | 3 |
| ENGL | 1102 | English Composition II or | 3 |
| HONR | 1112 | Honors Humanities II (H) | 3 |
| SELECT ONE AS REQUIRED | | | |
| MATH | 1111 | College Algebra | 3 |
| MATH | 1101 | Math Modeling (Non-Science Majors) | 3 |
| MATH | 1113 | Pre-Calculus (Required for the following majors Mathematics, Computer Science, Chemistry, Biology, Forensic Science) | 3 |
| MATH | 1211 | Calculus I (Required for Pre-Engineering majors) | 4 |

| **AREA B: INSTITUTIONAL OPTIONS (5 hours)** | | | |
|---|---|---|---|
| COMM 1101 | | Public Speaking | 3 |
| HIST 1002 | | Intro to African Diaspora | 2 |

| **AREA C: HUMANITIES/FINE ARTS (6 hours)** | | | |
|---|---|---|---|
| ENGL | 2111 | World Literature I | 3 |
| HONR | 2111 | Honors Humanities III (H) | 3 |
| SELECT | | | |
| ARAP | 1100 | Art Appreciation | 3 |
| ENGL | 2112 | World Literature II | 3 |
| MUSC | 1100 | Music Appreciation | 3 |
| FREN | 2201 | Intermediate French | 3 |
| GERM | 2221 | Intermediate German | 3 |
| SPAN | 2231 | Intermediate Spanish | 3 |
| FIAR | 1100 | Introduction to Fine Arts | 3 |

| **AREA D: SCIENCE, MATH & TECH (10-11 hours)** | | | |
|---|---|---|---|
| **OPTION II - SCIENCE MAJORS (SELECT TWO)** | | | |
| CHEM | 1211 | General Chemistry I | 3 |
| CHEM | 1212 | General Chemistry II | 3 |
| PHYS | 1111 | Introductory Physics | 3 |
| PHYS | 1112 | Introductory Physics | 3 |
| PHYS | 2221 | Principles of Physics I | 3 |
| PHYS | 2222 | | 3 |
| SELECT ONE | | | |
| MATH | 1113 | Pre-Calculus | 3 |
| MATH | 1211 | Calculus I | 3 |
| MATH | 2212 | Calculus II | 3 |
| PHYS | 2100 | Computer Applications | 3 |

MAJOR EXIT EXAM FOSC 4201 L
(No Minimum or Maximum Required Score)

The Academic requirements for Forensic Science program have been modified and specific admission criteria have been developed as recommended by the American Academy of Forensic Science's (AAFS) Forensic Science Education Programs Commission (FEPAC)

Requirements for Specific admission Criteria for Forensic Science Majors:

1. Completion of 32 hours of the core curriculum with a min grade of C in each course and institutional requirements.

2. Completion of General Chemistry I and II (Chem 1211 and Chem 1212) and Organic Chem I, Intro/Prin of Physics I and II with a minimum grade of C.

3. A cumulative Grade Point Average of 2.5

4. Students seeking admission into the forensic program must pass the Regents Exams with no more than two attempts on each component of the exams.

**AREA E: SOCIAL SCIENCE (12 hours)**

| | | | |
|---|---|---|---|
| POLS | 1101 | U.S. & Georgia Govt. or | 3 |
| HONR | 1161 | Honors American Govt. (Optional for Honors Student Only) | 3 |
| SOCI | 2011 | Principles of Sociology | 3 |
| SOCI | 2031 | Introduction to Anthropology | 3 |

**ELECTIVES Select at least one HISTORY course and two other courses**

| | | | |
|---|---|---|---|
| ECON | 2105 | Macroeconomics | 3 |
| ECON | 2106 | Microeconomics | 3 |
| ECON | 2201 | Survey of Economics | 3 |
| GEOG | 1101 | Intro to Human Geography | 3 |
| HIST | 1111 | Survey of World History I | 3 |
| HIST | 1112 | Survey of World History II | 3 |
| HIST | 2111 | Survey of American History I | |
| HIST | 2112 | Survey of American History II | 3 |
| HIST | 2113 | Minorities in America | 3 |
| HONR | 1151 | Honors World History I | 3 |
| HONR | 1152 | Honors World History II | 3 |
| PHIL | 2101 | Intro to Philosophy | 3 |
| POLS | 2101 | Intro to Political Science | 3 |
| POLS | 2102 | Intro to Law | |
| PSYC | 1101 | General Psychology | 3 |
| SOCI | 2011 | Principles of Sociology | 3 |
| SOCI | 2031 | Introduction to Anthropology | 3 |

**ABOVE THE CORE: (6 hours)**

| | | | |
|---|---|---|---|
| ASU | 1200 | Freshman Sem. & Serv. To Leadership | 3 |

**SELECT THREE**

| | | | |
|---|---|---|---|
| HEDP | 1001 | Introduction to Wellness | 1 |
| PEDH | 1001 | Team Sports | 1 |
| PEDH | 1002 | Fitness | 1 |
| PEDH | 1003 | Recreational Skills I | 1 |
| PEDH | 1004 | Recreational Skills II | 1 |
| PEDH | 1005 | Lifetime Skills I | 1 |
| PEDH | 1006 | Lifetime Skills II | 1 |
| PEDH | 1007 | Aquatics | 1 |

**AREA F: Program of Study Related Courses (18 hrs)**

FOSC 2100 Intro to FOSC w/lab
FOSC 2120 Forensic Photography
CHEM 2301 Organic Chemistry I CHEM 2302 Organic Chemistry II

Select Any One
CHEM 2351 Quantitative Analysis
BIOL 2111 General Biology

**AREA G 23 Hours Supporting Courses for the Major**
Minimum one course (3 or 4 hr) required in each of CHEM, PHYS, BIOL, and MATH or SOC Groups (I-IV)

**Group I**

| | | |
|---|---|---|
| CHEM | 3250 | Biochemistry |
| CHEM | 3221 | Physical Chemistry I |
| CHEM | 3222 | Physical Chemistry II |

**Group I**

| | | |
|---|---|---|
| PHYS | 2221 | Principles of Physics I and |
| PHYS | 2222 | Principles of Physics II or |
| PHYS | 1111 | Introductory Physics I and |
| PHYS | 1122 | Introductory Physics II |

**Group III**

| | | |
|---|---|---|
| BIOL | 3101 | Environmental Biology |
| BIOL | 3501 | Principles of Genetics |
| BIOL | 4701 | Cell and Molecular Biology |

**Group IV**
CRJU 3420 Criminal Justice Statistics,
or R SOCI 4300 Behavioral Statisitcs,
required

**AREA H 37 Hours Forensic Science Courses**
Required all 33 hours courses below:

| | | |
|---|---|---|
| FOSC | 2120 | Forensic Photography |
| FOSC | 2130 | Crime Scene Investigation |
| I FOSC | 2140 | Crime Scene Investigation |
| II FOSC | 3020 | Forensic Micro of Trace |
| (w/lab) FOSC | 3030 | Criminal Evid. & Court |
| Proc FOSC | 4040 | Forensic Sero & DNA |
| (w/lab) FOSC | 4050 | Forensic Chemistry (w/lab) |
| FOSC | 4060 | SEM-EDX of Trace Evid |
| (w/lab) FOSC | 4201L | Evidence Analysis & |
| Research I FOSC/CRJU 4999 | | Senior Capstone Seminar |
| CRJU | 1100 | Introduction to Criminal Justice |
| FOSC | 3100 | International Forensic DNA |
| FOSC | 3200 | Bio-Terrorism and Biotechnology |
| FOSC | 4120 | Electron Optics (w/lab) |
| FOSC | 4130 | Expert Witness at Mock Trial |
| FOSC | 4140 | Fingerprint Technology (w/lab) |
| FOSC | 4150 | Evid. Proc. for Med. Techs. (w/lab) |
| FOSC | 4160 | Evidence Collection (w/lab) |
| | | Study/Chemistry Seminar |
| FOSC | 2140 | Crime Scene Investigation II |

# PROGRAM OF STUDY FOR BACHELOR OF SCIENCE DEGREE IN FORENSIC SCIENCE

**Freshman Year**

| **Fall** | | | | **Spring** | | | |
|---|---|---|---|---|---|---|---|
| ENGL | 1101 | English Composition I | 3 | ENGL | 1102 | English Composition II | 3 |
| MATH | 1111 | College algebra | 3 | CHEM | 1212 | General Chemistry II | 4 |
| COMM | 1101 | Public Speaking | 3 | MATH | 1211/2212 | Pre Calculus/Calculus 1 | 3 or 4 |
| ASU | 1200 | Freshman Seminar & Service to Leadership | 3 | HIST | 1002 | Intro to African Diaspora | 2 |
| BIOL | | | | POLS | 1101 | US & Georgia Govt. | 3 |
| CHEM | 1211 | General Chemistry I | 4 | | | | |
| **Total** | | | **16** | **Total** | | | **15-16** |

**SophomoreYear**

| **Fall** | | | | **Spring** | | | |
|---|---|---|---|---|---|---|---|
| CHEM | 2301 | Organic Chemistry I | 4 | HIST Area E | 1111-2/ 2111-3 | Select one History | 3 |
| PHYS | 1111/2221 | Introductory Physics I /Principles of physics I | 4 | PHYS | 1122/2222 | Introductory Physics I /Principles of physics I | 4 |
| PEDH | 1001-1007 | ( Above the Core ) select one) | 1 | CHEM | 2302 | Organic Chemistry II | 4 |
| BIOL | Area G | Select one from Part III | 4 | FOSC | 2100/2000 | Introduction to Forensic | 3 |
| ENG | 2111 | World Literature | 3 | PEDH/HED | 1001-1007/1001 | ( Above the Core ) select one) | 1 |
| **Total** | | | **16** | **Total** | | | **15** |

**Junior Year**

| **Fall** | | | | **Spring** | | | |
|---|---|---|---|---|---|---|---|
| CRJU | 1100 | Introduction to Criminal Justice | 3 | CHEM | 3250 | Biochemistry | 4 |
| CRJU/SOCI | Area G | Select one from Part IV | 3 | FOSC | 2120 | Forensic Photography | 3 |
| FOSC | 2130 | Crime Scene Investigation I | 3 | FOSC | 2140 | Crime Scene Investigation II | 3 |
| PEDH/HEDP | 1001-1007/1001 | ( Above the Core ) select one) | 1 | Area E | Area E | Select One other than History | 3 |
| FOSC | 3030 | Criminal Evidence & Court Proc. | 3 | PHYS | 2100 | Computer applications | 3 |
| Area E | Area E | Select one other than History | 3 | | | | |
| **Total** | | | **16** | **Total** | | | **16** |

**SeniorYear**

| **Fall** | | | | **Spring** | | | |
|---|---|---|---|---|---|---|---|
| FOSC | 3020 | Forensic Micro of Trace (w/Lab | 3 | FOSC | Area H | Select one from the Specialization | 2/3 |
| Area G | | Select one from Part I | 4 | Area C | Select one | World Literature II or any of the languages | 3 |
| FOSC | 4040 | Forensic Serology & DNA Technology | 3 | FOSC | 4201L | Evidence Anal/Research | 3 |
| FOSC | 4050 | Forensic Chemistry | 3 | FOSC /CRJU | 4999 | Senior Capstone seminar | 3 |
| FOSC | 4060 | SEM-EDX of Trace Evidence | 3 | Area G | Area G | Select one from Part I/II/III/IV | 4 |
| **Total** | | | **16** | **Total** | | | **15-16** |

# DEPARTMENT OF NATURAL SCIENCES

The Department of Natural Sciences offers degrees in biology and chemistry with course offerings in physics and engineering. The department also offers a degree in science education with a broad based emphasis in biology area.

## BIOLOGY

The major in biology provides courses and course sequences leading to the Bachelor of Science degree in biology. The program prepares a student for professional careers and employment in biological sciences and teaching in the area of biology. Flexibility and design of the program aids in preparation for entrance into graduate, medical, pharmacy and dental schools, as well as other professional schools. Students interested in attending medical and dental schools choose from a select number of biology and chemistry courses and are advised by the Pre-Health Advisor.

Students majoring in biology must complete a minimum of 32 hours in biology, including Biology 2111K, 2112K, 2211K, 2311K, 3101K, 3501K, 4001, 4222 and 4701K. Additionally, the Biology major must complete 13 hours of biology electives with a minimum of 8 hours at the 3000 and 4000 level. The electives will be chosen by the student with the advisor from a list of approved electives. Biology majors and minors must make a "C" or better in all biology, chemistry, physics, and mathematics courses. Students must meet the requirements of the Core Curriculum and pass the Regents Exam. Students must also take the Area Concentration Achievement Test (ACAT) in biology during the senior year.

## CHEMISTRY

The major in chemistry provides courses and sequences leading to the Bachelor of Science degree in chemistry. The program is designed to follow the criteria for baccalaureate degrees set forth by the Committee on Professional Training of the American Chemical Society. The program prepares students for professional employment after graduation and also provides strong academic and laboratory experiences for those who wish to pursue graduate degrees in chemistry or attend professional schools.

Students must meet the requirements listed in the Core Curriculum and pass the Regents' examination. Students must also complete a minimum of 49 semester hours of chemistry. All students are required to earn at least a grade of "C" in all chemistry, biology, physics, and mathematics courses. All students are required to take the American Chemical Society standardized test in the area in which they are enrolled. Students must also take the chemistry exit

exam, the Major Field Test (MFT) during the senior year.

### SCIENCE EDUCATION

The Bachelor of Science in Science Education is approved by Georgia Professional Standards Commission (PSC) and National Council of Accreditation for Teacher Education. The program leads to Level-4 teacher certification is Broad field Science with biology emphasis. Upon admission to Albany State University, students who have declared science education as their major must formally apply to the Teacher Education Program. Students must meet the following requirements to be fully admitted to the Teacher Education Programs. These requirements include: 1) completion of a minimum 36 semester hours in core and prescribed courses with a cumulative grade point average (GPA) of 2.5 or better; 2) successful completion of Regents Examination and Basic Test for Georgia Assessment for Certification of Educators (GACE1); and 3) acceptable history of mental, emotional and physical health. The exit exam for the program is GACE II, which is content area must be taken by all students.

### ENGINEERING

Albany State University offers two tracks of pre-engineering programs that lead to a Bachelor of Engineering degree from the Georgia Institute of Technology: (1) The Regents' Engineering Transfer Program (RETP) and (2) Dual Degree Program.

**TRACK 1**

The Regents Engineering Transfer Program (RETP) is a cooperative program between the Georgia Institute of Technology and Albany State University that allows students to complete the first two years of the engineering program at Albany State University and then transfer to Georgia Tech to their chosen field of engineering to complete the requirements of B.S. degree in engineering. Student will be admitted to Georgia Tech upon completion of the prescribed courses at Albany State University provided (s)he maintains an overall GPA of 2.7 as well as 2.7 in science and mathematics courses at ASU. At times Georgia Tech may add certain requirements for admission to junior level, which will equally be applied to Georgia Tech students also for advancing to the junior level in that field.

To be eligible for admission to the RETP at Albany State University student must be a resident of Georgia and must have a combined minimum SAT score of 1090 including minimum of 560 on the math and 440 on the verbal portion and a high school GPA of "B" or better. Students who prefer to live and study in a smaller community may also transfer to Georgia Tech Regional Engineering Program (GTREP) at coastal city of Savannah and receive the Georgia Tech engineering degree by completing their studies at Georgia Tech campus at Savannah.

**TRACK 2**

The Dual Degree Program is also a cooperative program between Georgia Tech and Albany State University that is designed for students who want to have a broad liberal arts background in addition to their chosen field of engineering. The student will complete approximately three years of study towards a program in Chemistry, Computer Science or Mathematics at Albany State University and then transfer to Georgia Tech for two additional years of study in his/her chosen field of engineering. Upon successful completion of the two programs, student will earn a B.A. degree from Albany State University and a B.S. degree in Engineering from Georgia Tech. The admission and transfer requirements for Dual Degree Program are the same as the RETP program though additional courses as described later in this catalog are needed to qualify for transfer under the Dual Degree Program.

Students are advised to follow the customized list of courses as detailed in this document for each engineering discipline in order to complete their degree goal in the most efficient man-ner. Non-residents of Georgia and international students acan also join the engineering program at ASU though the transfer to Georgia Tech will require higher GPA. After completing the program one may also apply for transfer to any other ABET accredited engineering college any. In the past, students have transferred to the engineering programs at Auburn, Florida A & M, Tuskegee, North Carolina A&T Mercer, Southern Polytechnic and University of Texas at Arlington.

## BACHELOR OF SCIENCE DEGREE IN BIOLOGY

Biology I. Required: 18 hours, lower division (1000-2000 Level)

| **Area F** | | **Titled** | **Credit hrs.** |
|---|---|---|---|
| BIOL | 2111K | Biology I | 4 |
| BIOL | 2112K | Biology II | 4 |
| CHEM | 2301K | Organic Chemistry I | 4 |
| CHEM | 2302K | Organic Chemistry II | 4 |
| 2 credits from Area D or Area F | | | 2 |
| **Total Area F** | | | **18** |
| | | | |
| **Total Core Curriculum** | | | **60** |
| **Major Courses** | | | |
| BIOL | 2211K | General Microbiology | 4 |
| BIOL | 2311K | General Botany | 4 |
| BIOL | 3101K | Environmental Biology | 4 |
| BIOL | 3501K | Principles of Genetics | 4 |
| BIOL | 4001 | Research and Independent Study I | 1 |
| BIOL | 4222 | Biology Research | 3 |
| BIOL | 4701K | Cell and Molecular Biology | 4 |

| | | | |
|---|---|---|---|
| CHEM | 3250K | Biochemistry | 4 |
| MATH | 1211 | Calculus I | 4 |
| PHYS | 1111K | Introductory Physics I | 4 |
| PHYS | 1112K | Introductory Physics II | 4 |
| PHYS | 2100 | Computer Applications (If not in Area D) | 3 |
| SPAN, FREN OR GRMN Foreign Language sequence | | | 6 |
| Electives (Non-Science) | | | 3 |
| Electives (Biology) | | | 13 |
| Total (Major and other courses) | | | 61 |
| Total above Core Hours | | | 6 |
| **Total Hours in Program** | | | **126** |

## PROGRAM OF STUDY FOR A BACHELOR OF SCIENCE DEGREE IN BIOLOGY

***(Suggested Program of Study Only! Student should consult with faculty advisor)***

| **Freshman Year** | | | **Fall** | **Spring** |
|---|---|---|---|---|
| ASU | 1200 | Freshman Seminar | 3 | |
| HIST | 1002 | Intro. to African Diaspora | 2 | |
| ENGL | 1101 and 1102 | English Composition I & II | 3 | 3 |
| MATH | 1113 | Pre-Calculus | | 3 |
| CHEM | 1211K and 1212K | General Chemistry I & II | 4 | 4 |
| BIOL | 2111K and 2112K | Biology I & II | 4 | 4 |
| BIOL | 1801 | (Suggested Elective) | | 1 |
| PEDH | Choice | | | 1 |
| **Total** | | | **16** | **16** |

| **Sphomore Year** | | | **Fall** | **Spring** |
|---|---|---|---|---|
| **PEDH** | Choice | | **1** | **1** |
| ENGL | 2111 | World Literature | | **3** |
| CHEM | 2301K and 2302K | Organic Chemistry I and II | **4** | **4** |
| BIOL | 2211K | General Microbiology | | **4** |
| POLS | 1101 | U.S. & GA Government | | **3** |
| MATH | 1211 | Calculus I | **4** | |
| PHYS | 2100 | Computer Applications | **3** | |
| BIOL | 2311K | Botany I | **4** | |
| Total | | | **16** | **15** |

| **Junior Year** | | | **Fall** | **Spring** |
|---|---|---|---|---|
| HIST | 1111 | World History I | | **3** |
| MUSC | 1100 | Music Apprec. or ARAP 1100 Art Apprec. | | **3** |
| PHYS | 1111K and 1112K | Introduction to Physics I and II | **4** | **4** |
| BIOL | 3101K | Environmental Biology | | **4** |
| CHEM | 3250K | Biochemistry | **4** | |
| COMM | 1100 | Fundamentals of Public Speaking | **3** | |
| BIOL | 3501K | Principles of Genetics | **4** | |
| BIOL | | Elective | | **3** |
| Total | | | **15** | **17** |

| **Senior Year** | **Fall** | **Spring** |
|---|---|---|
| BIOL 4222 Biology Research | | 2 |
| BIOL 4701K Cell and Molecular Biology | 4 | |
| Foreign Language (Spanish, French of German sequence) | 3 | 3 |
| NON-Science Electives | | 3 |
| Biology Electives | 4 | 4 |
| BIOL 4001 Research and Indep. Study I | 1 | 1 |
| Area E Choice | 3 | 3 |
| **Total** | **15** | **17** |

| **Biology Electives** | | | **Credit Hrs.** |
|---|---|---|---|
| **Courses** | **Title** | | |
| BIOL | 1801 | Science Career Explorations | 1 |
| BIOL | 2113K | Invertebrate Zoology | 3 |
| BIOL | 2312K | General Botany II | 4 |
| BIOL | 2412K | Anatomy and Physiology II | 4 |
| BIOL | 2320K | Lab Research Techniques | 3 |
| BIOL | 2415 | Scientific Writing | 3 |
| BIOL | 2702K | Fundamentals of Biotechnology | 4 |
| BIOL | 3201K | Entomology | 4 |
| BIOL | 3309K | Plant Anatomy | 3 |
| BIOL | 3311K | Introduction to Natural Resources | 3 |

| | | | |
|---|---|---|---|
| BIOL | 3312K | Planning and Managing Natural Resources | 3 |
| BIOL | 3313K | Natural Resources and Environmental Policy | 3 |
| BIOL | 3314K | Use of Energy Resources | 3 |
| BIOL | 3315K | Conservation of Energy Resources | 3 |
| BIOL | 3316K | Sources and Uses of Plant & Wildlife Resources | 3 |
| BIOL | 3317K | Natural Resources and Food Production | 3 |
| BIOL | 3318K | Marine Life Resources | 3 |
| BIOL | 3319K | Conservation of Marine Life Resources | 3 |
| BIOL | 3320K | Principles and Techniques in Water Resource Services | 4 |
| BIOL | 3321K | Conservation of Plant and Wildlife Resources | 3 |
| BIOL | 3401K | Introduction to Histology | 4 |
| BIOL | 3506 | Bioinformatics | 3 |
| BIOL | 3611K | Medical Mycology | 4 |
| BIOL | 3701 | Current Issues and Topics in Biotechnology | 2 |
| BIOL | 3801K | Electron Microscopy | 3 |
| BIOL | 3901 | Pathophysiology | 3 |
| BIOL | 4002 | Research and Independent Study II | 1 |
| BIOL | 4101K | General Physiology | 4 |
| BIOL | 4201K | Introduction to Parasitology | 4 |
| BIOL | 4301K | Developmental Biology | 4 |
| BIOL | 4401K | Comparative Vertebrate Anatomy | 4 |
| BIOL | 4501K | Immunology | 4 |
| BIOL | 4601K | Plant Physiology | 4 |
| BIOL | 4702K | Biotechnology | 4 |
| BIOL | 4703K | Genetic Engineering | 4 |

**Non-Biology Elective**

| | | | |
|---|---|---|---|
| MATH | 2411 | Basic Statistics or | 3 |
| PHYS | 2120 | Applied Math for Sciences I | 3 |

## Recommended Electives for Specific Career Choices

**I. Graduate School Courses selected in conjunction with advisor.**

**II. Pre-Health Careers (Courses are selected from those listed below).**

| | | |
|---|---|---|
| BIOL | 3401K | Histology |
| BIOL | 4101K | General Physiology |
| BIOL | 4301K | Developmental Biology |
| BIOL | 4401K | Comp. Vert. Anatomy |

**III. Biological Careers (Botanical Emphasis)**

| | | |
|---|---|---|
| BIOL | 3309K | Plant Anatomy |
| BIOL | 2312K | Botany |
| BIOL | 4601K | Plant Physiology |

| **IV. Biotechnology Concentration** | | | **Credit hrs** |
|---|---|---|---|
| **BIOL** | **2702K** | **Fundamentals of Biotechnology** | **4** |
| **BIOL** | **3506** | **Bioinformatics** | **3** |
| **BIOL** | **3701** | **Current Issues and Topics in Biotechnology** | **2** |
| **BIOL** | **4703K** | **Genetic Engineering** | **4** |

**MINOR IN BIOLOGY (Minimum of 20 hours)**

Students desiring a minor in Biology are required to complete the following courses:

| | | | |
|---|---|---|---|
| BIOL | 2111K and 2112K | General Biology I and II | 8 |
| BIOL | 2311K | General Botany I | 4 |
| BIOL | 3101K | Environmental Biology 4 or appropriate Biology substitute | |
| BIOL | 4701K | Cell and Molecular Biology | 4 |
| **Total** | | | **20** |

**MINOR IN Biology (**Environmental Emphasis)

(Minor acquired after completion of a minimum of 21 hours)

**Required Courses for a Minor in Natural Resources (9 hours)**

| | | |
|---|---|---|
| BIOL | 3311K | Introduction to Natural Resources |
| BIOL | 3312K | Planning and Managing Natural Resources |
| BIOL | 3313K | Natural Resources and Environmental Policy |

**Four Additional Courses from Categories I, II, III and IV:**

| | | | |
|---|---|---|---|
| I. | BIOL | 3314K | Use of Energy Resources or |
| | BIOL | 3315K | Conservation of Energy Resources |
| II. | BIOL | 3318K | Marine Life Resources or |
| | BIOL | 3319K | Conservation of Marine Life Resources |
| III. | BIOL | 3320K | Principles and Techniques in Water Resources Services |
| | BIOL | 3316K | Sources and Uses of Plants and Wildlife Resources |
| IV | BIOL | 3317K | Natural Resources and Food Production |
| | BIOL | 3321K | Conservation of Plant and Wildlife Resources |

# Bachelor of Science Degree in Science Education
# Broad Based Science

| **Courses** | | **Titles** | **Credit Hrs.** |
|---|---|---|---|
| 18hours lower division (1000-2000 level) | | | |
| PHYS | 1111K | Introductory Physics I | 4 |
| PHYS | 1112K | Introductory Physics II | 4 |
| BIOL | 2111K | Biology I | 4 |
| EDUC | 2110 | Invest Critical/Contemporary Issues in Ed. | 3 |
| EDUC | 2120 | Explor Soci/Cul Perspectives | 3 |
| **Total Hours** | | | **18** |

| **Major Courses** | | **Titles** | **Credit Hrs.** |
|---|---|---|---|
| EDUC | 2130 | Expl Teaching/ Learning | 3 |
| EDUC | 4412 | Student Teaching | 12 |
| EDUC | 4405 | Methods/Material of Teaching Science | 3 |
| EDUC | 4400 | Prep. for Teaching | 2 |
| EDUC | 4441 | Teaching Reading in Sec. Sch. | 3 |
| CHEM | 2301K | Organic Chem I | 4 |
| CHEM | 2302K | Organic Chem II | 4 |
| CHEM | 3250K | Biochemistry | 4 |
| PHYS | 3002 | Advance Earth Space Science | 4 |
| BIOL | 2112K | Biology II | 4 |
| BIOL | 2211K | Intro to Microbiology | 4 |
| BIOL | 3501K | Principle of Genetics | 4 |
| BIOL | 2311K | General Botany I | 4 |
| SPED | 3230 | Contemp. Perspective of Exceptional Students | 3 |
| **Total Hours** | | | **58** |

# Program of Study for the Bachelor of Science Degree in Science Education Broad Based Emphasis

| Freshman Year | | | Fall | Spring |
|---|---|---|---|---|
| ASU | 1200 | Freshman Seminar & Service to Leadership | 3 | |
| HEDP | 1001 | Introduction to Wellness or PEDH | 1 | |
| HIST | 1002 | Intro. to the African Diaspora | 2 | |
| ENGL | 1101 | English Composition I | 3 | |
| ENGL | 1102 | English Composition II | 3 | |
| MATH | 1113 | Pre-Calculus | | 3 |
| BIOL | 2111K | Biology I | 4 | |
| BIOL | 2112K | Biology II | | 4 |
| CHEM | 1211K | General Chemistry I | 4 | |
| CHEM | 1212K | General Chemistry II | 4 | |
| EDUC | 2110 | Inves. Critical/Contemporary Issues in Edu. | | 3 |
| **Totals** | | | **16** | **18** |

| Sophomore Year | | | Fall | Spring |
|---|---|---|---|---|
| ENGL | 2111 | World Literature | 3 | |
| PEDH | 1002 | Fitness or other choice | 1 | |
| MATH | 1211 | Calculus I | 4 | |
| BIOL | 2311K | Botany I | 4 | |
| EDU | 2120 | Explore Socio. Culture Perspective on Divers. | 3 | |
| BIOL | 2211K | General Microbiology | 4 | |
| POLS | 1101 | U.S. and GA Government | 3 | |
| CHEM | 2301K | Organic Chemistry I | 4 | |
| CHEM | 2302K | Organic Chemistry II | 4 | |
| EDU | 2130 | Explore Teaching/Learning | 3 | |
| PEDH | choice | 100X Physical Education choices | 1 | |
| **Totals** | | | **16** | **18** |

| Junior Year | | | Fall | Spring |
|---|---|---|---|---|
| PHYS | 1111K | Introductory Physics I | 4 | |
| PHYS | 1112K | Introductory Physics II | 4 | |
| BIOL | 3501K | Principles of Genetics | 4 | |
| CHEM | 3250K | Biochemistry | 4 | |
| COMM | 1100 | Anal. Disc. Of Global Issues | 3 | |
| Sped | 3230 | Contemp Perspective of Except Students | 3 | |
| Area C | elective | Fine Arts/ Humanity elective | 3 | |
| PHYS | 3002 | Adv Earth/ Space Science | 4 | |
| Area E | elective | Social Science Elective | 3 | |
| **Total** | | | **18** | **14** |

| Summer Session | | | |
|---|---|---|---|
| SPED | 2330 | Exceptional Children | 3 |
| MATH | 2411 | Statistics | 3 |
| **Total** | | | **6** |

| Senior Year | | | Fall | Spring |
|---|---|---|---|---|
| Area E | | Social Science Elective | 3 | |
| EDUC | 4400 | Prep. for Teaching | 2 | |
| EDUC | 4441 | Teaching Reading | 3 | |
| HIST | 1111 | World History I (or other history elective) | 3 | |
| EDUC | 4405 | Methods of Teaching Science | 3 | |
| EDUC | 4412 | Student Teaching | 12 | |
| **Total** | | | **14** | **12** |

# Bachelor of Science Degree in Chemistry

| Courses | | Titles | Credit Hrs. |
|---|---|---|---|
| I. Required: 18 hours, lower division (1000-2000 Level) | | | |
| CHEM | 1211K | General Chemistry I | 4 |
| CHEM | 1212K | General Chemistry II | 4 |
| CHEM | 2301K | Organic Chemistry I | 4 |
| CHEM | 2302K | Organic Chemistry II | 4 |
| 2 credit hours course taken from Area D for science majors | | | 2 |
| **Total** | | | **18** |
| BIOL | 2111K | Biology I | 4 |
| MATH | 2212 | Calculus II | 4 |
| MATH | 2213 | Calculus III | 4 |
| CHEM | 2351K | Quantitative Analysis I | 4 |
| CHEM | 2352K | Quantitative Analysis II | 4 |
| CHEM | 3221K | Physical Chemistry I | 4 |
| CHEM | 3222K | Physical Chemistry II | 4 |
| CHEM | 3231 | Intermediate Inorganic Chemistry I | 3 |
| CHEM | 3250K | Biochemistry | 4 |
| CHEM | 4100K | Instrumental Analysis | 4 |
| CHEM | 4110 | Chemical Literature | 1 |
| CHEM | 4111 | Junior Seminar | 1 |
| CHEM | 4120 | Senior Research I | 1 |
| CHEM | 4130K | Senior Research II | 3 |
| PHYS | 2100 | Computer Applications | 3 |
| Electives (2000 level or higher including at least one 3 hr. class outside the department) | | | 12 |
| **Total** | | | **60** |

# Program of Study for the Bachelor of Science Degree in Chemistry

| **Freshman Year** | | | **Fall** | **Spring** |
|---|---|---|---|---|
| ASU | 1200 | Freshman Seminar & Service to Leadership | 3 | |
| ENGL | 1101 | English Composition I | 3 | |
| ENGL | 1102 | English Composition II | | 3 |
| MATH | 1113 | Pre-Calculus | 3 | |
| MATH | 1211 | Calculus I | | 4 |
| CHEM | 1211K | General Chemistry I | 4 | |
| CHEM | 1212 K | General Chemistry II | | 4 |
| PHYS | 2100 | Computer Applications | | 3 |
| CORE E | | Social Sciences | 3 | |
| HIST | 1002 | Intro. to African Diaspora | | 2 |
| **Totals** | | | **16** | **16** |

| **Sophomore Year** | | | **Fall** | **Spring** |
|---|---|---|---|---|
| ENGL | 2111 | World Literature I | | 3 |
| PEDH | 1001-1010 | | | 1 |
| PHYS | 2221K | Principles of Physics I | | 4 |
| CHEM | 2301K | Organic Chemistry I | 4 | |
| CHEM | 2302K | Organic Chemistry II | | 4 |
| CHEM | 2351K | Quantitative Analysis I | 4 | |
| CHEM | 2352K | Quantitative Analysis II | | 4 |
| MATH | 2212 | Calculus II | 4 | |
| Area C | | Humanities/Fine Arts | 3 | |
| HEDP | 1001 | Introduction to Wellness | 1 | |
| **Total** | | | **16** | **16** |

| Junior Year | | | Fall | Spring |
|---|---|---|---|---|
| CHEM | 3221K | Physical Chem. I | | 4 |
| CHEM | 4110 | Chemical Literature | 1 | |
| Core E | | Social Sciences | 3 | 3 |
| Core E | | Social Sciences or CHEM 2351K | | 3 |
| BIOL | 2111K | Biology I | | 4 |
| MATH | 2213 | Calculus III | 4 | |
| PHYS | 2222K | Principles of Physics II | 4 | |
| COMM | 1100 | Fundamentals of Public Speaking | 3 | |
| PEDH | 1001-1010 | | 1 | |
| CHEM | 4111 | Junior Seminar I | | 1 |
| **Total** | | | **16** | **15** |

| Senior Year | Fall | Spring | | |
|---|---|---|---|---|
| CHEM | 3222K | Physical Chemistry II | 4 | |
| CHEM | 3231 | Intermediate Inorganic I | | 3 |
| CHEM | 4100K | Instrumental Analysis | | 4 |
| CHEM | 4120 | Senior Research I | 1 | |
| CHEM | 4130K | Senior Research II | | 3 |
| CHEM | 3250K | Biochemistry | 4 | |
| Electives | Core F | | 6 | 6 |
| **Total** | | | **15** | **16** |
| **Total** | | | | **126 hrs** |

## Required Courses for a Minor in Chemistry

Minor in Chemistry acquired after completing 20 Semester hours. Students must complete courses with a grade of 'C' or better.

| Courses | | Titles | Credit Hrs. |
|---|---|---|---|
| CHEM | 1212K | General Chemistry II | 4 |
| CHEM | 2301K | Organic Chemistry I | 4 |
| CHEM | 2302K | Organic Chemistry II | 4 |
| CHEM | 3250K | Biochemistry | 4 |
| CHEM | 2351K | Quant. Analysis I or other 2000 level or higher chemistry course | 4 |
| **Total** | | | **20** |

## Required Courses for Pre-Engineering and Dual Degree Programs

The program is structured to transfer students specifically to Georgia Institute of Technology but may equally be useful to transfer to any other ABET accredited engineering program. The minimum course requirement imposed by Georgia Tech for both RETP and Dual Degree programs is dependent on the type of engineering major students choose. However, additional courses are required by Albany State University before granting recommendation for transfer which guarantees placement in the junior year at Georgia Tech. *The following course list is designed for RETP transfer. Dual Degree transfer students have to complete additional courses.* However, at any time, students can, ***on their own***, apply to Georgia Tech without completing the recommended courses and may get admitted.

**Engineering Majors in Georgia Institute of Technology:**
AE– Aerospace Engineering , BME– Biomedical Engineering, ChE – Chemical Engineering, CE – Civil Engineering' EnvE – Environmental Engineering, EE – Electrical Engineering, CmpE – Computer Engineering, ISyE – Industrial & Systems Engineering, MSE – Materials Science Engineering, ME – Mechanical Engineering, NRE – Nuclear and Radiological Engineering, PTFE – Polymer, Textile & Fiber Engineering

| Courses | Engineering Major |
|---|---|
| **GA TECH RETP Required Courses** | |
| Biology I (BIOL 1111K) | BME, ChE* |
| Calculus I (MATH 1211) | Required for all Engineering Majors |
| Calculus II (MATH 2212) | Required for all Engineering Majors |
| Calculus III (MATH 2213) | Required for all Engineering Majors |
| Differential Equations (MATH 3211) | AE, BME, ChE, CE, EnvE, EE, CmpE, MSE, ME, NRE, PTFE |
| Linear Algebra (MATH 2111) | Required for all Engineering Majors |
| Chemistry I (CHEM 1211K) | AE, BME, ChE, CE, EnvE, EE, CmpE, MSE, ME, NRE, PTFE |
| Chemistry II (CHEM 1212K) | ChE, EnvE, MSE, PTFE |
| Physics I (PHYS 2221K) | Required for all Engineering Majors |
| Physics II (PHYS 2222K) | Required for all Engineering Majors |
| Science Elective I | AE*, CE, EnvE, EE, CmpE, ISyE, ME, NRE, |
| Science Elective II | ISyE |
| Computer Science I (CS 1371) | Required for all Engineering Majors* |
| English Comp I (ENG 1101) | Required for all Engineering Majors |
| English Comp II (ENG 1102) | Required for all Engineering Majors |
| **ASU RETP Required Courses** | |
| US & GA Gov (POLS 1101) | Required for all Engineering Majors |
| Macro or Microeconomics (ECON 2105 or 2106) | Required for all Engineering Majors |
| Engineering Computing (ENGR 1200) | Required for all Engineering Majors* |
| Engineering Graphics (ENGR 1203) | AE, CE, ME |
| Principles of Engineering Analysis & Design (ENGR 1103) | Required for all Engineering Majors |
| Introduction to Engineering Materials (ENGR 2001) | Required for all Engineering Majors |
| Engineering Statics (ENGR 2201) | Required for all Engineering Majors |
| Introduction to Computer Engineering (CSCI 2030) | EE, CmpE |
| Discrete Mathematics (MATH 3112) | ISyE |
| Mathematical Statistics (MATH 3314) | AE, BME, CE, EE, CmpE, ME |
| General Psychology (PSYC 1101) | ISyE |
| Organic Chemistry I (CHEM 2301K) | BME, ChE |
| Organic Chemistry II (CHEM 2302K) | ChE |
| Physical Chemistry I (CHEM 3222K | ChE |
| Physical Chemistry II CHEM 3221K) | ChE |
| Biochemistry (CHEM 3250) | BME |
| | |

1) *Courses may be taken at Georgia Tech; however, it is recommended that they are completed prior to transferring to Tech for these majors if possible.
2) Science electives may be selected from Chemistry, Biology, Physics, Earth and Atmospheric Science, or other courses approved by the engineering school.
3) Students may need to take College Algebra (MATH 1111) & Pre-Calculus (MATH 1113) in order to take Calculus I (MATH 1211)
4) ***In order to guarantee transfer to Georgia Institute of Technology under Regents Engineering Transfer Program (RETP), a student must successfully finish the entire curriculum as described above and secure an overall GPA of at least 2.7 as well as Mathematics and Science GPA of at least 2.7.***
5) As Georgia Tech follows a no forgiveness policy, in calculating GPA, grades in all courses are counted including those taken at other institutions and those repeated here at Albany State University in order to improve the previous grade.

## Dual Degree Requirements

### Additional Courses Required for Dual Degree in Chemistry

| Required Chemistry Courses | | | Credits | Semester Offered |
|---|---|---|---|---|
| CHEM | 1211K | General Chemistry I | 4 | Fall and Spring |
| CHEM | 1212K | General Chemistry II | 4 | Fall, Spring, Summer |
| CHEM | 2301K | Organic Chemistry I | 4 | Fall and Spring |
| CHEM | 2302K | Organic Chemistry II | 4 | Fall and Spring |
| CHEM | 2351K | Quantitative Analysis I | 4 | Fall |
| CHEM | 2352K | Quantitative Analysis II | 4 | Spring |
| CHEM | 3221K | Physical Chemistry I | 4 | Spring |
| CHEM | 3222K | Physical Chemistry II | 4 | Fall |
| Chemistry Electives (2000 level or higher) | | | 5 | |
| **Total Chemistry Credit Hours Required to obtain Chemistry Degree from Albany State University** | | | **37** | |

### Additional Courses Required for Dual Degree in Computer Science for Computer Engineering Majors

| ALBANY STATE UNIVERSITY | HOURS | GEORGIA TECH SUBSTITUTIONS | HOURS |
|---|---|---|---|
| CSCI 1301 COMPUTER SCIENCE I | **4** | | |
| CSCI 1302 COMPUTER SCIENCE II | **4** | | |
| CSCI 3111 DISCRETE STRUCTURES | **3** | | |
| CSCI 3122 DATA STRUCTURES | **3** | | |
| CSCI 4113 OPERATING SYSTEMS &<br>CSCI 3212 COMPUTER ORG. & ARCHITECTURE II | **3**<br>**3** | ECE 3055 COMPUTER ARCHITECTURE AND OPERATING SYSTEMS | 4 |
| CSCI 4123 COMPUTER NETWORKS | **3** | ECE 3076 COMPUTER COMMUNICATIONS | 3 |
| CSCI 3211 COMPUTER ORG. & ARCHITECTURE I | **3** | ECE 2031 DIGITAL DESIGN LABORATORY | 3 |
| CSCI 4151 SYSTEMS SIMULATION | **3** | ISYE 3044 SIMULATION ANALYSIS AND DESIGN | 3 |
| CSCI 4311 COMPUTER GRAPHICS | **3** | | |
| CSCI 4221 SOFTWARE ENGINEERING | **3** | | |
| MATH 2212 CALCULUS II | **3** | | |
| MATH 2213 CALCULUS III | **3** | | |
| MATH 2111 LINEAR ALGEBRA | **3** | | |
| MATH 3423 INTRO TO OPERATIONS RESEARCH | **3** | | |
| **TOTAL CREDIT HOURS** | **47** | | |

| Additional Courses Required for Dual Degree in Mathematics | |
|---|---|
| Courses | Hours |
| Calculus I*, II, III | 12 |
| Basic Statistics | 3 |
| MATH 4211-Elements of Analysis I | 3 |
| MATH 4111-Modern Algebra I | 3 |
| MATH 3314-Statistical Methods | 3 |
| MATH 3211-Ordinary Differential Equations | 3 |
| MATH 3423-Introduction to Operations Research | 3 |
| MATH 3213-Modern Geometry | 3 |
| MATH 3411-Statistcial Methods | 3 |
| MATH 3101-Introduction to Number Theory | 3 |
| MATH 4215-Numericval Analysis | 3 |
| MATH 3112-Discrete Mathematics | 3 |
| MATH 2111-Linear Algebra* | 3 |
| Total | 48 |

# DEPARTMENT OF MATHEMATICS AND COMPUTER SCIENCE

The Department of Mathematics and Computer Science offers programs of study leading to the Bachelor of Arts degree in Mathematics, the Bachelor of Science degree in Computer Science with emphasis in mathematics, Bachelor of Science degree in Computer Science with emphasis in business and offers graduate courses to support the Master of Education degree with concentration in mathematics. The Department also provides courses in support of the curriculums of other departments at the University and minor programs in mathematics and computer science. The minor programs are designed for those students interested in pursuing graduate study or the wide variety of careers in the fields of mathematics and computer science. Students in computer science may choose to concentrate in business or mathematics. To be admitted to the department as a major, the student must have a cumulative grade point average of 2.25 or higher.

The major in mathematics provides course work that leads to the Bachelor of Arts degree in mathematics. In addition to the general institutional requirements, the major in mathematics is required to complete 60 semester hours in major courses which include six (6) hours of foreign language and 15 semester hours general electives.

The Bachelor of Science degree in computer science with mathematics emphasis is for those students who want to combine mathematics and computer science. In addition to the general institutional requirements, the major completes 60 semester hours in major courses which include 33 hours in computer science, 20 hours in mathematics courses, including Calculus II, and Calculus III, 6 semester hours in major electives and 1 hour in general electives.

The Bachelor of Science degree in computer science with business emphasis is for those students who want to combine computer science and business. In addition to the general institutional requirements, the major completes 60 semester hours in major courses, which include 39 hours in computer science and mathematics courses, 12 hours in business courses, 6 semester hours in major electives and 3 semester hours in general electives. The Bachelor of Science degree in computer science with business emphasis is a cooperative program between Albany State University and Albany Technical College that allows qualified students to earn 99 quarter hours at Albany Technical College and then transfer to Albany State University to complete the requirements for the Bachelor of Science degree with emphasis in business. Upon admission to Albany State University students may transfer up to 60 semester hours of credit to Albany State to satisfy Areas A, B, C, D, and E of the Core Curriculum.

All majors must complete a minimum of 126 semester hours. All majors and minors in the department must achieve a grade of "C" or better in all mathematics, science, and computer science and business courses. A cumulative grade point average of at least 2.25 is required for graduation.

# Bachelor of Science Degree In Computer Science (Mathematics Emphasis)

| Courses | | Titles | Credit Hrs. |
|---|---|---|---|
| CSCI | 2101 | Intro to Computer Science | 3 |
| CSCI | 1301 | Computer Science I | 4 |
| CSCI | 1302 | Computer Science II | 4 |
| MATH | 1211 | Calculus 1 | 4 |
| MATH | 2411 | Basic Statistics | 3 |
| **Subtotal** | | | **18** |

**Major Requirements**

| | | | |
|---|---|---|---|
| CSCI | 3111 | Discrete Structures | 3 |
| CSCI | 3122 | Data Structures | 3 |
| CSCI | 3211 | Computer Organization & Architecture I | 3 |
| CSCI | 3212 | Computer Organization& Architecture II | 3 |
| CSCI | 4113 | Operating Systems | 3 |
| CSCI | 4123 | Computer Networks | 3 |
| CSCI | 4151 | System Simulation | 3 |
| CSCI | 4221 | Software Engineering | 3 |
| CSCI | 4311 | Computer Graphics | 3 |
| CSCI | 4211 | Systems Analysis I | 3 |
| CSCI | 4921 | Senior Project I | 1 |
| CSCI | 4922 | Senior Project II | 2 |
| MATH | 2212 | Calculus II | 4 |
| MATH | 2213 | Calculus III | 4 |
| MATH | 2111 | Linear Algebra | 3 |
| MATH | 3211 | Ordinary Differential Equations | 3 |
| MATH | 3423 | Introductions to Operations Research | 3 |
| MATH | 4215 | Numerical Analysis | 3 |
| **Subtotal** | | | **53** |
| Major Electives | | | 6 |
| General Electives | | | 1 |
| Any courses in the college curriculum | | | |
| **Subtotal** | | | **70** |
| **Total Required For Graduation** | | | **126** |

# Program of Study for the Bachelor of Science Degree in Computer Science (Mathematics Emphasis)

Total number of hours= 126

**Freshman Year**

| **Fall** | | | | **Spring** | | | |
|---|---|---|---|---|---|---|---|
| ENGL | 1101 | English Comp. I | 3 | ENGL | 1102 | English Comp. 11 | 3 |
| CSCI | 1201 | Intro to Computer Science | 3 | | | | |
| ASU | 1200 | Service to Leadership | 3 | MATH | 1113 | Pre-Calculus | 3 |
| MATH | 1111 | College Algebra | 3 | MUSC | 1100 | Music | 3 |
| HIST | 1111 | History I | 3 | CSCI | 1301 | Computer Science I | 4 |
| | PEDH | | 1 | COMM | 1100 | Public Speaking | 3 |
| **Total** | | | **16** | | | | **16** |

**Sophomore Year**

| **Fall** | | | | **Spring** | | | |
|---|---|---|---|---|---|---|---|
| ENGL | 2111 | World Literature I | 3 | POLS 1101 | | US & Georgia Govt | 3 |
| CSCI | 1302 | Computer Science II | 4 | MATH 2411 | | Basis Statistics | 3 |
| MATH | 1211 | Calculus I | 4 | PHYS 2221 | | Principles of Physis I | 4 |
| HIST | 1002 | Intro to African Diaspora | 2 | CSCI 3122 | | Data Structurs | 3 |
| PEDH | | 1 | | MATH 2212 | | Calculus II | 4 |
| **Total** | | | **14** | | | | **17** |

**Junior Year**

| **Fall** | | | | **Spring** | | | |
|---|---|---|---|---|---|---|---|
| PHYS | 2222 | Principles of Physics | 4 | HIST | 1112 | World History II | 3 |
| CSCI | 3211 | Comp. Org. & Arch. 1 | 3 | CSCI | 4311 | Computer Graphics | 3 |
| CSCI | 3111 | Discrete Structures | 3 | CSCI | 4211 | System Analsis I | 3 |
| MATH | 3211 | Differential Equations | 3 | CSCI | 3212 | Comp. Org. & Arch 11 | 3 |
| MATH | 2213 | Calculus III | 4 | | | | |
| MATH | 2111 | Linear Algebra | 3 | | | | |
| PEDH | | | 1 | | | | |
| **Total** | | | **17** | | | | **16** |

**Senior Year**

| **Fall** | | | | **Spring** | | | |
|---|---|---|---|---|---|---|---|
| CSCI | 4113 | Operating Systems | 3 | CSCI | 4123 | Computer Networks | 3 |
| CSCI | 4921 | Senior Project I | 1 | MATH | 4215 | Numerical Analysis | 3 |
| CSCI | 4151 | Systems Simulation | 3 | | | AREA E Elective | 3 |
| CSCI | 4411 | Artificial Intelligence | 3 | CSCI | | Major Elective | 3 |
| CSCI | 4221 | Software Engineering | 3 | CSCI | 4922 | Senior Project II | 2 |
| MATH | 3423 | Intro. Operations Research | 3 | | | | |
| Major Electives | | | 3 | General Electives | | | |
| **Total** | | | **16** | | | | **14 5** |

# Bachelor of Science Degree in Computer Science (Business Emphasis)

| **Courses** | **Titles** | | **Credit Hrs.** |
|---|---|---|---|
| ACCT | 2101 | Accounting Principles I | 3 |
| CSCI | 1201 | Introductin to Computer Science | 3 |
| CSCI | 1301 | Computer Science I | 3 |
| CSCI | 1302 | Computer Science II | 3 |
| MATH | 1211 | Calculus I | 4 |
| **Subtotal** | | | **16** |
| **Major Requirements** | | | |
| Computer Science Courses | | | |
| CSCI | 2211 | Visual Basic Programming | 3 |
| CSCI | 3111 | Discrete Structures | 3 |
| CSCI | 3122 | Data Structures | 3 |
| CSCI | 3132 | Database Management | 3 |
| CSCI | 4211 | Systems Analysis I | 3 |
| CSCI | 4212 | Systems Analysis II | 3 |
| CSCI | 4113 | Operating Systems | 3 |
| CSCI | 4123 | Computer Networks | 3 |
| CSCI | 4311 | Computer Graphics | 3 |
| CSCI | 4921 | Senior Project I | 1 |
| CSCI | 4922 | Senior Project II | 2 |
| **Subtotal** | | | **30** |

**Mathematics Courses**

| | | | |
|---|---|---|---|
| MATH | 2111 | Linear Algebra | 3 |
| MATH | 2411 | Basic Statistics I | 3 |
| MATH | 3423 | Operations Research | 3 |
| **Subtotal** | | | **9** |

**Management/Economic Courses**

| | | | |
|---|---|---|---|
| ACCT | 2102 | Accounting Principles II | 3 |
| ECON | 2106 | Principles of Microeconomics | 3 |
| MGMT | 3105 | Legal Environment for Business | 3 |
| MKTG | 3120 | Principles of Marketing | 3 |
| **Subtotal** | | | **12** |

**Major Electives** **6**

Six hours from the following courses:
Computer Science Courses 2000 Level or higher
Management Courses 3000 Level or above
General Electives 3
Any courses in the college curriculum

**Subtotal** **60**
**Total Required For Graduation** **126**

# Program of Study for the Bachelor of Science Degree in Computer Science (Business Emphasis)

125 Semester Hours

**Freshman Year Fall Spring**

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| ENGL | 1101 | English Comp I | 3 | ENGL | 1102 | English Comp. II | 3 |
| MATH | 1111 | College Algebra | 3 | MATH | 1113 | Precalculus | 3 |
| ASU | 1200 | Services to Leadership | 3 | COM | 1100 | Public Speaking | 3 |
| CSCI | 1201 | Intr to Comp Science | 3 | CSCI | 1301 | Computer Science I | 4 |
| HIST | 1111 | History I | 3 | MUSC | 1100 | Music | 3 |
| | | PEDH | 1 | | | | |
| **Total** | | | **16** | | | | **16** |

**Sophomore Year**

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| MMATH | 1211 | Calculus I | 4 | MATH | 2411 | Basic Statistics | 3 |
| ENGL | 2111 | World Literature I | 3 | | | | |
| CSCI | 1302 | Computer Science II | 4 | | | | |
| HIST | 1002 | Intro. to African Diaspora | 2 | CSCI | 3122 | Data Structures | 3 |
| ACCT | 2101 | Accounting I | 3 | BIOL | 1111 | Intro to Biological Science | |
| ACCT | | | | | 2102 | Accounting Principles II | 3 |
| | | | | POLS | 1101 | U.S. & Georgia Govt | 3 |
| **Total** | | | **16** | | | | **16** |

**Junior Year**

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| CSCI | 3111 | Discrete Structures | 3 | | | | |
| MATH | 2111 | Linear Algebra | 3 | | | | |
| | | | | CSCI | 4211 | System Analysis I | 3 |
| CSCI | 3132 | Database Management | 3 | ECON | 2106 | Principles of Microeconomics | 3 |
| | | | | CSCI | 4311 | Computer Graphics | 3 |
| ECON | 2105 | Macroeconomics | 3 | HIST | 1112 | Survey of World History II | 3 |
| BIOL | 1112 | Intro to Biological Science | 4 | CSCI | 2211 | Visual Basic Programming | 3 |
| | | | | | | PEDH | 1 |
| **Total** | | | **16** | | | | **16** |

**Senior Year**

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| CSCI | 4113 | Operating Systems | 3 | CSCI | 4123 | Computer Networks | 3 |
| CSCI | 4212 | System Analyis II | 3 | MGM | 3120 | Principle of Marketing | 3 |
| MATH | 3423 | Intro. to Operations Research | 3 | | | | |
| MGMT | 3105 | Legal Environment of Business | 3 | | | General Electives | 3 |
| CSCI | 4921 | Senior Project I | 1 | CSCI | 4922 | Senior Project II | 2 |

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| | | Major Electives | 3 | | | | |
| Major Electives | | | 3 | PEDH | | | 1 |
| **Total** | | | **16** | | | | **15** |

# Bachelor of Arts Degree in Mathematics

| **Courses** | **Titles** | **Credit Hrs.** | |
|---|---|---|---|
| MATH | 1211 | Calculus I | 4 |
| MATH | 2212 | Calculus II | 4 |
| MATH | 2213 | Calculus III | 4 |
| MATH | 2411 | Basic Statistics | 3 |
| FREN | 1101 | Elem. French or GRMN 1121 Elem German | 3 |
| **Subtotal** | | | **17** |

**Major Requirements**

| | | | |
|---|---|---|---|
| MATH | 2111 | Linear Algebra | 3 |
| MATH | 3101 | Introduction to Number Theory | 3 |
| MATH | 3211 | Ordinary Differential Equations | 3 |
| MATH | 3213 | Modern Geometry | 3 |
| MATH | 3314 | Math Statistics | 3 |
| MATH | 3411 | Statistical Methods | 3 |
| MATH | 4111 | Modern Algebra I | 3 |
| MATH | 4112 | Modern Algebra II | 3 |
| MATH | 4211 | Elem. of Analysis I | 3 |
| MATH | 4212 | Elem. of Analysis II | 3 |
| MATH | 4215 | Numerical Analysis | 3 |
| MATH | 4921 | Senior Project i | 1 |
| MATH | 4922 | Senior Project II | 2 |
| FREN | 1102, | Fren or GRMN 1121, Elem. German | 3 |
| **Subtotal** | | | **39** |

**Major Electives**

| | |
|---|---|
| Six hours from the Mathematics Courses 3000 or above | 6 |
| General Electives | |
| Any course from the college curriculum. | 15 |
| **Subtotal** | **60** |
| **Total Required for Graduation** | **126** |

# Program of Study for the Bachelor of Arts Degree in Mathematics

125 Semester Hours

| **Freshman Year Fall Spring** | | | | | | | |
|---|---|---|---|---|---|---|---|
| ENGL | 1101 | English Comp. I | 3 | ENGL | 1102 | English Comp. II | 3 |
| MATH | 1113 | Precalculus | 3 | MATH | 1211 | Calculus 1 | 4 |
| COMM | 1100 | Analytic Discussion | 3 | PEDH | Elective | | 1 |
| CHEM | 1211K | General Chemistry I or | 4 | CHEM | 1212K | General Chemistry II | 4 |
| ASU | 1200 | Fresh. Sem. & Serv. to Lead. | 3 | POLS | 1101 | U.S. & GA Government | 3 |
| **Total Hours** | | | **16** | | | | **15** |

**Sophomore Year**

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| ENGL | 2111 | World Lit. I | 3 | MATH | 2213 | Calculus III | 4 |
| MATH | 2212 | Calculus II | 4 | Hum./Fine Arts Elective | | | 3 |
| Social Science Elective | | | 3 | MATH | 2111 | Linear Algebra | 3 |
| | | | | Social Science Elective | | | 3 |
| MATH | 2411 | Basic Statistics | 3 | PEDH | | Elective | 1 |
| General Elective | | | 3 | HIST | 1002 | Intro. to African Diaspora | 2 |
| **Total Hours** | | | **16** | | | | **16** |

**Junior Year**

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| MATH | 3213 | Modern Geometry | 3 | MATH | 4112 | Modern Algebra II | 3 |
| MATH | 3211 | Ordinary Diff. Equa. | 3 | MATH | 3101 | Intro to Number Theory | 3 |
| MATH | 4111 | Modern Algebra I | 3 | FREN or GRMN II | | | 3 |
| | | | | MATH 3314 | | Math Statistics | 3 |
| FREN | 1101 OR GRMN 1121 | | 3 | Social Science Elective | | | 3 |
| General Elective | | 3 | | | | | |
| PEDH | | Activity 1 | | | | | |
| **Total Hours** | | | **16** | | | | **15** |

**Senior Year**

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| MATH | 4211 | Elements of Analysis I | 3 | MATH | 4212 | Elements | |
| Analysis II 3 | | | | | | | |
| MATH | | Elective | 3 | MATH | 4215 | Numeric Analysis | 3 |
| MATH | | Elective | 3 | | | | |
| General Electives | | | 6 | | | | |
| MATH | | 4921Senior Proiect | 1 | MATH | 4922 | Senior Project II | 2 |
| | | | | Math | 3411 | Statistical Methods | 3 |
| | | | | | | General Electives | 3 |
| | | | | | Social | Science Electives | 3 |
| **Total Hours** | | | **16** | | | | **17** |