

DEPARTMENT OF SCIENCE AND MATH

Dr. Kevin L. Evans, Department Chair

Professors: K. Evans, G. Morris, D. O'Dell, S. Sawyer

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The Department of Science and Mathematics houses a wide variety of programs. In addition to the Teacher Education programs many students choose to follow a pre-professional track. They major in biology or chemistry (or both) while preparing for professional schools. Pre-professional training is available in the following areas:

Medicine	Pharmacy	Dentistry
Veterinary Medicine	Physician's Assistant	Optometry
Physical Therapy	Psychiatry	Medical Technology
Radiology		

After graduation, a wide variety of employment opportunities exists. In addition to teaching, graduates are employed as nurses, pharmacists, or lab technicians. They are employed at such places as the Division of Natural Resources, the Department of Environmental Protection, and the State Police Forensics lab. Other students have gone on to graduate school to pursue advanced degrees in biology, chemistry, and wildlife biology.

Science and Math students can participate in an array of student clubs and organizations, including Chi Beta Phi, the Science and Math Honorary Society, the Student Affiliates of the American Chemical Society, and the Biochemistry club. Students have worked on community service events, helped host national meetings of Chi Beta Phi, and made presentations at the national meetings of the American Chemical Society. A wide variety of extra-curricular activities also are available for student participation.

For additional information about the Department of Science and Mathematics, its programs, faculty, and organizations call (304) 462-6310.

Degree Program

Bachelor of Arts

Chemistry

Bachelor of Science

Biology

Bachelor of Science in Health and Human Performance

Athletic Conditioning and Coaching

Exercise Science

Health Promotions

Bachelor of Arts in Education:

Biology (9-Adult)

General Science (5-Adult) or General Science (5-9)

Chemistry (9-Adult)

Mathematics (5-Adult) or Mathematics (5-9)

Glenville State University has partnered with Marshall University Graduate Schools for the Professional Master of Science in Athletic Training (PMSAT) and Doctoral Degree in Pharmacology (PharmD). Information regarding these are listed in the Graduate Program Partnership section of the catalog.

PRE-PROFESSIONAL PROGRAMS AND HEALTH-RELATED PROFESSIONS

Many health-related professions require degrees from professional schools after completing an undergraduate degree. These professional schools have specific admission requirements and students interested in obtaining one of these degrees should begin planning their undergraduate curriculum as early as possible. Any student interested in pursuing a career in one of these areas should contact the health-professions advisor.

I. Curriculum for Medical, Dental, and Veterinary Professions

A Bachelor of Science degree is recommended for students planning careers in medicine, dentistry, or veterinary medicine. It is possible to gain admittance into any of these programs with a non-science major, but it is usually more difficult as a student will be taking the science requirements necessary for admittance into these programs in addition to other requirements for the major. The basic science requirements for admission into medical, dental, or veterinary medical programs are similar. In addition to coursework, most programs require experience in the profession. Some programs have a specific number of hours and types of experience that an applicant must have, thus early planning is critical.

All programs require the applicant take an entrance examination that will test the applicants knowledge of various fields of science. The minimum entrance requirements for the programs should be completed before taking these exams. Students applying to medical school must take the Medical University Admission Test (MCAT), which is given January-September. The Dental Admission Test (DAT) is required for students applying to dental school; this exam is given year round. Students applying to veterinary school must take either the General Record Examination (GRE) or the MCAT, depending on the requirement of the school; the GRE is offered year round.

Basic Requirements for Medical School

BIOL 120, 121 Principles of Biology I and II.....	8 hours
CHEM 101, 102 General Chemistry I and II	8 hours
CHEM 301, 302 Organic Chemistry I and II	8 hours
CHEM 380 Biochemistry I.....	4 hours
ENGL 101, 102 Critical Reading and Writing I and II	6 hours
MATH 115 College Algebra.....	3 hours
PHYS 201, 202 General Physics I and II	8 hours
SOCIAL SCIENCE/BEHAVIOR	9 hours
TOTAL.....	54 hours

Some schools may require additional courses in English and Mathematics.

Department of Science and Math 229

Basic Requirements for Dental and Veterinary School

BIOL 120, 121 Principles of Biology I and II	8 hours
CHEM 101, 102 General Chemistry I and II	8 hours
CHEM 301, 302 Organic Chemistry I and II	8 hours
ENGL 101, 102 Critical Reading and Writing I and II	6 hours
MATH 115 College Algebra	3 hours
PHYS 201, 201 General Physics I and II	8 hours
SOCIOLOGY, HISTORY	3-6 hours
TOTAL	44-47 hours

Some schools may require additional courses in English and Mathematics.

Recommended courses for Medical, Dental, and Veterinary School

BIOL 309 and BIOL 310 Human Anatomy and Physiology I and II	8 hours
BIOL 335 Cell Physiology	4 hours
BIOL 361 Microbiology	4 hours
BIOL 420 Neurobiology	3 hours
BIOL 456 Genetics	4 hours
CHEM 380 and CHEM 381 Biochemistry I and II	8 hours
MATH 256 Probability and Statistics	3 hours

A student should plan on taking as many of the recommended courses as feasible; it is not necessary to take all of them.

II. Curriculum for Pharmacy

Preparation for a career in pharmacy requires completion of 67-75 credit hours (depending on the program) and an undergraduate degree is not required. The Pharmacy College Admission test (PCAT) is required of all applicants and can be taken in July, September and January.

General Course Requirements

BIOL 120, 121 Principles of Biology I and II	8 hours
BIOL 309, 310 Human Anatomy and Physiology I and II *	8 hours
BIOL 361 Microbiology	4 hours
CART 101 Introduction to Public Speaking	3 hours
CHEM 101, 102 General Chemistry I and II	8 hours
CHEM 301, 302 Organic Chemistry I and II	8 hours
ECON 201 Principles of Microeconomics	3 hours
ENGL 101, 102 Critical Reading and Writing I and II	6 hours
HISTORY	3 hours
MATH 115 College Algebra	3 hours
MATH 120 Precalculus	4 hours
MATH 201 Calculus I	4 hours
MATH 256 Probability and Statistics I	3 hours
PHYS 201, 202 General Physics I and II	8 hours
PSYCHOLOGY, SOCIOLOGY	3 hours
TOTAL	67-75 hours

** These courses are required by some, but not all programs.*

III. Curriculum for Physical Therapy

The curriculum for admission into physical therapy programs varies between schools. The courses listed below fulfill the requirements of many programs, but not all. Most schools require that applicants have a four-year degree. In addition to coursework, most physical therapy programs require that an applicant has observed a physical therapy practice and some programs require a certain number of hours and observation of more than one practice. A student interested in a career in physical therapy must begin planning early to meet the admission requirements. Physical therapy programs require that applicants take the GRE.

General Course Requirements

BIOL 120, 121 Principles of Biology I and II	8 hours
BIOL 309, 310 Human Anatomy and Physiology I and II.....	8 hours
CHEM 101, 102 General Chemistry I and II	8 hours
ENGL 101, 102 Critical Reading and Writing I and II	6 hours
HLTH 107 Introduction to Medical Terminology *.....	1 hour
MATH 115 College Algebra.....	3 hours
MATH 256 Probability and Statistics I.....	3 hours
PHYS 201, 202 General Physics I and II	8 hours
PSYC 201 General Psychology.....	3 hours
PSYC 250 Lifespan Development #.....	3 hours
TOTAL.....	31 hours

* Some programs require 3 hours of medical terminology

Some programs require a different upper-level psychology course

IV. Occupational Therapy

General course requirements in many physical therapy programs:

BIOL 120, 121 Principles of Biology I and II.....	8 hours
BIOL 309, 310 Human Anatomy and Physiology I and II.....	8 hours
CHEM 101, 102 General Chemistry I and II	8 hours
HLTH 107 Introduction to Medical Terminology.....	1-3 hours
MATH 256 Probability and Statistics I.....	3 hours
PHYS 201 General Physics I.....	4 hours
PSYC 201 General Psychology.....	3 hours
PSYC 250 Lifespan Development.....	3 hours
PSYC 310 Abnormal Psychology	3 hours
PSYC 420 Theories of Personality.....	3 hours
SOCIOLOGY	3-6 hours
PHILOSOPHY (some programs require a course in Philosophy or Ethics)	3 hours
TOTAL.....	46-51 hours

Most PT programs require observation hours at one, and often two, PT practices. Glenville State University's Practicum course, EXSC/HLTH 493, provides the student with 6 credit hours of observation.

V. Curriculum for Physician Assistant

Students interested in becoming a Physician Assistant (PA) must complete a Bachelor's Degree. The course requirements for admission into a PA program vary by school, but have some overlap. Physician Assistant programs require that applicants take the GRE.

General Course Requirements

BIOL 120, 121 Principles of Biology I and II	8 hours
BIOL 309, 310 Human Anatomy and Physiology I and II.....	8 hours
BIOL 361 Microbiology.....	4 hours
BIOLOGY (UPPER LEVEL)	4-8 hours
CHEM 101, 102 General Chemistry I and II	8 hours
CHEM 301 Organic Chemistry I.....	4 hours
CHEM 380 Biochemistry I.....	4 hours
MATH 256 Probability and Statistics I.....	3 hours
PHYS 201, 202 General Physics I and II	8 hours
PSYCHOLOGY	3-6 hours
TOTAL.....	54-61 hours

VI. Curriculum for Wildlife Biology

Students interested in a career in wildlife biology will be well-prepared by majoring in biology. Depending on career aspirations in wildlife biology, courses from the Wildlife Management major offered by the Department of Land Resources at the university may also be possible. Students interested in wildlife biology will work with their advisor to create the best plan of study for their career aspirations.

Department of Science and Math 232

BACHELOR OF SCIENCE BIOLOGY

GSU 100 The First Year Experience 0 hour

All degree seeking students are required to take GSU 100 during their first semester.

General Education Requirements 39 hours

Students must complete BIOL 120, BIOL 121 and MATH 115 as part of the General Education requirements.

Biology Major 66-67 hours

BIOL 120	Principles of Biology I	
BIOL 121	Principles of Biology II	
BIOL 193	Scientific Writing	1
BIOL 293	Experimental Design	1
BIOL 456	Genetics	4
BIOL 493	Senior Seminar	1
BIOL 497	Internship II (OR)	
BIOL 499	Individual Research Problems	3
CHEM 101	General Chemistry I	4
CHEM 102	General Chemistry II	4
CHEM 301	Organic Chemistry I	4
MATH 115	College Algebra	
MATH 120	Precalculus (OR)	
MATH 125	College Trigonometry	3-4
MATH 256	Probability and Statistics I	3
PHYS 201	General Physics I	4
PHYS 202	General Physics II	4

Biology Electives 15-16 hours

One course from each of the following categories.

Organismal Biology (select at least one)

BIOL 210	Zoology	4
BIOL 305	General Botany	4
BIOL 351	Flora of West Virginia	3
BIOL 361	Microbiology	4

Ecology/Evolution (select at least one) 4

BIOL 371	Evolution	
BIOL 400	Ecology and Field Biology	

Cellular/Physiology (select at least one) 4

BIOL 335	Cell Physiology	
BIOL 420	Neurobiology	
BIOL 435	Developmental Biology	
BIOL 460	Physiological Ecology	
CHEM 380	Biochemistry I	

Department of Science and Math 233

Applied Biology (select at least one)

BIOL 309	Human Anatomy and Physiology I
BIOL 425	Bioethics
BIOL 470	Conservation Biology
NRMT 201	Forest Ecology

In addition to the courses in the four categories, these courses are approved as biology electives:

BIOL 310	Human Anatomy and Physiology II
CHEM 381	Biochemistry II
WLMT 404	Mammalogy

General Electives

15 hours

General electives should be selected with consultation with your advisor to determine the best electives to help you toward a career and/or professional goal.

Total minimum hours required for degree

120 hours

Gateway Assessment - BIOL 293 - Capstone Assessment - BIOL 493

Suggested for a Career in:

Ecology and Conservation

BIOL 210	Zoology
BIOL 305	Botany
BIOL 351	Flora of West Virginia
BIOL 371	Evolution
BIOL 400	Ecology and Field Biology
BIOL 460	Physiological Ecology
BIOL 470	Conservation Biology
NRMT 201	Forest Ecology

Pre-Professional (Pre-Med, Pre-Dental, Pre-Physician Assistant, Pre-Veterinarian)

BIOL 210	Zoology
BIOL 309	Anatomy and Physiology I
BIOL 335	Cell Physiology
BIOL 361	Microbiology
BIOL 371	Evolution
BIOL 420	Neurobiology
BIOL 425	Bioethics
BIOL 435	Developmental Biology
CHEM 302	Organic Chemistry II
CHEM 380	Biochemistry I
CHEM 381	Biochemistry II

Wildlife Biology

Required courses: Completion of these courses will allow eligibility to apply for an Associate Certificate in Wildlife Biology from the Wildlife Society.

BIOL	210	Zoology
BIOL	305	Botany
BIOL	351	Flora of West Virginia
BIOL	371	Evolution
BIOL	400	Ecology and Field Biology
BIOL	460	Physiological Ecology
BIOL	470	Conservation Biology
ENVR	393	Environmental Compliance
JOUR	415	Literary Non-Fiction and Features
PSYC	201	General Psychology or
SOCL	205	Principles of Sociology
WLMT	301	Wildlife Law and Policy
WLMT	302	Wildlife Habitat Management
WLMT	404	Mammalogy
WLMT	493	Wildlife Techniques

Other Biology Careers – talk to your advisor about the best courses for you.

**BS - BIOLOGY
SUGGESTED PLAN OF STUDY**

FIRST YEAR

BIOL 120 (OR) BIOL 121	4	BIOL 121 (OR) BIOL 120	4
BIOL 193.....	1	CART 101 (or other Gen Ed)	3
CHEM 101	4	CHEM 102.....	4
ENGL 101	3	ENGL 102.....	3
GSU 100.....	0	PED 201 (OR) 301	1
MATH 115	3	Total Hours - Spring Semester	15
Total Hours - Fall Semester	15		

SECOND YEAR

BIOL 293.....	1	ART 200, CART 200, FNAR 100 (OR) MUSC 200	3
CHEM 301	4	BIOLOGY ELECTIVE	7
HIST 201, 202, 207, 208 (OR) POSC 203	3	ECON 201, 202, GEOG 203, PSYC 201, SOCL 205 (OR) SOCS 225	3
MATH 120 (OR) 125	3-4	MATH 256	3
BIOLOGY ELECTIVE.....	4	Total Hours - Spring Semester	16
Total Hours - Fall Semester	15-16		

THIRD YEAR

HIST 201, 202, 207, 208 (OR) POSC 203	3	BIOL 456 (OR) BIOLOGY ELECTIVE.....	4
PHYS 201.....	4	BIOL 497 (OR) 499.....	1
GENERAL ELECTIVE	4	CSCI 101	3
BIOLOGY ELECTIVE.....	4	PHYS 202.....	4
Total Hours - Fall Semester	15	BIOLOGY ELECTIVE	4
		Total Hours - Spring Semester	16

FOURTH YEAR

BIOLOGY ELECTIVES.....	8	BIOL 456 (OR) BIOLOGY ELECTIVE.....	4
BIOL 497 (OR) 499	1	BIOL 493.....	1
ENGL 203, 204, 205, (OR) 206	3	BIOL 497 (OR) 499.....	1
GENERAL ELECTIVE	3-4	GENERAL ELECTIVE	6
Total Hours - Fall Semester	15-16	Total Hours - Spring Semester	12

**BACHELOR OF ARTS
CHEMISTRY**

GSU 100 The First Year Experience 0 hour

All degree seeking students are required to take GSU 100 during their first semester.

General Education Requirements 39 hours

Students must complete CHEM 101, CHEM 102, and MATH 115 as part of the General Education requirements.

Chemistry Major Requirement 45 hours

BIOL	120	Principles of Biology I	4
CHEM	101	General Chemistry I	
CHEM	102	General Chemistry II	
CHEM	293	Techniques of Chemistry	1
CHEM	301	Organic Chemistry I	4
CHEM	302	Organic Chemistry II	4
CHEM	307	Inorganic Chemistry (OR)	
CHEM	380	Biochemistry I	4
CHEM	321	Analytical Chemistry I	4
CHEM	493	Senior Research Seminar	2
MATH	120	Precalculus	4
MATH	256	Probability and Statistics I	3
PHYS	201	General Physics I	4
PHYS	202	General Physics II	4

Restricted Electives (select from the following)* 7

CHEM	307	Inorganic Chemistry	4
CHEM	322	Analytical Chemistry II	4
CHEM	341	Nuclear Chemistry	3
CHEM	345	Introductory Physical Chemistry	3
CHEM	380	Biochemistry I*	4
CHEM	381	Biochemistry II	4

Minor 18 hours

General Electives* 18 hours

Recommended courses for graduate school in chemistry:

CHEM	322	Analytical Chemistry II	4
CHEM	345	Introductory Physical Chemistry*	3
MATH	202	Calculus I	4
MATH	207	Calculus II	4
PHYS	350	Modern Physics	3

Total minimum hours required for degree 120 hours

GATEWAY ASSESSMENT - CHEM 293 - CAPSTONE ASSESSMENT - CHEM 493

Department of Science and Math 237

**If introductory physical chemistry is taken as one of the chemistry electives then additional hours in math courses are required as prerequisites. Introductory physical chemistry (CHEM 345) requires 4 additional hours of math (MATH 202).*

Students enrolled in chemistry courses are responsible for all lost or broken glassware and equipment. At the beginning of the semester, the student will verify that all laboratory items assigned to him/her are present and in good condition. At the end of the semester, the student must return all items in the same condition. If any items were lost or broken throughout the semester, the student will receive a financial statement either during the last week of classes or during the final examination period. This financial obligation must be paid to the Cashier's Office before the student can graduate. Students who fail to check out of the laboratory will be charged an additional fee.

**BA - CHEMISTRY
SUGGESTED PLAN OF STUDY**

FIRST YEAR

CHEM 101	4	ART 200, CART 200, FNAR 100	
ENGL 101	3	(OR) MUSC 200	3
GSU 100	0	CART 101	3
HIST 201, 202, 207, 208 (OR)		CHEM 102	4
POSC 203	3	CSCI 101	3
MATH 115	3	MATH 256	3
PED 201 (OR) 301	1	Total Hours - Spring Semester	16
Total Hours - Fall Semester	14		

SECOND YEAR

BIOL 120	4	CHEM 302	4
CHEM 293	1	ECON 201, 202, GEOG 203, PSYC 201,	
CHEM 301	4	SOCL 205 (OR) SOCS 225	3
MATH 120	4	ENGL 102	3
PHYS 201	4	PHYS 202	4
Total Hours - Fall Semester	17	Total Hours - Spring Semester	14

THIRD YEAR

CHEM 307 (OR) CHEM 380 (OR)		CHEMISTRY ELECTIVES	4
CHEM 321	4	ECON 201, 202, GEOG 203, PSYC 201,	
HIST 201, 202, 207, 208 (OR)		SOCL 205 (OR) SOCS 225	3
POSC 203	3	MINOR/GENERAL ELECTIVES	7
MINOR/GENERAL ELECTIVES	8	Total Hours - Spring Semester	14
Total Hours - Fall Semester	15		

FOURTH YEAR

CHEM 321 (OR) CHEM 307 (OR)		CHEMISTRY ELECTIVE	3
CHEM 380	4	MINOR/ELECTIVES	13
CHEM 493	2	Total Hours - Spring Semester	16
MINOR/GENERAL ELECTIVES	8		
Total Hours - Fall Semester	14		

**BACHELOR OF SCIENCE DEGREE HEALTH AND HUMAN PERFORMANCE
ATHLETIC CONDITIONING AND COACHING**

GSU 100 The First Year Experience 0 hour

All degree seeking students are required to take GSU 100 during their first semester.

General Education Requirements 39 hours

Students must complete BIOL 120, MATH 115, and PSYC 201 as part of the General Education requirements.

Health and Human Performance Core 31 hours

BIOL 120	Principles of Biology I	
EXSC 455	Psychology of Exercise	3
EXSC 493	Practicum	6
HLTH 102	Introduction to Health Promotion	3
HLTH 105	Human Nutrition	3
HLTH 232	Foundations of Health	2
HLTH 293	Lifetime Fitness and Wellness (Gateway Course)	3
MATH 115	College Algebra	
MATH 256	Probability and Statistics I	3
PED 333	Motor Learning and Development	2
PSYC 201	General Psychology	
PSYC 250	Lifespan Development	3
PSYC 380	Drugs and Human Behavior	3

Athletic Conditioning and Coaching Major 40 hours

EXSC 375	Strength and Conditioning Leadership	3
HLTH 130	Anatomy & Physiology I for Allied Health	4
HLTH 131	Anatomy & Physiology II for Allied Health	4
MRKT 201	Principles of Marketing	3
PED 131	Introduction to Athletic Training	3
PED 224	Assisting in Sports/Camps/Intramurals/Coaching	2
PED 232	Philosophy and Techniques in Sport Coaching	2
PED 265	Diversity and Ethics in Sport	3
PED 325	Athletic Coaching and Administration	3
PED 327	Adapted Physical Education	2
PED 450	Career Planning in Sports	3
SMGT 130	Introduction to Sport Management	3
SMGT 330	Event and Sport Facilities Management	3
SMGT 335	Sport Marketing	3
SMGT 430	Legal Aspects of Sport	3

Restricted Electives 5 hours

HLTH 341	Community and Environmental Health	2
HLTH 342	Health Disparities in Vulnerable Populations	3
HLTH 435	Research Methods in Health and Human Performance	3
PSYC 310	Abnormal Psychology	3

General Electives 1 hour

Department of Science and Math 240

Total minimum hours required for degree

120 hours

GATEWAY ASSESSMENT – HLTH 293 - CAPSTONE ASSESSMENT EXSC 493

Department of Science and Math 241

**BS: HEALTH AND HUMAN PERFORMANCE
ATHLETIC CONDITIONING AND COACHING
SUGGESTED PLAN OF STUDY**

FIRST YEAR

ART 200, CART 200, FNAR 100 (OR)	
MUSC 200.....	3
ENGL 101	3
GSU 100.....	0
HLTH 102	3
HLTH 105	3
MATH 115	3
Total Hours - Fall Semester.....	15
BIOL 120.....	4
CART 101	3
ENGL 102	3
HLTH 232	2
PSYC 201	3
Total Hours - Spring Semester.....	15

SECOND YEAR

ENGL 203, 204, 205 (OR) 206	3
HLTH 130	4
MATH 256	3
PED 201	1
SMGT 130.....	3
Total Hours - Fall Semester.....	14
CSCI 101	3
HLTH 131	4
HLTH 293	3
PED 131	3
PSYC 250.....	3
Total Hours - Spring Semester.....	16

THIRD YEAR

ENVR 101, SCNC 101, 102, (OR) 103.....	4
MRKT 201	3
PED 265	3
PSYC 380.....	3
SMGT 330.....	3
Total Hours - Fall Semester.....	16
EXSC 375.....	3
HIST 201, 202, 207, 208 (OR)	
POSC 203.....	3
PED 232	2
PED 325	3
SMGT 335.....	3
Total Hours - Spring Semester.....	14

FOURTH YEAR

EXSC 455.....	3
HIST 201, 202, 207, 208 (OR)	
POSC 203	3
PED 224	2
PED 333	2
PED 327	3
RESTRICTED ELECTIVES.....	2
GENERAL ELECTIVES	1
Total Hours - Fall Semester.....	15
EXSC 493.....	6
PED 450	3
SMGT 430.....	3
RESTRICTED ELECTIVE.....	3
Total Hours - Spring Semester.....	15

**BACHELOR OF SCIENCE DEGREE HEALTH AND HUMAN PERFORMANCE
EXERCISE SCIENCE**

GSU 100 The First Year Experience 0 hour

All degree seeking students are required to take GSU 100 during their first semester.

General Education Requirements 39 hours

Students must complete BIOL 120, MATH 115, and PSYC 201 as part of the General Education requirements.

Health and Human Performance Core 31 hours

BIOL 120	Principles of Biology I	
EXSC 455	Psychology of Exercise	3
EXSC 493	Practicum	6
HLTH 102	Introduction to Health Promotion	3
HLTH 105	Human Nutrition	3
HLTH 232	Foundations of Health	2
HLTH 293	Lifetime Fitness and Wellness (Gateway Course)	3
MATH 115	College Algebra	
MATH 256	Probability and Statistics I	3
PED 333	Motor Learning and Development	2
PSYC 201	General Psychology	
PSYC 250	Lifespan Development	3
PSYC 380	Drugs and Human Behavior	3

Exercise Science Major 41 hours

BIOL 309	Anatomy and Physiology I	4
BIOL 310	Anatomy and Physiology II	4
EXSC 375	Strength and Conditioning Leadership	3
EXSC 465	Human Performance Testing	4
HLTH 107	Introduction to Medical Terminology	3
HLTH 342	Health Disparities in Vulnerable Populations	3
HLTH 425	Wellness Programming and Administration	3
HLTH 435	Research Methods in Health and Human Performance	3
PED 131	Introduction to Athletic Training	3
PED 327	Adapted Physical Education	2
PED 332	Kinesiology	3
PED 421	Exercise Physiology	3
SOCL 105	Interviewing and Counseling	3

Restricted Electives 9 hours

BIOL 121	Principles of Biology II	4
CHEM 101	General Chemistry I	4
CHEM 102	General Chemistry II	4
PHYS 201	General Physics I	4
PHYS 202	General Physics II	4
PSYC 310	Abnormal Psychology	3
PSYC 330	Social Psychology	3
PSYC 420	Theories of Personality	3
SOCL 205	Principles of Sociology	3

Department of Science and Math 243

Total minimum hours required for degree

120 hours

GATEWAY ASSESSMENT – HLTH 293 - CAPSTONE ASSESSMENT EXSC 493

Department of Science and Math 244

**BS: HEALTH AND HUMAN PERFORMANCE
EXERCISE SCIENCE
SUGGESTED PLAN OF STUDY**

FIRST YEAR

CART 101	3	BIOL 120.....	4
ENGL 101	3	CSCI 101	3
GSU 100	0	HIST 201, 202, 207, 208 (OR)	
HLTH 102	3	POSC 203	3
HLTH 105	3	HLTH 107	3
MATH 115	3	PSYC 201	3
Total Hours - Fall Semester	15	Total Hours - Spring Semester	16

SECOND YEAR

ART 200, CART 200, FNAR 100 (OR) MUSC 200	3	BIOL 310.....	4
BIOL 309.....	4	ENGL 203, 204, 205 (OR) 206	3
ENGL 102	3	HIST 201, 202, 207, 208 (OR)	
ENGL 102	3	POSC 203	3
HLTH 293	3	PED 131	3
Total Hours - Fall Semester	16	PSYC 250.....	3
		Total Hours - Spring Semester	16

THIRD YEAR

EXSC 455.....	3	EXSC 375.....	3
EXSC 465.....	4	HLTH 232	2
HLTH 435	3	PED 332	3
PED 201	1	PED 421	3
PED 333	2	PSYC 380.....	3
SOCL 105.....	3	Total Hours - Spring Semester	14
Total Hours - Fall Semester	16		

FOURTH YEAR

ENVR 101, SCNC 101, 102, (OR) 103.....	4	EXSC 493.....	6
HLTH 342	3	RESTRICTED ELECTIVES	6
HLTH 425	3	Total Hours - Spring Semester	12
PED 327	2		
RESTRICTED ELECTIVES.....	3		
Total Hours - Fall Semester	15		

Department of Science and Math 245

BACHELOR OF SCIENCE DEGREE HEALTH AND HUMAN PERFORMANCE HEALTH PROMOTION

GSU 100 The First Year Experience 0 hour

All degree seeking students are required to take GSU 100 during their first semester.

General Education Requirements 39 hours

Students must complete BIOL 120, MATH 115, and PSYC 201 as part of the General Education requirements.

Health and Human Performance Core 31 hours

BIOL 120	Principles of Biology I	
EXSC 455	Psychology of Exercise	3
EXSC 493	Practicum	6
HLTH 102	Introduction to Health Promotion	3
HLTH 105	Human Nutrition	3
HLTH 232	Foundations of Health	2
HLTH 293	Lifetime Fitness and Wellness (Gateway Course)	3
MATH 115	College Algebra	
MATH 256	Probability and Statistics I	3
PED 333	Motor Learning and Development	2
PSYC 201	General Psychology	
PSYC 250	Lifespan Development	3
PSYC 380	Drugs and Human Behavior	3

Health Promotion Major 44 hours

ENVR 255	Health and Safety	3
HLTH 107	Introduction to Medical Terminology	3
HLTH 130	Anatomy & Physiology I for Allied Health	4
HLTH 131	Anatomy & Physiology II for Allied Health	4
HLTH 341	Community and Environmental Health	2
HLTH 342	Health Disparities in Vulnerable Populations	3
HLTH 425	Wellness Programming and Administration	3
HLTH 435	Research Methods in Health and Human Performance	3
MRKT 201	Principles of Marketing	3
NPLM 301	Nonprofit Leadership and Management	3
NPLM 302	Grant Writing	3
PSYC 330	Social Psychology	3
PSYC 360	Psychology of Human Sexuality	3
SOCL 105	Interviewing and Counseling	3

Restricted Electives 5 hours

SAFE 327	Legal Aspects and General Safety	2
SAFE 338	Emergency Services and Disaster Preparedness	3
SOCL 205	Principles of Sociology	3
SOCL 209	Social Problems	3
SOCL 340	Death and Dying	3
SOCL 390	Introduction to Public Administration	3

Department of Science and Math 246

General Elective

2 hours

Total minimum hours required for degree

120 hours

GATEWAY ASSESSMENT – HLTH 293 - CAPSTONE ASSESSMENT EXSC 493

Department of Science and Math 247

**BS – HEALTH AND HUMAN PERFORMANCE
HEALTH PROMOTION
SUGGESTED PLAN OF STUDY**

FIRST YEAR

ART 200, CART 200, FNAR 100 (OR) MUSC 200.....	3	BIOL 120.....	4
ENGL 101	3	ENGL 102	3
GSU 100.....	0	HLTH 107	3
HLTH 102	3	HLTH 232	2
HLTH 105	3	PSYC 201	3
MATH 115	3	Total Hours - Spring Semester	15
Total Hours - Fall Semester	15		

SECOND YEAR

ENGL 203, 204, 205 (OR) 206	3	CART 101	3
ENVR 255	3	CSCI 101	3
HLTH 130	4	ENVR 101, SCNC 101, 102, (OR) 103.....	4
MRKT 201	3	HLTH 131	4
SOCL 105.....	3	Total Hours - Spring Semester	14
Total Hours - Fall Semester	16		

THIRD YEAR

EXSC 455.....	3	HLTH 293	3
HLTH 341	2	MATH 256	3
HLTH 425	3	NPLM 301	3
PED 333	2	PED 201	1
PSYC 250.....	3	PSYC 330.....	3
RESTRICTED ELECTIVES.....	2	GENERAL ELECTIVE	2
Total Hours - Fall Semester	15	Total Hours - Spring Semester	15

FOURTH YEAR

HIST 201, 202, 207, 208 (OR) POSC 203	3	HIST 201, 202, 207, 208 (OR) POSC 203.....	3
HLTH 342	3	HLTH 493.....	6
HLTH 435	3	PSYC 360	3
NPLM 302.....	3	RESTRICTED ELECTIVES.....	3
PSYC 380.....	3	Total Hours - Spring Semester	15
Total Hours - Fall Semester	15		

**BACHELOR OF ARTS IN EDUCATION
BIOLOGY (9-Adult)**

Candidates may wish to combine this specialization with another (5-9), (9-Adult), (5-Adult) or (PreK-Adult) specialization.

GSU 100 The First Year Experience 0 hour

All degree seeking students are required to take GSU 100 during their first semester.

General Education Requirements 39 hours

Students must complete BIOL 120, CHEM 101, CSCI 267, MATH 115 and PED 201 as part of the General Education requirements.

Content Specialization Courses 42 hours

Total Hours in Biology 31 hours

BIOL 120	Principles of Biology I	
BIOL 121	Principles of Biology II	4
BIOL 193	Scientific Writing	1
BIOL 210	Zoology	4
BIOL 293	Experimental Design	1
BIOL 305	General Botany	4
BIOL 335	Cell Physiology	4
BIOL 371	Evolution	4
BIOL 400	Ecology and Field Biology	4
BIOL 456	Genetics	4
BIOL 493	Senior Seminar	1

Total Hours in Chemistry 4 hours

CHEM 101	General Chemistry I	
CHEM 102	General Chemistry II	4

Total Hours in Mathematics 3 hours

MATH 115	College Algebra	
MATH 256	Probability and Statistics I	3

Total Hours in Physics 4 hours

PHYS 201	General Physics I	4
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Department of Science and Math 249

Professional Education **21 hours**

CSCI 267	Computer Skills for Education	
EDSP 220	Introduction to Educating Exceptional and Culturally Diverse Students	3
EDSP 334	Strategies for Educating Exceptional and Culturally Diverse Students	3
EDUC 203	Foundations of Education	2
EDUC 205	Educational Psychology*	3
EDUC 310	Classroom Management and Teaching Strategies	3
EDUC 345	Teaching Science in Middle and Adolescent Education (5-Adult)	2
EDUC 412	Curriculum and Assessment: Content (5-Adult)	2
READ 317	Teaching Reading in Middle and Adolescent Education	3

Student Internship **18 hours**

EDUC 470	Residency I	6
EDUC 480	Residency II	11
EDUC 493	Capstone Assessment	1

Total minimum hours required for degree **120 hours**

Education 203 and Education 205 are the only Professional Education courses which can be attempted without being admitted to a Program in Teacher Education.

*Before enrolling in Education 205, a student must have attempted PRAXIS CORE or be exempt from this requirement due to ACT or SAT score.

GATEWAY ASSESSMENT – ADMISSION TO TEACHER EDUCATION

CAPSTONE ASSESSMENT – EDUCATION 493

Department of Science and Math 250

**BIOLOGY (9-Adult)
SUGGESTED PLAN OF STUDY**

FIRST YEAR

BIOL 120 (OR) BIOL 121	4	BIOL 121 (OR) BIOL 120	4
BIOL 193	1	CART 101.....	3
CSCI 267	3	EDUC 205	3
EDUC 203	2	ENGL 102.....	3
ENGL 101	3	MATH 256	3
GSU 100.....	0	Total Hours - Spring Semester	16
MATH 115	3		
Total Hours - Fall Semester	16		

**REGISTER FOR/ATTEMPT PRAXIS
CORE PRIOR TO REGISTERING FOR
EDUC 205**

SECOND YEAR

BIOL 210.....	4	ART 200, CART 200, FNAR 100	
BIOL 293.....	1	(OR) MUSC 200	3
CHEM 101	4	BIOL 305 (OR) BIOL 335	4
EDSP 220	3	PHYS 201	4
HIST 201, 202, 207, 208 (OR)		CHEM 102.....	4
POSC 203	3	PED 201.....	1
Total Hours - Fall Semester	15	Total Hours - Spring Semester	16

THIRD YEAR

BIOL 400.....	4		
ECON 201, 202, GEOG 203, PSYC 201,		BIOL 305 (OR) BIOL 335	4
SOCL 205 (OR) SOCS 225	3	BIOL 456.....	4
EDUC 310	3	EDSP 334	3
HIST 201, 202, 207, 208 (OR) POSC 203 ..	3	EDUC 412	2
BIOL ELECTIVE.....	3	ENGL 203, 204, 205 (OR) 206	3
Total Hours - Fall Semester	16	Total Hours - Fall Semester	16

PASS PRAXIS II EXAM

FOURTH YEAR

BIOL 493.....	1	EDUC 480	11
EDUC 345	2	EDUC 493	1
EDUC 470	6	Total Hours - Spring Semester	12
READ 317	3	*Interns may not enroll in any other	
Total Hours - Fall Semester	12	courses.	

Department of Science and Math 251

BACHELOR OF ARTS IN EDUCATION CHEMISTRY (9-Adult)

Candidates may wish to combine this specialization with another (5-9), (9-Adult), (5-Adult) or (PreK-Adult) specialization.

GSU 100 The First Year Experience 0 hour

All degree seeking students are required to take GSU 100 during their first semester.

General Education Requirements 39 hours

Students must complete BIOL 120, CHEM 101, CSCI 267, MATH 202* and PED 201 as part of the General Education requirements.

*MATH 115 and MATH 120 or 125 may be required as a prerequisite for MATH 202 if candidates do not have a MATH ACT of 24 or SAT of 610 or higher.

Content Specialization Courses 42 hours

Total Hours in Biology 4

BIOL	120	Principles of Biology I	
BIOL	121	Principles of Biology II	4

Total Hours in Chemistry 27

CHEM	101	General Chemistry I	
CHEM	102	General Chemistry II	4
CHEM	293	Techniques of Chemistry	1
CHEM	301	Organic Chemistry I	4
CHEM	302	Organic Chemistry II	4
CHEM	307	Inorganic Chemistry	4
CHEM	321	Analytical Chemistry I	4
CHEM	380	Biochemistry I	4
CHEM	493	Senior Research Seminar	2

Total Hours in Physics 11

PHYS	201	General Physics I	4
PHYS	202	General Physics II	4
PHYS	345	Introductory Chemical Physics	3

Department of Science and Math 252

Professional Education **21 hours**

CSCI	267	Computer Skills for Education	
EDSP	220	Introduction to Educating Exceptional and Culturally Diverse Students	3
EDSP	334	Strategies for Educating Exceptional and Culturally Diverse Students	3
EDUC	203	Foundations of Education	2
EDUC	205	Educational Psychology*	3
EDUC	310	Classroom Management and Teaching Strategies	3
EDUC	345	Teaching Science in Middle and Adolescent Education (5-Adult)	2
EDUC	412	Curriculum and Assessment: Content (5-Adult)	2
READ	317	Teaching Reading in Middle and Adolescent Education	3

Residency **18 hours**

EDUC	470	Residency I	6
EDUC	480	Residency II	11
EDUC	493	Capstone Assessment	1

Total minimum hours required for degree **120 hours**

Education 203 and Education 205 are the only Professional Education courses which can be attempted without being admitted to a Program in Teacher Education.

*Before enrolling in Education 205, a candidate must have attempted PRAXIS CORE or be exempt from this requirement due to ACT or SAT score.

GATEWAY ASSESSMENT – ADMISSION TO TEACHER EDUCATION

CAPSTONE ASSESSMENT – EDUC 493

**CHEMISTRY (9-Adult)
SUGGESTED PLAN OF STUDY**

FIRST YEAR

BIOL 120.....	4	BIOL 121	4
CHEM 101	4	CART 101.....	3
CSCI 267	3	CHEM 102.....	4
EDUC 203	2	EDUC 205	2
ENGL 101	3	ENGL 102.....	3
GSU 100	0	PED 201.....	1
Total Hours - Fall Semester	16	Total Hours - Spring Semester	17

**ATTEMPT PRAXIS I DURING THE
FALL SEMESTER OF FRESHMAN
YEAR**

SECOND YEAR

CHEM 293	1	ART 200, CART 200, FNAR 100 (OR)	
CHEM 301	4	MUSC 200	3
CHEM 307 (OR) CHEM 321	4	CHEM 302.....	4
MATH 202	4	HIST 201, 202, 207, 208 (OR)	
PHYS 201	4	POSC 203.....	3
Total Hours - Fall Semester	17	PHYS 202	4
		Total Hours - Spring Semester	14

THIRD YEAR

CHEM 380	4	CHEM/PHYS 345	3
CHEM 307 (OR) CHEM 321	4	CHEM 493.....	2
EDSP 220	3	ECON 201, 202, GEOG 203, PSYC 201,	
EDUC 310	3	SOCL 205 (OR) SOCS 225	3
Total Hours - Fall Semester	14	EDUC 412	2
		ENGL 203, 204, 205 (OR) 206	3
		HIST 201, 202, 207, 208 (OR)	
		POSC 203.....	3
		Total Hours - Spring Semester	16
		PASS PRAXIS II EXAM	

FOURTH YEAR

BIOL 400.....	4	EDUC 480	11
EDSP 334	3	EDUC 493	1
EDUC 345	2	Total Hours - Spring Semester	12
READ 317	3		
Total Hours - Fall Semester	12		

***Residents may not enroll in any other
courses.**

**BACHELOR OF ARTS IN EDUCATION
GENERAL SCIENCE (5-Adult)**

GSU 100 The First Year Experience 0 hour

All degree seeking students are required to take GSU 100 during their first semester.

General Education Requirements 39 hours

Students must take BIOL 120, CHEM 101, CSCI 267, MATH 115 and PED 201 as part of the General Education requirements.

Content Specialization Courses 39-40 hours

Total Hours in Biology 12 hours

BIOL 120	Principles of Biology I	
BIOL 121	Principles of Biology II	4
BIOL 400	Ecology and Field Biology	4
Restricted Elective (select from the following)		4
BIOL 335	Cell Physiology	4
BIOL 371	Evolution	4
BIOL 456	Genetics	4

Total Hours in Chemistry 8 hours

CHEM 101	General Chemistry I	
CHEM 102	General Chemistry II	4
CHEM 301	Organic Chemistry I (OR)	
CHEM 321	Analytical Chemistry I	4

Total Hours in Mathematics 3-4 hours

MATH 115	College Algebra	
MATH 120	Precalculus (OR)	4
MATH 256	Probability and Statistics I	3

Total Hours in Physics 16 hours

PHYS 201	General Physics I	4
PHYS 202	General Physics II	4
PHYS 209	General Geology	4
PHYS 310	General Astronomy	4

Department of Science and Math 255

Professional Education **21 hours**

CSCI	267	Computer Skills for Education	
EDSP	220	Introduction to Educating Exceptional and Culturally Diverse Students	3
EDSP	334	Strategies for Educating Exceptional and Culturally Diverse Students	3
EDUC	203	Foundations of Education	2
EDUC	205	Educational Psychology*	3
EDUC	310	Classroom Management and Teaching Strategies	3
EDUC	345	Teaching Science in Middle and Adolescent Education (5-Adult)	3
EDUC	412	Curriculum and Assessment: Content (5-Adult)	2
READ	317	Teaching Reading in Middle and Adolescent Education	3

Residency **18 hours**

EDUC	470	Residency I	6
EDUC	480	Residency II	11
EDUC	493	Capstone Assessment	1

General Elective **1-2 hours**

Total minimum hours required for degree **120 hours**

Education 203 and Education 205 are the only Professional Education courses which can be attempted without being admitted to a Program in Teacher Education.

*Before enrolling in Education 205, a student must have attempted the Praxis CORE or be exempt from this requirement due to ACT or SAT score.

GATEWAY ASSESSMENT – ADMISSION TO TEACHER EDUCATION

CAPSTONE ASSESSMENT – EDUC 493

Department of Science and Math 256

**GENERAL SCIENCE (5-Adult)
SUGGESTED PLAN OF STUDY**

FIRST YEAR

BIOL 120 (OR) BIOL 121	3	BIOL 120 (OR) BIOL 121	4
CART 101	3	CSCI 267	3
EDUC 203	2	EDUC 205	3
ENGL 101	3	ENGL 102.....	3
GSU 100.....	0	MATH 120 or 256	4-3
MATH 115	3	Total Hours - Spring Semester	16-17
Total Hours - Fall Semester	15		

**ATTEMPT PRAXIS CORE DURING
THE FALL SEMESTER OF
FRESHMAN YEAR**

SECOND YEAR

CHEM 101	4	CHEM 102.....	4
ECON 201, 202, GEOG 203, PSYC 201, SOCL 205 (OR) SOCS 225	3	EDSP 220	3
ENGL 203, 204, 205 (OR) 206	3	HIST 201, 202, 207, 208 (OR) POSC 203.....	3
PED 201	1	PHYS 209 (OR) BIOL ELECTIVE	4
PHYS 201.....	4	Total Hours - Spring Semester	18
Total Hours - Fall Semester	15		

THIRD YEAR

BIOL 400.....	4	ART 200, CART 200, FNAR 100 (OR) MUSC 200	3
CHEM ELECTIVE	4	EDSP 334	3
EDUC 310	3	EDUC 412	2
HIST 201, 202, 207, 208 (OR) POSC 203	3	PHYS 209 (OR) BIOL ELECTIVE	4
PHYS 310.....	4	Total Hours - Spring Semester	12
Total Hours - Fall Semester	18		

PASS PRAXIS II EXAM

FOURTH YEAR

EDUC 345	2	EDUC 480*	11
EDUC 470	6	EDUC 493	1
READ 317	3	Total Hours - Spring Semester	12
GENERAL ELECTIVE	1-2		
Total Hours - Fall Semester	12-13		

***Residents may not enroll in any other
courses.**

**BACHELOR OF ARTS IN EDUCATION
MATHEMATICS (5-Adult)**

Candidates may wish to combine this specialization with another (5-9), (9-Adult), (5-Adult) or (PreK-Adult) specialization.

GSU 100 The First Year Experience 0 hour

All degree seeking students are required to take GSU 100 during their first semester.

General Education Requirements 39 hours

Students must take CSCI 267, MATH 110 and PED 201 as part of the General Education requirements.

Content Specialization Courses 39 hours

MATH 110	The Nature of Math	
MATH 120*	Precalculus	4
MATH 201*	Introduction to Mathematical Reasoning and Proofs	3
MATH 202	Calculus I	4
MATH 207	Calculus II	4
MATH 230	Euclidean Geometry for College Students	3
MATH 256	Probability and Statistics I	3
MATH 265	Math Topics for Teaching	2
MATH 308	Calculus III	4
MATH 312	Topics in Algebra	4
MATH 321	History of Mathematics	2
MATH 330	Discrete Mathematics	3
MATH 356	Probability and Statistics II	3

*MATH 115 may be required as a prerequisite for MATH 120 and MATH 201 if candidates do not have a Math ACT of 24 or SAT score of 610 or higher.

Professional Education 22 hours

CSCI 267	Computer Skills for Education	
EDSP 220	Introduction to Educating Exceptional and Culturally Diverse Students	3
EDSP 334	Strategies for Educating Exceptional and Culturally Diverse Students	3
EDUC 203	Foundations of Education	2
EDUC 205	Educational Psychology*	3
EDUC 310	Classroom Management and Teaching Strategies	3
EDUC 343	Teaching Mathematics in Middle and Adolescent Education (5-Adult)	3
EDUC 412	Curriculum and Assessment: Content (5-Adult)	2
READ 317	Teaching Reading in Middle and Adolescent Education	3

Department of Science and Math 258

Residency			18 hours
EDUC 470	Residency I	6	
EDUC 480	Residency II	11	
EDUC 493	Capstone Assessment	1	

General Electives **2 hours**

Total minimum hours required for degree **120 hours**

Education 203 and Education 205 are the only Professional Education courses which can be attempted without being admitted to a Program in Teacher Education.

*Before enrolling in Education 205, a student must have attempted PRAXIS CORE or be exempt from this requirement due to ACT or SAT score.

GATEWAY ASSESSMENT – ADMISSION TO TEACHER EDUCATION

CAPSTONE ASSESSMENT – EDUC 493

**MATHEMATICS (5-Adult)
SUGGESTED PLAN OF STUDY**

This plan of study is intended for students with an ACT Math score 24 or above or SAT Math score 590 or above. Other students should consult their advisor for a revised plan of study.

FIRST YEAR

EDUC 203	2		
ENGL 101	3	CSCI 267	3
GSU 100	0	EDUC 205	3
HIST 201, 202, 207, 208 (OR)		MATH 201	3
POSC 203	3	MATH 202	4
MATH 110	3	MATH 230 (OR) 256	3
MATH 120	4	Total Hours - Spring Semester	16
Total Hours - Fall Semester	15		

**ATTEMPT PRAXIS I DURING THE
FALL SEMESTER OF FRESHMAN
YEAR**

SECOND YEAR

CART 101	3	ECON 201, ECON 202, GEOG 203, PSYC	
ECON 201, ECON 202, GEOG 203, PSYC		201, SOCL 205 (OR) SOCS 225	3
201, SOCL 205 (OR) SOCS 225	3	ENGL 203, 204, 205 (OR) 206	3
ENGL 102	3	GENERAL EDUCATION SCIENCE	4
GENERAL EDUCATION SCIENCE	4	MATH 230 (OR) MATH 256	3
MATH 207	4	MATH 312 (OR) MATH 308	4
MATH 330 (OR) MATH 356		Total Hours - Spring Semester	17
Total Hours - Fall Semester	17		

THIRD YEAR

ART 200, CART 200, FNAR 100,		EDSP 334	3
(OR) MUSC 200	3	EDUC 412	2
EDSP 220	3	HIST 201, 202, 207, 208 (OR)	
EDUC 310	3	POSC 203	3
MATH 265	2	MATH 312 (OR) MATH 308	4
MATH 330 (OR) MATH 356	3	PED 201	1
MATH 321	2	ELECTIVE	2
Total Hours - Fall Semester	16	Total Hours - Spring Semester	15

PASS PRAXIS II EXAM

FOURTH YEAR

EDUC 470	6	EDUC 480*	11
EDUC 343	3	EDUC 493	1
READ 317	3	Total Hours - Spring Semester	12
Total Hours - Fall Semester	12		

***Interns may not enroll in any other
courses.**

**BACHELOR OF ARTS IN EDUCATION
MIDDLE SCHOOL SPECIALIZATIONS**

This program may be combined with Elementary Education (K-6) specialization only.

GENERAL SCIENCE (5-9)			18 hours
BIOL	121	Principles of Biology II	4
CHEM	205	General. Organic, and Biochemistry	3
CHEM	206	GOB Laboratory	1
SCNC	101	Earth Science	4
SCNC	102	Nature of Sound and Light	4
EDUC	345	Teaching Science in Middle and Adolescent Education	2

This program may be combined with (PreK-adult), (5-adult) or (9-adult) specialization.

GENERAL SCIENCE (5-9)			34 hours
BIOL	120	Principles of Biology I	4
BIOL	121	Principles of Biology II	4
CHEM	101	General Chemistry I	4
CHEM	102	General Chemistry II	4
PHYS	201	General Physics I	4
PHYS	202	General Physics II	4
PHYS	209	General Geology	4
PHYS	310	General Astronomy	4
EDUC	345	Teaching Science in Middle and Adolescent Education	2

This program may be combined with (PreK-adult), (5-adult), or (9-adult) specializations.

GENERAL MATH–ALGEBRA I (5-9)			20 hours
Candidates must take MATH 115 as part of the General Education requirements.			
MATH	110	The Nature of Math	3
MATH	115	College Algebra	
MATH	120	Precalculus	4
MATH	201	Introduction to Mathematical Reasoning and Proofs	3
MATH	202	Calculus I	4
MATH	230	Euclidean Geometry for College Students	3
MATH	256	Probability and Statistics I	3
EDUC	343	Teaching Mathematics in Middle and Adolescent Education	

GATEWAY ASSESSMENT – ADMISSION TO TEACHER EDUCATION

CAPSTONE ASSESSMENT – EDUCATION 493