

GENERAL EDUCATION

I. Skills/Processes for Literacy (3 courses)	
A. INTD 101 University Seminar	
B. ENGL 101 Composition: Theme Writing	
C. ENGL 104 Composition: The Essay	
II. HUMANITIES (5 courses)	
A. Fine Arts (1 course): Art, Music, Performance, Aesthetics	
B. Literature/Language (1 course): ENGL or Foreign Language	
C. Philosophy (1 course)	
D. Humanities Electives (2 courses)	
1. HUM 101/301 or HIST 131/331	
2. One additional elective from ENGL, The Arts/Aesthetics, Foreign Language, HUM,PHIL,REL	
III. SOCIAL SCIENCE (3 courses)	
A. American History or Government	
B. Social Science Electives (2 courses from ECON, GEOG, HIST, PSCI, PSYC, SOC)	
IV. Natural Science/Quantitative Reasoning (met through major)	
V. General Education Electives (2 courses): From with-in the College of Arts and Sciences	

Recommended Options

SCI 250 Intro to Computational Science (3)	

TIMING F = Fall S = spring

* denotes that the course is offered every other year

PREREQUISITES@=117/118 # = 260 \$ = 270
& = 316 > = 101/102**COREQUISITES**

% = 260 ^ = 270 a = 394

See page 2 for required and recommended courses for specific career tracks and popular minor possibilities

All students must complete all core classes and the courses from the upper level basket:

83-85 credits for 3+1 BS MLS –Designed for transfers or incoming students with credits, plus the MLS internship.**Min 85 credits for BS Biology with MLS Concentration** but NO Required MLS Internship.**95-100 Credits for 4+1 BS Biology/MLS Double major** plus MLS Internship.**BIOLOGY CORE REQUIREMENTS**

BIOL 117 General Biology I (4) F/S	BIOL 118 General Biology II (4) S
BIOL 260 General Genetics (4) F @	BIOL 270 Evolution (4) S #
BIOL 499-MLS Internship (36) – Students must be accepted into an affiliated AND accredited program	If students are not entering an internship then SCI 498-Advanced Topics (2) S, BIOL 401 Research 1 (3) F/S @

UPPER LEVEL BASKETS – REQUIRED FOR ALL MLS MAJORS

FALL	SPRING
BIOL 101 Anatomy and Physiology (4) F/S Ω	BIOL 102 Anatomy & Physiology 2 (4) F/S Ω
BIOL 394 Advanced Physiology (3) F #	BIOL 351 Cell Biology (4) S @
BIOL 316 General Microbiology (4) F # β	BIOL 354 Immunology (3) S*
CHEM 320 Biochemistry (4) F	one other course
3+1 MLS Majors must complete 46 credits in Biology and the 36 hour internship for a BS MLS degree completion	Application to MLS Internship may occur up to one year prior to anticipated start of internship at the permission of the MLS Director

ADDITIONAL COURSES**Suggested choices** for the 4+1 BS Biology and MLS Double Major**Optional choices** for BS Biology with MLS Concentration

Students may take other courses offered in the Biology or Chemistry programs rather than suggested or optional choices after discussion with advisor.

Biology and Chemistry courses must be a minimum of 84 credits.

BIOL 390 Biotechnology (4) F #	BIOL 395 Pathophysiology (3) S* <i>optional but strongly recommended</i>
CHEM 353 – Quantitative Analysis (4) F	BIOL 100 – Intro to Clinical Lab Science (2) S <i>optional but strongly recommended</i>
CHEM 410 – Instrumental (4) S	BIOL 391 - Molecular Genetics (4) S* ^
	CHEM 321 - Biochemistry II (3)S*

NON-BIOLOGY SCIENCE AND MATH REQUIREMENTS

MATH 151 Calculus I (4) F (<i>recommended</i>) OR MATH 125 College Algebra & Trigonometry (3) F/S	MATH 141 Elementary Stats (3) F/S OR MATH XXX Applied Statistical Analysis (3) S OR PSYC 341 Understanding Statistical Inference
PHYS 153 Calculus-Based Physics II (4) S (<i>recommended</i>) OR PHYS 103 Gen. Physics II (4) S	PHYS 154 Calculus-Based Physics II (4) S (<i>recommended</i>) OR PHYS 104 Gen. Physics II (4) S
CHEM 103 General Chemistry I (4) F	CHEM 104 General Chemistry II (4) S
CHEM 203 Organic Chemistry I (4) F	CHEM 204 Organic Chemistry II (4) S

Ω - Transfer students may substitute BIOL 115 or BIOL 250 with permission of MLS Director

β - Transfer students may substitute BIOL 104 with permission of MLS Director

Alternate Course Offerings

Fall Even Years – Conservation Biology, Comparative Vertebrate Anatomy

Fall Odd Years – Ecology, Zoology, Physical Chemistry 1

Spring Even Years – Pathophys, Ex Science, Plants and People, Immunology, Ornithology, Physical Chemistry 2, Inorganic Chemistry, Physical Chemistry 2

Spring Odd Years – Intro to Gross, Molecular Genetics, Botany, Biochem II

128 Credit hours _____ Major Requirements _____ Minor Requirements _____ Last 30 hr. residency

Concentrations of the Biology Major

Biomedical Science

Core plus four courses from the Anatomy and Physiology Basket and two courses from the Molecular Biology and Microbiology Basket AND CHEM 320 and BIOL 354.

Environmental Science

Core plus 4 courses from the following: SUST 101, SUST 150, SUST 201, SUST 350, SUST 375, and two courses from the Ecology basket, plus one from one of the other baskets, plus HIST 325, HIST 475, and SCI 250. A Chemistry minor is strongly recommended but not required.

Biotechnology

Core plus four courses from the Molecular Biology and Microbiology Basket and two courses from one or more baskets. CHEM 320 and one other CHEM course 300 or higher.

Popular Minors

Chemistry Minor – CHEM 101/102, CHEM 203/204, two additional 300-400 level chemistry courses. Will be two additional courses in the future.

Psychology Minor – PSYC 101, 7 additional psychology courses, 5 of which must be at 300 level or above.

Education Minor – Two paths: Certification and Non-certification

Non Certification – 18 credits total to include: EDUC 100 (recommended), EDUC 200, EDUC 201, EDUC 300, EDUC 301, and 1 more 3 credit course of which is at the 300 level or above. Students interested in teaching and certification may apply to the MA in Education Secondary Teaching and Inquiry (MASTI) program in their senior year. GPA of 3.0 is required for acceptance into the MASTI program, as well as a passing Praxis II score, a graduate school application and a successful interview.

Certification Routes – **AKA Secondary Education Bridge** – EDUC 100 (recommended), EDUC 200, EDUC 201, EDUC 300, EDUC 301 or 411, EDUC 552, and EDUC 626. Students must have a strong Chemistry background including the following courses: CHEM 103/104, CHEM 203/204, CHEM 301, CHEM 320, CHEM 353, CHEM 410, CHEM 432, CHEM 433, CHEM 498, BIOL 117/118, PHYS 153/154, ENV 112, SCI 102, SCI 222, SCI 309, MATH 151/152/153, SCI 140

Coaching Minor – EDUC 250, PSYC 460, BIOL 220, EDUC 355, EDUC 359, PSYC 101, BIOL 101/102 **OR** BIOL 117/118

Business Administration Minor – ACCT 210, ACCT 211 **OR** FIN 312, ECON 201 **OR** ECON 202, ISYS 100, MGMT 321, MKT 360, **plus** one additional course from ACCT, BUS, FIN, ECON, FIN, ISYS, MANAGEMENT, MKTING

Information Systems Minor – ISYS 250, ISYS 307, ISYS 320, ISYS 390, plus 6 1-credit ISYS Tech Tools courses **OR** a combination of 6 hours of approved course substitutions and ISYS Tech Tools from ISYS 101-199.

Computational Science Minor – COSC 151, MATH 151/152, MATH 370, SCI 250, SCI 401, PHYS 153/154 **OR** CHEM 103/104 **OR** BIOL 117/118

Biology Major: Pre-Health Professions Career Tracks Required and/or Recommended Course Material

Medical School & Physician Assistant School

BIOL 101/102, BIOL 351, CHEM 320, SOC 101, PSYC 101, some programs require two semesters of calculus. Some programs like to see micro, immuno, and pathophys

Dental School

BIOL 101/102, BIOL 316, BIOL 394, CHEM 320, SOC 101, PSYC 101, ECON 202, a second semester of Calculus is required for some schools. Chem 301 (Inorganic) is required in a few schools.

Podiatry School

BIOL with labs 8-12 hours
CHEM (Gen and Org) 8 hours, Physics 8 hours, English 6-12 hours

Physical Therapy School

BIOL 101/102, 300-level (to include either cell, immuno, micro, molecular genetics) BIOL 394, ISYS 100, HEPR 108, PSYC 101, PSYC 254
Some programs require an additional human anatomy course. Additional Requirements: Min recommended GPA 3.5
GRE, PT Volunteer Experience

Veterinary Medicine School

One Ecology course, BIOL 101/102, BIOL 303, CHEM 320, BIOL 316, BIOL 351, BIOL 394 & Mammalian Physiology Lab. ECON 202, PSYC 101, SCI 131, **BIOL XXX – Zoology**

Pharmacy School

BIOL with labs 8-12 hours
CHEM (Gen and Org) 8 hours, Physics 8 hours, English 6-12 hours

Optometry School

BIOL 101/102, CHEM 320 and BIOL 316, ECON 202, PSYC 101. Calculus and Calculus-based Physics