

Bachelor of Science (BS)
 Degree Code 260*
 Concentration Code 260F
 Student Name: _____

Program of Study for Mathematical
 Sciences Majors
 LIFE SCIENCES
 Date _____

I. GENERAL EDUCATION CURRICULUM 44
 CHE 1101/1110 & 1102/1120 fulfill the Science Inquiry perspective. Math 1110 fulfills the Quantitative Literacy requirement.

II. MAJOR REQUIREMENTS (not including 12 s.h. counted in Area I, above) 53
 2.0 major GPA is required for graduation. Major GPA calculation will include all courses taken in the major department, plus any other courses under II. Minimum of 18 semester hours of courses taken to fulfill major requirements must be courses offered by Appalachian.

A. Mathematics Common Core (14-15 hours)

- MAT 1110 _____ (4) Calculus with Analytic Geometry I (Pre: MAT 1025 w/min grade C-)
- MAT 1120 _____ (4) Calculus with Analytic Geometry II (Pre: MAT 1110 w/min grade C-)
- MAT 2240 _____ (3) Introduction to Linear Algebra (Pre: MAT 1120)

Choose one:

- MAT 2110 _____ (3) Techniques of Proof (Pre: MAT 1120)
- MAT 2510 _____ (4) Sophomore Honors Seminar (Pre: MAT 1120)

B. General Mathematics Concentration (29-31 hours; 6 hours must be at 4000 level, 3 hours of which must be MAT)

- MAT 2310 _____ (3) Computational Mathematics (Pre: MAT 1120)
- MAT 3130 _____ (3) Introduction to Differential Equations (Pre: MAT 1120)
- MAT 3220 _____ (3) Introduction to Real Analysis [WID] (Pre: ENG 2001, MAT 2110 or 2510)
- MAT 3350 _____ (3) Introduction to Mathematical Biology (Pre: MAT 1120; Jr. standing)
- STT 3850 _____ (4) Statistical Data Analysis I (Pre: MAT 1110)

Choose one:

- MAT 4310 _____ (3) Numerical Methods (Pre: MAT 2310)
- STT 3851 _____ (3) Statistical Data Analysis II [WID] (Pre: ENG 2001, STT 3850)

Choose one:

- MAT 4040 _____ (1) Mathematics Capstone [CAP] (Pre: MAT 3110 or 3220; Sr. standing)
- MAT 4510 _____ (3) Senior Honors Thesis [CAP] (Pre: MAT 3510; 3.45+ GPA in math)

4-7 hours of approved electives** in mathematical sciences to bring total hrs in AREA II to 65 hrs (at least 4 hours at 4000 level, 3 of which must have MAT prefix)

**Must be approved by advisory committee.

C. A Life Sciences Concentration (24-28 hours)

- CHE 1101 _____ (3) Introductory Chemistry I (Co: CHE 1110)
- CHE 1110 _____ (1) Introductory Chemistry I Lab (Co: CHE 1101)
- CHE 1102 _____ (3) Introductory Chemistry II (Pre: CHE 1101/1110; Co: CHE 1120)
- CHE 1120 _____ (1) Introductory Chemistry II Lab (Co: CHE 1102)
- CHE 2201 _____ (3) Organic Chemistry I (Pre: CHE 1102/1120; Co: CHE 2203)
- CHE 2203 _____ (1) Organic Chemistry I Lab (Co: CHE 2201)
- BIO 1801 _____ (4) Biological Concepts I (Co: CHE 1101)
- or both BIO 1101 _____ (4) Biology in Society I
- and BIO 1102 _____ (4) Biology in Society II

Choose two: (Pre: BIO 1801 for all BIO courses above 2000)

- BIO 3302 _____ (4) Ecology
- BIO 2400 _____ (3) Genetics (Pre: CHE 1102, MAT 1025) **AND**
- BIO 2600 _____ (3) Cell Biology (Pre: CHE 1102) **AND**
- BIO 3800 _____ (4) Molecular Biology (Pre: CHE 2201 or 2101)

Student Signature: _____ Advisor Signature: _____ Chairperson Signature: _____ Date: _____ Date Sent to Dean's Office: _____

- BIO 2410 _____ (1) Genetics Lab (Pre/Co: BIO 2400/2700)
- BIO 2610 _____ (1) Cell Bio Lab (Pre: MAT 1025; Co: BIO 2600)

III. MINOR (optional)

IV. ELECTIVES (taken to total 122 hours for the degree) 25
 2 semester hours of free electives must be outside the major discipline. **122**