Bachelor of Science   **2016-2017**   **Program of Study for Mathematical Sciences Majors**
Degree Code 260*   **MATHEMATICS**
Concentration Code 260I   **SECONDARY EDUCATION LICENSURE**

I. GENERAL EDUCATION CURRICULUM **44**

    Math 1110 will count toward Quantitative Literacy general education requirement.

II. PROFESSIONAL EDUCATION REQUIREMENTS **24**

A minimum grade of C is required in each professional education course. CI 2300 & FDN 2400 are required prior to admission to Teacher Educ.

CI 2300	_____	(2)	Teaching and Learning in the Digital Age *(Entry course to teacher education)*
FDN 2400	_____	(2)	Critical Perspectives on Teaching and Learning *(Pre or Co: CI 2300) (Entry course to teacher education)*
PSY 3010	_____	(3)	Psychology Applied to Teaching *(Pre or Co: CI 2300)* **PROFICIENCIES:**
SPE 3300*	_____	(3)	Creating Inclusive Learning Communities *(Pre: CI 2300, FDN 2400, PSY 3010)* Reading _____
C I 3400*	_____	(2)	Policies and Practice in Educational Assessment *(Pre: CI 2300, FDN 2400, PSY 3010)* English _____
C I 4900	_____	(12)	Student Teaching **[CAP]** *(Pre: 2.7 cumulative GPA; All courses in professional core must be completed with grades of*

                               C (2.0) or higher prior to student teaching, along with other courses (including methods and reading) identified within the major.

  *Admission to Teacher Education required.   **Minimum 2.7 cumulative GPA required to graduate**

  NOTE: To be admitted to the Teacher Education Program students must have a minimum 2.7 cumulative GPA and take and satisfy testing requirements for Reading, Writing and Math areas of the PRAXIS (PPST or CBT). The PRAXIS II Area Exams are required for student teaching.

III. MAJOR REQUIREMENTS (not including 4 s.h. counted in Area I, above) **45**

2. 0 major GPA is required for graduation. Major GPA calculation will include <u>all</u> courses taken in the major department, plus any other courses under III. Minimum of 18 semester hours of courses taken to fulfill major requirements must be courses offered by Appalachian.

A. Area of Specialization in Preparation for Teaching: (46-47 hours)
<u>Mathematics</u>:

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)*
MAT 3010	_____	(2)	Survey in the History of Mathematics *(Pre: MAT, 2110 or 2510)*
MAT 3015	_____	(2)	Junior Seminar for Mathematics Majors in Education *(Pre: MAT 2240, 3010)*
MAT 3110*	_____	(3)	Introduction to Modern Algebra **[WID]** *(Pre: RC 2001, MAT 2110 or 2510; Co: 2240)*
MAT 3220*	_____	(3)	Introduction to Real Analysis I **[WID]** *(Pre: RC 2001, MAT 2110 or 2510)*
MAT 3310	_____	(3)	Discrete and Continuous Mathematical Models *(Pre: MAT 1120; Co: 2240)*
MAT 3520	_____	(1)	Instructional Assistance *(Pre: Jr./Sr. standing)*
MAT 3610*	_____	(3)	Introduction to Geometry *(Pre: MAT, 2110 or 2510)*
MAT 4015	_____	(3)	Advanced Seminar in Secondary Math Education *(Pre: MAT 3015, 3 s.h. 4000-level MAT/STT; Sr. stdg)*
STT 4811	_____	(3)	Statistical Concepts and Applications I *(Pre: MAT 1120)*
STT 4812	_____	(3)	Statistical Concepts and Applications II with Probability Modeling *(Pre: STT 4811)*

    * Grade of C required in MAT 1120, 3610, and 3110 or 3220 for CI 4900

Choose one:

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

5-6 s.h. approved courses in Mathematical Sciences **to bring total hrs in AREA III to 48 hrs** (at least 3 s.h. MAT at 4000 level):

_____   _____

B. Other Required Courses (3 hours)
<u>Education</u>:

C I 4085*	_____	(3)	Teaching High School Mathematics *(Pre: Sr. standing)*

*Minimum "C" grade required

IV. MINOR (optional)

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

V. ELECTIVES (taken to total 122 hours for the degree)...**9**

  2 semester hours of free electives must be outside the major discipline.   **122**