Bachelor of Science (BS)  
Degree Code 260*  
Concentration Code 260B  

2014-2015  
Program of Study for Mathematics Majors  

Student Name: ____________________________  
Date ____________  

I. GENERAL EDUCATION CURRICULUM ........................................................................................................................................ 44  
Math 1110 will meet the Quantitative Literacy general education requirement.  

II. MAJOR REQUIREMENTS (not including 4 s.h. counted in Area I, above) .................................................................................................................. 61  
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. Mathematics Courses for the Concentration (29-30 hours)  
MAT 2130 _____ (4) Calculus with Analytic Geometry III (Pre: MAT 1120 w/min grade C-)  
MAT 3110 _____ (3) Intro to Modern Algebra [WID] (Pre: ENG 2001, MAT 2110 or 2510; Co: 2240)  
MAT 3220 _____ (3) Intro to Real Analysis I [WID] (Pre: ENG 2001, MAT 2110 or 2510)  
Choose one:  
MAT 3130 _____ (3) Intro to Differential Equations (Pre: MAT 1120)  
MAT 3310 _____ (3) Discrete & Continuous Mathematical Models (Pre: MAT 1120; Co: 2240)  
Choose one:  
STT 3850 _____ (4) Statistical Data Analysis (Pre: MAT 1110)  
STT 4250 _____ (3) Probability Modeling w/Applications (Pre: MAT 1120)  
STT 4860 _____ (3) Probability Models & Statistical Inference I (Pre: MAT 2130)  
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)  

9-13 hours of approved electives** in mathematical sciences to bring total hrs in AREA II to 65 hrs (at least 6 hours at the 4000 level, at least 3 hours in MAT)  

C. A Career Support Concentration (at least 21 approved** hours)  

<table>
<thead>
<tr>
<th>Course</th>
<th>Credits</th>
<th>Description</th>
<th>Prerequisites</th>
<th>Notes</th>
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<tbody>
<tr>
<td>MAT 3110</td>
<td>3</td>
<td>Intro to Modern Algebra</td>
<td>ENG 2001, MAT 2110 or 2510, Co: 2240</td>
<td>[WID]</td>
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</table>

** Must be approved by mathematical sciences advisor.  

III. MINOR (optional)  

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IV. ELECTIVES (taken to total 122 hours for the degree) .................................................................................................................. 17  
2 semester hours of free electives must be outside the major discipline  

Total major requirements – 65; Gen Ed courses that may count in major (depends on choices) – 4; net major 61 hours;