I. GENERAL EDUCATION CURRICULUM .................................................................................................................. 44
Math 1110 will count toward Quantitative Literacy general education requirement.

II. LANGUAGE (Completion of 6 semester hours at the *intermediate level, or higher) ........................................... 6

1040 ___ and 1050 ___ or 1060 ___; or higher level courses

*NOTE: Language 1010 and 1020 (or 1030) are prerequisites for the intermediate levels. FL 1050 or 1060 may be used in Gen Ed Liberal Studies Experience

III. MAJOR REQUIREMENTS (not including 4 s.h. counted in Area I, above) ........................................................... 31

1. Mathematics Major Requirements: (28-29 s.h.)

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 2130 _____ (4) Calculus with Analytic Geometry III (Pre: MAT 1120 w/min grade C-)
MAT 2110 _____ (3) Techniques of Proof (Pre: MAT 1120)
MAT 2240 _____ (3) Introduction to Linear Algebra (Pre: MAT 1120)

Choose one:

MAT 3130 _____ (3) Intro to Differential Equations (Pre: MAT 1120)
STT 3850 _____ (3) Statistical Data Analysis (Pre: MAT 1110)

Choose one WID course: (Pre for WID: RC 2001, MAT 2110 or 2510)

MAT 3110 _____ (3) Intro to Modern Algebra [WID] (Co: 2240)
MAT 3220 _____ (3) Intro to Real Analysis I [WID]

Choose one 4 hour combination (courses must be taken in same semester):

Choose one:

MAT 4010 ___ (1-3) Current Topics in Mathematics
AND
MAT 4011 ___ (1) Current Topics in Math [CAP]
AND
MAT 4140 ___ (3) Differential Geometry (Pre: MAT 2130; Co: MAT 2240)
AND
MAT 4141 ___ (1) Differential Geometry [CAP]
AND
MAT 4220 ___ (3) Intro to Real Analysis II (Pre: MAT 3220)
AND
MAT 4221 ___ (1) Intro to Real Analysis II [CAP]
AND
MAT 4310 ___ (3) Numerical Methods (Pre: MAT 2310)
AND
MAT 4311 ___ (1) Numerical Methods [CAP]
AND
MAT 4340 ___ (3) Intro to Operations Research (Pre: MAT 2240; STT 3 850; Sr st) AND
MAT 4341 ___ (1) Intro to Oper Research [CAP]
AND
MAT 4420 ___ (3) Dynamical Systems Theory (Pre: MAT 3130 or 3310)
AND
MAT 4421 ___ (1) Dynamical Systems Theory [CAP]
AND
MAT 4590 ___ (3) Adv Topics in Differential Equations (Pre: MAT 3130; Sr st) AND
MAT 4591 ___ (1) Adv Topics in Diff Equations [CAP]
AND
MAT 4710 ___ (3) Intro to Topology (Pre: MAT 3220; Sr st) AND
MAT 4711 ___ (1) Introduction to Topology [CAP]
AND
MAT 4720 ___ (3) Abstract Algebra (Pre: MAT 3110; Sr st) AND
MAT 4721 ___ (1) Abstract Algebra [CAP]
AND
MAT 4990 ___ (3) Numerical Linear Algebra (Pre: MAT 4310; Sr st) AND
MAT 4991 ___ (1) Numerical Linear Algebra [CAP]
AND
STT 4820 ___ (3) Design & Analysis of Experiments (Pre: STT 3820; Sr st) AND
STT 4821 ___ (1) Design & Analysis of Exper [CAP]
AND
STT 4830 ___ (3) Linear Regression Models (Pre: MAT 2240; STT 3830; Sr. st) AND
STT 4831 ___ (1) Linear Regression Models [CAP]
AND
STT 4840 ___ (3) Regression & Time Series Forec (Pre: MAT 2240; STT 3250, 3850) AND
STT 4841 ___ (1) Regression & Time Series Forec [CAP]

2. Mathematics Electives: (6-7 s.h. to bring total hours in AREA III to 35 hours; at least 3 hours must be from 4000 level);

Any course listed above but not used to meet requirements above, may be used in this section.

MAT 2310 ___ (3) Computational Math (Pre: MAT 1120)
MAT 2500 ___ (1-3) Independent Study
MAT 3010 ___ (2) Survey in History of Math (Pre: MAT 1120; MAT 2110 or 2510)
MAT 3310 ___ (3) Discrete & Continuous Math Models (Pre: MAT 1120; Co: 2240)
MAT 3330 ___ (3) Financial Mathematics (Pre: MAT 1120)
MAT 3350 ___ (3) Intro to Mathematical Biology (Pre: MAT 1120, Jr stdng)
MAT 3500 ___ (1-3) Independent Study
MAT 3510 ___ (3) Junior Seminar
MAT 3610 ___ (3) Intro to Geometry (Pre: MAT 1120; MAT 2110 or 2510)
MAT 4400 ___ (1-3) Senior Research (Pre:3 sh 4000 level MAT)
STT 3250 ___ (4) Fundamentals of Probability (Pre: MAT 2130)
STT 3820 ___ (3) Statistical Methods I (Pre: STT 2810 or 2820)
STT 3830 ___ (3) Statistical Methods II (Pre: STT 3820)
STT 4840 ___ (3) Elem Prob & Surv Smpg (Pre: STT 2810 or 2820)
STT 3851 ___ (3) Stat Data Anlys II [WID] (Pre: STT 3850; RC 2001)
STT 4811 ___ (3) Stat Concepts & Applications I (Pre: MAT 1120)
STT 4812 ___ (3) Stat Concepts & Applications II (Pre: STT 4811)

IV. MINOR REQUIRED ............................................................................................................................................. 12-21

Minimum of 9 semester hours of courses taken to fulfill minor requirements must be courses offered by Appalachian.

V. ELECTIVES (taken to total 122 hours for the degree) .......................................................................................... 20-29

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