

**Lock Haven University**  
**Mathematics Department**  
**Bachelor of Science**  
**Mathematics Major Actuarial Science Track**

Effective: Fall 2017

<b>Intellectual Foundation</b>	<b>9 sh</b>
<b>Written Communication</b>	<b>3 sh</b>
ENGL100: Composition (3 sh)	3 sh
WC Competency 1 suggested: (MATH225: History of Mathematics)	
WC Competency 2	
<b>Oral Communication</b>	<b>3 sh</b>
<b>Mathematical and Computational Thinking</b>	<b>3 sh</b>
#MATH141: Calculus 1	3 sh
<b>Critical Thinking</b>	
CT Competency 1	
CT Competency 2	

<b>Knowledge and Inquiry</b>	<b>21 sh</b>
<b>Natural Science Inquiry (at least one lab)</b>	<b>6 sh</b>
<b>Historical, Behavioral, and Social Science Inquiry</b>	<b>6 sh</b>
ECON102: Principles of Macroeconomics	3 sh
ECON103: Principles of Microeconomics	3 sh
<b>Philosophical, Literary, and Aesthetic Inquiry</b>	<b>9 sh</b>
Aesthetics:	
Philosophy/Literature:	
PLA:	

<b>Personal and Social Responsibility</b>	<b>12 sh</b>
<b>Global Awareness and Citizenship</b>	<b>9 sh</b>
(at least one with GAC-Historical Foundation)	
GAC:	
GAC:	
GAC-H:	
<b>Wellness</b>	<b>3 sh</b>
<b>Experiential Learning</b>	
EL Competency 1	
EL Competency 2	

<b>Electives</b>	<b>18 sh</b>

<b>First Year Student Seminar</b>	<b>1 sh</b>
MATH119: First Year Student Seminar	1 sh

<b>Major Area and Cognate Courses</b>	<b>59 sh</b>
<b>Major Required Courses</b>	<b>36 sh</b>
#COMP160: Programming 1	3 sh
#MATH142: Calculus 2	3 sh
#MATH205: Foundations of Mathematics	3 sh
#MATH243: Calculus 3	3 sh
#MATH244: Calculus 4	3 sh
#MATH301: Differential Equations	3 sh
#MATH311: Elements of Linear Algebra	3 sh
#MATH312: Probability and Statistics	3 sh
#MATH313: Mathematical Statistics	3 sh
#MATH412: Actuarial Mathematics	3 sh
#MATH422: Applied Statistics	3 sh
#ACCT110: Financial Accounting	3 sh

<b>One of the Following Courses</b>	<b>2 sh</b>
#MATH369: Internship	2 sh
#MATH499: Independent Study	2 sh

<b>Three of the Following Courses</b>	<b>9 sh</b>
#MATH302: Number Theory	3 sh
#MATH307: Foundations of Geometry	3 sh
#MATH310: Modern Algebra 1	3 sh
#MATH320: Linear Programming	3 sh
#MATH350: Numerical Methods	3 sh
MATHX59: Special Topics in Mathematics	3 sh
#MATH401: Real Analysis 1	3 sh

<b>Four of the Following Courses</b>	<b>12 sh</b>
#ACCT335: Intermediate Accounting 1	3 sh
#ACCT340: Intermediate Accounting 2	3 sh
#ECON310: Intermediate Macroeconomics	3 sh
#ECON315: Intermediate Microeconomics	3 sh
#ECON320: American Public Finance	3 sh
#ECON330: Economic Development	3 sh
#ECON340: Money and Banking	3 sh
#ECON355: International Trade and Finance	3 sh
#ECON360: Current Economic Problems	3 sh
#ECON410: Econometrics	3 sh
#ECON415: Mathematical Economics	3 sh
#MANG325: Financial Management	3 sh
#MANG326: Fundamentals of Investment Management	3 sh

# BOG Advanced Coursework

**Lock Haven University  
Mathematics Department  
Actuarial Science Track  
Suggested Course Sequence**

**Fall Freshman (example)**

ENGL100: Composition (3)  
MATH119: First Year Student Seminar (1)  
MATH141: Calculus 1 (3) [MCT]  
ECON102: Principles of Macro. (3) [HBS]  
Natural Science (3) [NS]  
Philos., Lit., and Aesth. (3) [PLA]

Credit Total: 16

**Spring Freshman (example)**

MATH142: Calculus 2 (3)  
MATH205: Foundations of Math. (3)  
Philos., Lit., and Aesth. (3) [PLA]  
Oral Communication (3) [OC]  
Wellness (3) [WEL]

Credit Total: 15

**Fall Sophomore (example)**

MATH243: Calculus 3 (3)  
COMP160: Programming 1 (3)  
ECON103: Principles of Micro. (3) [HSB]  
ACCT110: Financial Accounting (3)  
Global Aware. And Citiz. (3) [GAC-H]

Credit Total: 15

**Spring Sophomore(example)**

MATH244: Calculus 4 (3)  
MATH312: Prob. and Stat. (3)  
MATH311: Elem. Of Linear Alg. (3)  
Philos., Lit., and Aesth. (3) [PLA]  
MATH225: History of Math. (3) [WC]

Credit Total: 15

**Fall Junior (example)**

MATH313: Mathematical Stat. (3)  
Natural Science (with Lab) (3) [NS]  
Math Elective (3)  
Global Awareness and Citiz (3) [GAC]  
Elective (3) [WC]

Credit Total: 15

**Spring Junior (example)**

MATH412: Actuarial Mathematics (3)  
MATH422: Applied Statistics (3)  
ACCT, ECON, MANG (3)  
Elective (3) [CT]  
ACCT, ECON, MANG (3)

Credit Total: 15

**Fall Senior (example)**

ACCT, ECON, MANG (3)  
ACCT, ECON, MANG (3)  
MATH301: Differential Equations (3)  
MATH401:Real Analysis 1 (3)  
Elective (3) [EL]

Credit Total: 15

**Spring Senior (example)**

Global Aware. And Citiz. (3) [GAC]  
MATH369 Internship (2) [EL]  
Elective (3) [CT]  
ACCT, ECON, MANG (3)  
Elective (3)

Credit Total: 14