Slippery Rock University of Pennsylvania – Curriculum Guide
Bachelor of Science in Mechanical Engineering

ROCK STUDIES REQUIREMENTS (37-38 credits)		
Course	***Title***	***Cr***
THE ROCK (10 credits)		
EXEMPT	Foundations of Academic Discovery	0
✓ ENGL 102	Critical Writing **ENGL102**	**3**
EXEMPT	Critical Reading	0
✓ COMM 200	Civil Discourse **COMM201**	**3**
✓ MATH 225	Calculus I ★ **MATH221**	**4**
INTEGRATED INQUIRY (16-17 credits)		
Creative and Aesthetic Inquiry (3 credits)		
✓	**Humanities Elective – SRU recommends Category I or II**	**3**
Humanities Inquiry (3 credits)		
✓	**ECON 101 or 102 - Principles of Economics**	**3**
Social Science Inquiry (2-3 credits)		
✓	**PHED 125 or HLTH 120**	**2-3**
Natural Science Inquiry (4 credits)		
✓ CHEM 107/111	General Chemistry I / Lab ★ **CHEM101**	**4**
Physical Science Inquiry (4 credits)		
✓ PHYS 216	University Physics 1 / Lab ★ **PHYS221**	**4**
ADDITIONAL ROCK STUDIES REQUIREMENTS (11 credits)		
✓ MATH 230	Calculus II ★ **MATH222**	**4**
✓ PHYS 217	University Physics 2 / Lab ★ **PHYS222**	**4**
ENGL 205	Introduction to Professional Writing ★	3

OTHER BASIC REQUIREMENTS		
(Check with your advisor or a current degree audit report to see if you have been exempted from this course.) The credit earned in this course will not be counted toward the 120-credit hour minimum needed to earn a degree.		
EXEMPT	Beginning Algebra	

IMPORTANT CURRICULUM GUIDE NOTES

This Curriculum Guide is provided to help SRU students and prospective students better understand their intended major curriculum. Enrolled SRU students should note that the My Rock Audit may place already-earned and/or in progress courses in different, yet valid, curriculum categories. Enrolled SRU students should use the My Rock Audit Report and materials and information provided by their faculty advisors to ensure accurate progress towards degree completion. *The information on this guide is current as of the date below. Students are responsible for curriculum requirements at the time of enrollment at the University.*

★	Course may have a prerequisite. See Undergraduate Online Catalog.
^	Course counts for 50% Major requirement and Major GPA
PASSHE = Pennsylvania State System of Higher Education Institution	

MAJOR/CONCENTRATION REQUIREMENTS (86 credits) • 45 major credits must be taken at SRU or PASSHE • 45 major credits must be taken at the 300 level or above		
Course	***Title***	***Cr***
Required Engineering Courses (64 credits)		
✓ ENGR 110	Introduction to Engineering^ **DRFT115**	**3**
ENGR 120	Engineering Design Tools ★^	2
✓ ENGR 130	Engineering Computing Tools ★^ **COMP230**	**3**
✓ ENGR 210	Statics ★^ **PHYS241**	**3**
ENGR 220	Engineering Materials ★^	3
ENGR 230	Mechanics of Materials ★^	3
ENGR 231	Mechanics of Materials Lab ★^	1
ENGR 240	Dynamics ★^	3
ENGR 250 ENGR 251	Circuit Analysis I ★^ Circuit Analysis Lab ★^	3 1
ENGR 301	Fluid Mechanics★^	3
ENGR 320	Thermodynamics★^	3
ENGR 340	Engineering Economics ★^	3
MECH 310	Machines and Mechanisms★^	3
MECH 320	Manufacturing Processes★^	3
MECH 330	Introduction to Mechatronics★^	4
MECH 340	Heat Transfer★^	4
MECH 410	Machine Design★^	4
MECH 411	Automatic Control Systems ★^	3
MECH 430	Mechatronics★^	3
MECH 460	Capstone Design I ★^	3
MECH 461	Capstone Design II ★^	3
Mechanical Engineering Electives – Select three courses (9 credits)		
MECH 412	Finite Element Analysis ★^	3
MECH 420	Design and Manufacturing ★^	3
MECH 421	Mechanical Vibrations ★^	3
MECH 422	Thermal System Design ★^	3
MECH 423	Additive Manufacturing ★^	3
MECH 431	Introduction to Robotics ★^	3
MECH 440	HVAC Systems ★^	3
MECH 441	Sustainable Energy ★^	3
Required Math and Science Courses (13 credits)		
✓ MATH 231	Calculus III★ **MATH223**	**4**
✓ MATH 232	Linear Algebra **Sci/Tech Elective – SRU recommends MATH 230**	**3**
✓ MATH 301	Differential Equations I **MATH224**	**3**
STAT 350	Applied Statistics ★	3

FREE ELECTIVES (0 credits needed)		
✓	**ENGL 101-College Writing**	**3**
✓	**CHEM 102-Chemistry II**	**4**
✓	**Sci/Tech Elective**	**3**

BC3-SRU Engineering, A.S. to Mechanical Engineering, B.S.		
Curriculum Category	**Credits Completed**	**Credits Needed**
Rock Studies	**34-35**	**3**
Major Requirements	**19**	**67**
Free Electives	**10**	**0**
TOTAL CREDITS	**63-64**	**70**