Slippery Rock University of Pennsylvania – Curriculum Guide
Bachelor of Science in Petroleum and Natural Gas 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 REQUIREMENTS (86 credits) • 43 major credits must be taken at SRU or PASSHE • 43 major credits must be taken at the 300 level or above		
Course	*Title*	*Cr*
Required Engineering Courses (59 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 230	Mechanics of Materials	3
ENGR 301^	Fluid Mechanics ★	3
ENGR 320^	Thermodynamics ★	3
ENGR 340	Engineering Economics	3
PNGE 201^	Intro to Petroleum & Natural Gas Engineering	1
PNGE 312^	Petrophysics ★	4
PNGE 315^	Reservoir Fluids ★	3
PNGE 325^	Reservoir Engineering ★	3
PNGE 410^	Drilling Engineering / Lab ★	4
PNGE 420^	Production Engineering ★	3
PNGE 430^	Reservoir Simulation★	3
PNGE 432^	Formation Evaluation ★	3
PNGE 435^	Pressure Transient Analysis ★	3
PNGE 440^	Hydraulic Fracturing ★	3
PNGE 441^	Oil & Natural Gas Resource Valuation & Econ ★	3
PNGE 459^	Capstone I ★	1
PNGE 460^	Capstone II ★	2
Engineering Electives – Select one (3 credits minimum)		
ENGR 220^	Engineering Materials ★	3
ENGR 240^	Dynamics ★	3
ENGR 250^	Circuit Analysis I	3
ISE 410^	Engineering Project Management ★	3
ISE 460^	Engineering Risk Analysis ★	3
PNGE/EGEO Electives – Select one (3 credits minimum)		
PNGE 330^	Unconventional Reservoir Engineering ★	3
PNGE 443^	Enhanced Oil Recovery ★	3
PNGE 445^	Natural Gas Engineering / Lab ★	3
PNGE 470^	Undergraduate Research ★	1-3
EGEO 358^	Introduction to Geophysics / Lab ★	3
Required Math and Science Courses (21 credits)		
✓ CHEM 108/112^	General Chemistry II ★ CHEM102	4
EVGE 201^	Earth Materials & Processes / Lab	4
EVGE 327^	Structural Geology / Lab ★	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
✓	MATH 223-Calculus & Analytical Geom III	4
✓	Sci/Tech Elective	3

BC3-SRU Engineering, A.S. to Petroleum & Natural Gas 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