**LIBERAL STUDIES REQUIREMENTS (43 credits)**

See Liberal Studies Guide for Goal and Enrichment choices

**GOAL COURSE REQUIREMENTS**

Complete Goal requirements as indicated below (33-34 credits)

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**Basic Requirements (9 credits)**

- ENGL 102 Critical Writing 3
- ENGL 104 or ENGL 220 Critical Reading or Intro to Literary and Cultural Studies 3
- COMM 200 Civil Discourse 3

**The Arts (3 credits)**

- Goal 3

**Global Community (9 credits)**

- Goal – Non-US 3
- Goal – Non – US 3
- Goal – US 3

**Human Institutions/Interpersonal Relationships (3 credits)**

- PHIL 123 Ethics 3

**Science, Technology & Math (12 credits)**

- CHEM 107 General Chemistry I 3
- CHEM 111 General Chemistry I Lab 1
- MATH 225 Calculus I 4
- PHYS 211 General Physics I Lab 4

**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.
- ACSD 110 Beginning Algebra 3

**Challenge of the Modern Age (0 credits)**

This requirement has been waived

**Enrichment Course Requirements**

Choose one course from two of the following Enrichment areas. (7 credits)

**The Arts**

This requirement has been waived

**Global Community**

- ECON 201 Macroeconomics 3

**Human Institutions/Interpersonal Relationships**

This requirement has been waived

**Science, Technology & Math**

- CHEM 108/112 Gen. Chem II Lab 4

**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.

**ACSD 110 Beginning Algebra 3**

**Computer Competency**

Students must demonstrate "computer competency" by:

- Passed Exam
- Pass Computer Competency Exam at SRU Orientation

**OR**

- CPSC ______
- Complete one of the following courses: CPSC 100, 110, 130, or PE 202 at SRU or another post-secondary institution 1-3

**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 can be counted as a Liberal Studies Requirement, but earns credit only once toward your 120-credit total.
- Course counts for 50% Major requirement and Major GPA
- PASSHE = Pennsylvania State System of Higher Education Institution

**GPA REQUIREMENT**

2.50 or higher Major GPA
2.50 or higher Overall GPA

**Slippery Rock University of Pennsylvania – Curriculum Guide**

**Bachelor of Science in Petroleum and Natural Gas Engineering**

**Degree (50 credits)**

- 43 major credits must be taken at SRU or PASSHE
- 43 major credits must be taken at the 300 level or above

**Required Engineering Courses (50 credits)**

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- ENG 110 Intro to Engineering 2
- ENG 120^ Engineering Design Tools 2
- ENG 301^ Fluid Mechanics 3
- ENG 303^ Solid Mechanics 3
- ENG 320^ Thermodynamics 3
- PHYS 314^ Engineering Mechanics 1: Statics 3
- PNGE 201^ Intro to Petroleum & Natural Gas Eng. 3
- PNGE 312^ Reservoir Rock & Fluid Properties /Lab 4
- PNGE 315^ Prop. Of Petr. Engr. Fluids/Lab 3
- PNGE 325^ Reservoir Engineering 3
- PNGE 330^ Unconventional Reservoir Engr. 3
- PNGE 410^ Drilling Engineering 4
- PNGE 420^ Production Engineering 3
- PNGE 430^ Reservoir Simulation 3
- PNGE 432^ Formation Evaluation 3
- PNGE 435^ Pressure Transient Analysis 3
- PNGE 441^ Oil & Natural Gas Resource Value 3
- PNGE 460^ Oil & Natural Gas Engineering Design 3

**Required Math and Science Courses (39 credits)**

- CPSC 146^ Intro. to Programming Principles 3
- ECEO 201^ Earth Materials & Processes /Lab 4
- ECEO 327^ Structural Geology /Lab 4
- MATH 230^ Calculus II 4
- MATH 231^ Calculus III 4
- MATH 301^ Differential Equations I 3
- MATH 309^ Linear Algebra 3
- PHYS 212^ General Physics II /Lab 3
- PHYS 213^ General Physics III /Lab 4

**NATURAL SCIENCE AND MATH COLLEGE-WIDE REQUIREMENTS**

Students must take the following four courses (12 credits)

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- CHEM 107 General Chemistry I 3
- CHEM 111 General Chemistry I Lab 1
- MATH 225 Calculus I 4
- PHYS 211 General Physics I Lab 4

**Effective Fall 2018**

**Revised 11-2018**