# LIBERAL ARTS AND SCIENCES: BACHELOR OF SCIENCE
# GEOLOGY

| III. MAJOR PROGRAM: 44 S.H. | | |
|---|---|---|
| **A. REQUIRED COURSES: 38 S.H.** | **Gr.** | **S.H.** |
| GEL 100 Physical Geology | | 4 |
| GEL 102 Historical Geology | | 4 |
| GEL 200 Field Geology | | 3 |
| GEL 220 Mineralogy | | 4 |
| GEL 230 Paleontology | | 3 |
| GEL 304 Structural Geology | | 4 |
| GEL 316 Petrology & Geochemistry | | 4 |
| GEL 346 Sedimentology & Stratigraphy | | 4 |
| GEL 358 Geophysics | | 3 |
| GEL 362 Hydrogeology | | 3 |
| GEL 380 Senior Seminar | | 2 |
| **B. ELECTIVE: 6 S.H.** | | |
| GEL 205 Planetary Surface Processes | | 3 |
| GEL 210 Environmental Geology | | 3 |
| GEL 302 Economic Geology | | 3 |
| GEL 366 Marine Geology | | 3 |
| GEL 368 Research in Geology I | | 1-3 |
| GEL 369 Research in Geology II | | 1-3 |
| GEL 371-373 Selected Topics | | 1-6 |
| GEL 390 Internship in Geology | | 1-4 |
| GEL 398 Honors Suppl. Research | | 1-3 |
| TOTAL SEMESTER HOURS | | |

| IV. CONCOMITANT COURSES: 12-14 S.H. | | |
|---|---|---|
| **A. CHEMISTRY: 8 S.H.** | **Gr.** | **S.H.** |
| CHM 100 General Chemistry I | | ** |
| CHM 102 General Chemistry II | | 4 |
| **B. PHYSICS: 8 S.H.** | | |
| PHY 040 **OR** PHY 100 | | ** |
| PHY 042 **OR** PHY 102 | | 4 |
| **C. MATHEMATICS: 4-6 S.H.** | | |
| **>>>>Option 1** | | |
| MAT 181 Calculus I | | 4 |
| **>>>>Option 2** | | |
| MAT 106 Trigonometry | | 3 |
| MAT 122 Applied Calculus | | 3 |
| **D. BIOLOGY: 4 S.H.** | | |
| BIO 104 Principles of Biology | | ** |

| V. FREE ELECTIVES: 17-19 S.H.* Any course carrying university credit | | |
|---|---|---|
| **Course Number and Name** | **Gr.** | **S.H.** |
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| VI. GRADUATION CLEARANCE | |
|---|---|
| A. Cumulative Q.P.A. | |
| Major G.P.A. | |
| B. Total Semester Hours | |
| a. General Education | |
| b. Major Program | |
| c. Concomitant | |
| GRAND TOTAL | |

C. Comprehensive Exam Passed yes no

Advisor's Signature _____

Date _____

**NOTES**

*GEG 274, GEG 333 & GEG 347 are strongly recommended to fulfi this requirement.

**Courses required for the major, but may be used to satisfy General Education requirements II.C.

A minimum of 120 s.h. are required for graduation.

Program Code: ULASGEOS
Effective Date of Program: Fall 2018
Reviewed: 2/2018

NAME

ID NUMBER

EFFECTIVE DATE
AUGUST 27, 2018

VERSION
2188

DEGREE REQUIREMENTS

# GENERAL EDUCATION

# KUTZTOWN UNIVERSITY

## Student Learning Outcomes *(SLO)*

*Upon completion of the requirements for the General Education Program, students will be able to:*

1. communicate clearly and effectively orally and in writing.
2. apply scientific and quantitative reasoning to solve problems and increase knowledge.
3. apply skills in critical analysis and reasoning for the interpretation of data.
4. engage critically with creative or artistic works.
5. demonstrate the ability to retrieve, interpret, evaluate, and use information.
6. analyze the role of values, ethics, diversity, and multiple perspectives in local and global society.
7. demonstrate an understanding of various models for the development of the whole person.

*Completion of the KU General Education program will give students opportunities to:*

8. explore concepts, ideas, and methods from a variety of disciplines.

*Use this checksheet to plan your degree program. Meet every semester with your academic advisor to be sure that you are taking courses that are required to obtain the degree you are seeking. Discuss your goals and choose courses that will help you to attain them. Get the most out of your education by taking advantage of everything that Kutztown University has to offer.*

TOTAL GENERAL EDUCATION CREDITS 42-45

FIND A FULL EXPLANATION OF THE GENERAL EDUCATION PROGRAM AT WWW.KUTZTOWN.EDU

## First Year Seminar: Discovering College

CREDITS REQUIRED 3

CREDITS EARNED:

THIS COURSE MEETS SLO 5 & 7

| COURSE NUMBER | COURSE NAME | CR | GR |
|---|---|---|---|
| FYS 100 | First Year Seminar | | |

TRANSFER STUDENTS TRANSFERRING 30 CREDITS OR MORE AND NOT TRANSFERRING AN FYS OR FYE COURSE MAY SELECT ANY ADDITIONAL COURSE FROM SECTIONS A, B, C, OR D TO MEET THEIR FYS REQUIREMENT.

| TRANSFER ELECTIVE: | | | |
|---|---|---|---|

## A Communicating With And About the World

CREDITS REQUIRED 12

CREDITS EARNED:

THESE COURSES MEET SLO 1 & 5

| | COURSE NUMBER | COURSE NAME | CR | GR |
|---|---|---|---|---|
| 1 | COMPOSITION 100 LEVEL | CMP 1__ | | |
| 2 | COMPOSITION 200 LEVEL | CMP 2__ | | |
| 3 | SPEAKING | | | |
| 4 | ANY WRITING (A2) OR SPEAKING COURSE (A3) OR FROM THE APPROVED LIST | | | |

COURSES IN CATEGORIES B, C & D MUST BE TAKEN OUTSIDE THE STUDENT'S MAJOR.
THE MAJOR IS DEFINED AS THE PREFIX THAT IDENTIFIES THE MAJOR.
CONCOMITANT REQUIREMENTS MAY BE TAKEN TO MEET GENERAL EDUCATION REQUIREMENTS.

## B Understanding Self & Others

CREDITS REQUIRED 9

CREDITS EARNED:

THESE COURSES MEET SLO 3 & 6

| | COURSE NUMBER | COURSE NAME | CR | GR |
|---|---|---|---|---|
| 1 | | | | |
| 2 | | | | |
| 3 | | | | |

## C Understanding Science & Technology

CREDITS REQUIRED 9-12

CREDITS EARNED:

THESE COURSES MEET SLO 2 & 3

| | COURSE NUMBER | COURSE NAME | CR | GR |
|---|---|---|---|---|
| 1 | SCIENTIFIC INQUIRY | | | |
| 2 | QUANTITATIVE REASONING | | | |
| 3 | ANY COURSE APPROVED FOR C1 OR C2 | | | |

## D Understanding & Creating Ideas

CREDITS REQUIRED 9

CREDITS EARNED:

THESE COURSES MEET SLO 4 & 6

| | COURSE NUMBER | COURSE NAME | CR | GR |
|---|---|---|---|---|
| 1 | | | | |
| 2 | | | | |
| 3 | | | | |

# Geology Course Plan

| Freshman Fall | |
|---|---|
| **Physical Geology** | **4** |
| **Chemistry 100** | **4** |
| MAT106 Trigonometry | 3 |
| Freshman Seminar | 3 |
| | 14 |

| Freshman Spring | |
|---|---|
| **Historical Geology** | **4** |
| **Chemistry 102** | **4** |
| Calculus MAT122 or MAT181 | 4 |
| Composition (100 level) General Ed. | 3 |
| | 15 |

| Sophomore Fall | |
|---|---|
| **Mineralogy**[1] | **4** |
| **Physics 040/100** | **4** |
| Speech General Ed. | 3 |
| Self and Others General Ed. | 3 |
| Free elective | 1 |
| | 15 |

| Sophomore Spring | |
|---|---|
| **Petrology/Geochemistry** | **4** |
| **Physics 042/102** | **4** |
| **Bio104** | **4** |
| Composition (200 level) General Ed. | 3 |
| | |
| | 15 |

| Junior Fall | |
|---|---|
| **Geophysics** | **3** |
| **Field Methods** | **3** |
| Intro to GIS *(recommended elective)* | 3 |
| Free Elective | 3 |
| Communication General Ed. | 3 |
| | 15 |

| Junior Spring | |
|---|---|
| **Hydrogeology** | **3** |
| **Structural Geology** | **4** |
| Advanced GIS *(recommended elective)* | 3 |
| Self and Others General Ed. | 3 |
| Free Elective (something fun) | 3 |
| | 16 |

| Senior Fall | |
|---|---|
| **Sed/Strat** | **4** |
| **Geology Elective** | **3** |
| Creating Ideas General Ed. | 3 |
| Self and Others General Ed. | 3 |
| Free Electives | 3 |
| | 16 |

| Senior Spring | |
|---|---|
| **Paleontology** | **3** |
| **Geology Elective** | **3** |
| Geology Senior Seminar | 2 |
| Creating Ideas General Ed. | 3 |
| Creating Ideas General Ed. | 3 |
| | 14 |

Goals:

- Average 15 credits per semester
- Take prerequisites in advance of course that require those prerequisites
- Never take more than three lab courses in one semester.

**Bold** = class that has a lab component (3-hour commitment in addition to regular lecture)
→ = prerequisite for this course
→ = not required, but helpful preparation for this course

[1] Mineralogy involves application of chemistry to geology, so having it under your belt early might help.

## *Prerequisites*

| **To take this course** | **You *must* have this pre-requisite** |
|---|---|
| GEL102 - Historical Geology | GEL100 - Physical Geology |
| GEL200 - Field Geology | GEL102 - Historical Geology |
| GEL205 – Planetary Surface Processes | GEL100 - Physical Geology |
| GEL210 – Environmental Geology | GEL100 - Physical Geology |
| GEL220 – Mineralogy | GEL100 - Physical Geology |
| GEL302 – Economic Geology | GEL100 - Physical Geology |
| GEL304 – Structural Geology | GEL102 - Historical Geology |
| GEL316 – Petrology and Geochemistry | GEL220 – Mineralogy and CHM100 |
| GEL320 - Paleontology | GEL102 - Historical Geology |
| GEL346 – Sedimentology and Strat. | GEL102 - Historical Geology or GEL366 Marine Geology |
| GEL358 – Geophysics | PHY040 or PHY100 – Physics |
| GEL362 – Hydrogeology | PHY040 or PHY100 – Physics + 2 Geology classes |
| GEL366 – Marine Geology | GEL100 - Physical Geology |
| PHY042 – Physics II | PHY040 or PHY100 – Physics |
| CHM102 – General Chemistry II | CHM100 – General Chemistry I |
| MAT122 or MAT181 – Applied Calculus | MAT106 – Trigonometry or MAT115 – Precalculus |
| MAT181 – Calculus I | MAT106 – Trigonometry or MAT115 – Precalculus |

Courses in Black are offered both Autumn and Spring.
Courses in Orange are offered in Autumn.
Courses in Green are available in Spring.