**EXPLORATION AREA OF CONCENTRATION**

Name____________________________________________ Matric Number_____________________
Catalog Year__________________________

<table>
<thead>
<tr>
<th>Credit</th>
<th>ABET Code</th>
<th>Grade</th>
<th>Semester</th>
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<tbody>
<tr>
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<td>M    BS  ES  D   H   O</td>
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</table>

**Freshman Year**

**Fall Semester**

- CHGN 121 Chem I  
  Credit: 4  
  ABET Code: 0 4 0 0 0 0  
  Grade: ____  
  Semester: ______

- CSM 101 Freshman Success  
  Credit: 0.5  
  ABET Code: 0 0 0 0 0 0.5  
  Grade: ____  
  Semester: ______

- EDNS 151 Design I  
  Credit: 3  
  ABET Code: 0 0 0 3 0 0  
  Grade: ____  
  Semester: ______

- MATH 111 Calc. I  
  Credit: 4  
  ABET Code: 0 0 0 0 0 0  
  Grade: ____  
  Semester: ______

- GEGN 101* Earth & Environ. Sys  
  Credit: 4  
  ABET Code: 0 4 0 0 0 0  
  Grade: ____  
  Semester: ______

- PAGN 101 Physical Education  
  Credit: 0.5  
  ABET Code: 0 0 0 0 0 0.5  
  Grade: ____  
  Semester: ______

Total Freshman Year: 16

**Spring Semester**

- CHGN 122 or 125 Chem. II  
  Credit: 4  
  ABET Code: 0 4 0 0 0 0  
  Grade: ____  
  Semester: ______

- HASS 100* Nature/Human Values  
  Credit: 4  
  ABET Code: 0 0 0 0 4 0  
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  Semester: ______

- MATH 112 Calc. II  
  Credit: 4  
  ABET Code: 0 0 0 0 0 0  
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  Semester: ______

- PHGN 100 Physics I  
  Credit: 4.5  
  ABET Code: 0 4.5 0 0 0 0  
  Grade: ____  
  Semester: ______

- PAGN 102 Physical Education  
  Credit: 0.5  
  ABET Code: 0 0 0 0 0 0.5  
  Grade: ____  
  Semester: ______

Total Freshman Year: 17

*Students will be registered in alternate combinations between the fall and spring semesters.

**Sophomore Year**

**Fall Semester**

- CEEN 241 Statics  
  Credit: 3  
  ABET Code: 0 0 3 0 0 0  
  Grade: ____  
  Semester: ______

- GEGN 203 Terrain Analysis  
  Credit: 2  
  ABET Code: 0 0.5 1.5 0 0 0  
  Grade: ____  
  Semester: ______

- GEGN 204 Geol. Prin/Proc  
  Credit: 2  
  ABET Code: 0 2 0 0 0 0  
  Grade: ____  
  Semester: ______

- GEGN 205 Adv. Geol. Lab  
  Credit: 1  
  ABET Code: 0 0.5 0.5 0 0 0  
  Grade: ____  
  Semester: ______

- MATH 213 Calc. III  
  Credit: 4  
  ABET Code: 0 0 0 0 0 0  
  Grade: ____  
  Semester: ______

- HASS 200 Human Systems  
  Credit: 3  
  ABET Code: 0 0 0 3 0  
  Grade: ____  
  Semester: ______

- PAGN 201 Physical Education  
  Credit: 0.5  
  ABET Code: 0 0 0 0 0 0.5  
  Grade: ____  
  Semester: ______

Total Sophomore Year: 17

**Spring Semester**

- CEEN 311 Mech. Of Materials  
  Credit: 3  
  ABET Code: 0 0 3 0 0 0  
  Grade: ____  
  Semester: ______

- EDNS 264 GIS EPICS Design II  
  Credit: 3  
  ABET Code: 0 0 0 3 0 0  
  Grade: ____  
  Semester: ______

- GEGN 206 Earth Materials  
  Credit: 3  
  ABET Code: 0 3 0 0 0 0  
  Grade: ____  
  Semester: ______

- MATH 225 Diff Eq  
  Credit: 3  
  ABET Code: 0 3 0 0 0 0  
  Grade: ____  
  Semester: ______

- PHGN 200 Physics II  
  Credit: 4.5  
  ABET Code: 0 4.5 0 0 0 0  
  Grade: ____  
  Semester: ______

- PAGN 202 Physical Education  
  Credit: 0.5  
  ABET Code: 0 0 0 0 0 0.5  
  Grade: ____  
  Semester: ______

Total Sophomore Year: 17

**Minerals and Fuels Exploration Engineering Concentration**

Recommended for students intending careers in exploration and development of minerals and fuels resources, or intending careers in geoscience research and education.
<table>
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<th>Credit</th>
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<th>Grade</th>
<th>Semester</th>
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**Junior Year**

**Fall Semester**

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<tr>
<td>GEGN 330 Thermodynamics</td>
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<td>GEOL 309 Structural Geology</td>
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<td>GEOL 321 Mineralogy</td>
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<tr>
<td>CEEC 312 Soil Mechanics OR</td>
<td>3</td>
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<tr>
<td>MNGN 321 Rock Mechanics</td>
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**Spring Semester**

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<th>Course</th>
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<tr>
<td>GEGN 307 Petrology</td>
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<tr>
<td>GEOL 314 Stratigraphy</td>
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<tr>
<td>GEGN 317 Field Methods</td>
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<td>GEGN 351 Geol. Fluid Mech.</td>
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<tr>
<td>GEGN 432 Geol. Data Management</td>
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<tr>
<td>Technical Elective II</td>
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**Summer Field Term**

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<tr>
<td>GEGN 316 Field Geology</td>
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**Senior Year**

**Fall Semester**

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<tr>
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**Spring Semester**

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<tbody>
<tr>
<td>GEGN 4xx Design Elective</td>
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<td>GEGN 4xx Design Elective</td>
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**Degree Total** 137.5

Option Electives: Students must take TWO of the following courses.

- GEGN 401 Mineral Deposits 4 credits
- GEGN 438 Petroleum Geology 4 credits
- GEGN 467 Ground-Water Engr. 4 credits
- GEGN 468 Engr. Geol. & Geotechnics 4 credits

Design Electives: Students must take TWO design courses, corresponding in subject area to the Option Elective.

- GEGN 403 Mineral Exploration Design 3 credits
- GEGN 439 Multi-Disciplinary Petroleum Design 3 credits
- GEGN 469 Engineering Geology Design 3 credits
- GEGN 470 Ground-Water Engineering Design 3 credits

09/24/2020