### KEAN UNIVERSITY – COLLEGE OF NATURAL APPLIED & HEALTH SCIENCES
#### (76204) B.S. IN EARTH SCIENCE (Option: Geo Science) 120 S.H.

**Minimum GPA Required for Declaration:** 2.0  
**Minimum GPA Required for Major:** 2.0  
**Overall Minimum GPA Required for Graduation:** 2.0

**EFFECTIVE DATE:** Fall 2019

<table>
<thead>
<tr>
<th>GENERAL EDUCATION</th>
<th>32 Semester Hours (S.H.)</th>
<th>ACADEMIC MAJOR***</th>
<th>54 S.H. (Total)</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Foundation Requirements:</strong></td>
<td>13 S.H.</td>
<td>Major Required Courses:</td>
<td>39 S.H.</td>
</tr>
<tr>
<td>GE 1000 Transition to Kea or GE 3000 Transfer Transition²</td>
<td>1</td>
<td>ENV 1000 Introduction to Environmental Science</td>
<td>3</td>
</tr>
<tr>
<td>ENG 1030 Composition</td>
<td>3</td>
<td>ENV 3100 Principles of Environmental Soil Science</td>
<td>4</td>
</tr>
<tr>
<td>MATH 1054 Precalculus*</td>
<td>3</td>
<td>ES 1101 Intro to Earth and Geographic Systems</td>
<td>4</td>
</tr>
<tr>
<td>COMM 1402 Speech Communication</td>
<td>3</td>
<td>ES 1200 Introduction to Geology</td>
<td>4</td>
</tr>
<tr>
<td>GE 2024 Research &amp; Technology</td>
<td>3</td>
<td>ES 1300 Meteorology</td>
<td>4</td>
</tr>
<tr>
<td><strong>Disciplinary &amp; Interdisciplinary Distribution Requirements:</strong></td>
<td>19 S.H.</td>
<td>*ENGR 2403 World Literature</td>
<td>4</td>
</tr>
<tr>
<td>Fine Arts/Art History</td>
<td>3</td>
<td>ES 2101 Geo-Hydro Systems</td>
<td>4</td>
</tr>
<tr>
<td>Philosophy or Religion</td>
<td>3</td>
<td>ES 2400 Intro to Oceanography</td>
<td>4</td>
</tr>
<tr>
<td>Foreign Languages (Must take I and II for credit)</td>
<td>3</td>
<td>ES 3010 Data Analysis and Modeling in GeoScience</td>
<td>4</td>
</tr>
<tr>
<td>Music or Theatre</td>
<td>3</td>
<td>ES 3200 GIS in GeoScience</td>
<td>4</td>
</tr>
<tr>
<td>Interdisciplinary</td>
<td>3</td>
<td>ES 4200 Remote Sensing</td>
<td>4</td>
</tr>
<tr>
<td><strong>Humanities</strong></td>
<td>6 S.H. (from different areas)</td>
<td>Take one &quot;GE Approved&quot; course from one area below</td>
<td></td>
</tr>
<tr>
<td><strong>Social Sciences</strong></td>
<td>6 S.H. (from different areas)</td>
<td><strong>Program Focused Electives:</strong></td>
<td>12 S.H.</td>
</tr>
<tr>
<td>Psychology</td>
<td>3</td>
<td>Optional: ES 1986 Research Initiative for First Year Students</td>
<td>1</td>
</tr>
<tr>
<td>Economics or ES 1010-World Geography</td>
<td>3</td>
<td>Optional: ES 3171-3173 Internship</td>
<td>1-3</td>
</tr>
<tr>
<td>Political Science</td>
<td>3</td>
<td><strong>Major Capstone Course</strong>*:</td>
<td>3 S.H.</td>
</tr>
<tr>
<td>Sociology or Anthropology</td>
<td>3</td>
<td>SUST 4300 Independent Practicum in Sust. Science (WE)</td>
<td>3</td>
</tr>
<tr>
<td>Interdisciplinary</td>
<td>3</td>
<td><strong>FREE ELECTIVES</strong></td>
<td>8 S.H.</td>
</tr>
<tr>
<td><strong>Science and Mathematics</strong></td>
<td>7 S.H.</td>
<td>at least 50% must be 3000/4000 level</td>
<td></td>
</tr>
<tr>
<td>MATH 1016 Statistics</td>
<td>3</td>
<td></td>
<td></td>
</tr>
<tr>
<td>BIO 1000 Principles of Biology**</td>
<td>4</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

**Special Notes:**  
1. See pre-requisites and equivalencies (on page 2)  
2. University requirement for graduation for all undergraduate students that must be satisfied in one of two ways: Complete GE 1000 (all freshmen and transfers entering with 0-29 credits) or complete GE 3000 (transfers entering with 30 credits or more)  
3. ENGR 1030 requires grade of C or higher  
4. A Student whose qualifying score on the placement test makes them eligible to take either MATH 1054 or MATH 2411 may start with that course instead. In that case, the student may take 3 additional credits of free electives instead of MATH 1054 to total 120 credits.  
5. GE Distribution course required of all students  
6. **Course required by Major**  
7. ***All Major courses require a grade of C or better**  
8. ****Must earn a grade of C or better to advance to CHEM 1084

**PROGRAM REVISION DATE 8/20/19**
GENERAL EDUCATION AND UNIVERSITY REQUIREMENTS

GENERAL EDUCATION INFORMATION AND REQUIREMENTS

Testing and Placement
Incoming freshmen and transfer students may be placed in specific GE Foundations, Developmental or ESL courses as a result of testing prior to registration. Students may be exempt from testing due to SAT scores or prior college work.

Prerequisites and Equivalencies for GE Foundations Courses

GE 1000
Required of all freshmen & transfers entering with 0-29 credits
Prereq: None
Equiv: ID 1001

GE 3000
Required of transfers entering with 30 credits or more
Prereq: 30 credits and ENG 1030

ENG 1030
Prereq: Placement testing or exemption from placement testing
Equiv: ENG 1031/1032, ENG 1033/1034, ENG 1430, ENG 1620, ENG 1020, ENG 1400

MATH 1000 or 1010 or 1016 or 1030
Prereq: MATH 0901 if required by placement testing
Equiv of MATH 1000: MATH 1001/1002, MATH 1003/1004, MATH 1051

MATH 1044* or 1054
Prereq: MATH 0901 if required by placement testing and MATH 1000
*MATH 1044 is available as a Foundation option for CBPM students only

COMM 1402
Prereq: CS 0412 if required by placement testing
ENG 1031/1032 or ENG 1033/1034 if required by placement testing
May be taken concurrently with ENG 1030
Equiv: COMM 1400

GE 2021-2025 Research and Technology is offered as college-based course
GE 2021 College of BPM
GE 2022 College of EDU
GE 2023 College of CLA
GE 2024 College of NAHS & NJCSTM & NWGC
GE 2025 SFPA & Michael Graves College
GE 2026 Undecided Majors and other special populations
Prereq: CS 0412 if required by placement testing
ENG 1030 or equivalent
COMM 1402
Equiv: GE 2020

GE Distribution Courses

Approved GE Distribution Courses
All courses taken under the General Education Disciplinary/Interdisciplinary Distribution requirements must be selected from the Approved General Education Distribution Course List.
These courses are designated as GEHU, GESS, and GESM.
GEHU Humanities
GESS Social Sciences
GESM Science and Mathematics

Required GE Distribution Courses

ENG 2403 is a required Humanities Distribution course with an emphasis on diversity.
Prereq: CS 0412 if required by placement testing; ENG 1030 or equivalent
Equiv: ENG**2203

HIST 1062 is a required Social Sciences Distribution course.
Prereq: None

Foreign Language Credit
The three credits for a foreign language that may satisfy the GE Disciplinary/Interdisciplinary Distribution Requirement are awarded only upon successful completion of the second of two semesters of study at the introductory or intermediate level.
Credit for the first semester may be used as elective credit.

UNIVERSITY REQUIREMENTS

GE 1000/3000 Requirement
All undergraduate students must satisfy this University requirement for graduation by successfully completing one of the following courses at Kean University: GE 1000 Transition to Kean (all freshmen and transfers entering with 0-29 credits) or GE 3000 Transfer Transitions (transfers entering with 30 credits or more).

Writing-Emphasis Requirement
All students are required to complete the "Writing-Emphasis" course. The "W-E" course must be within the major portion of your program. Consult your major program advisor for specific information.