**KEAN UNIVERSITY - COLLEGE OF NATURAL, APPLIED AND HEALTH SCIENCES**

(72101) B.A. IN CHEMISTRY (PRE-PROFESSIONAL OPTION) 120 S.H.

Minimum GPA Required for Declaration: 2.00
Minimum GPA Required for Major: 2.00
Overall Minimum GPA Required for Graduation: 2.00

**EFFECTIVE DATE:** Fall 2019

<table>
<thead>
<tr>
<th>GENERAL EDUCATION 42 Semester Hours (S.H.)</th>
<th>ACADEMIC MAJOR***</th>
<th>45 S.H. (Total)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Foundation Requirements: 13 S.H.</td>
<td></td>
<td>30 S.H.</td>
</tr>
<tr>
<td>GE 1000 Transition to Kean or GE 3000 Transfer Transitions</td>
<td>1 CHEM 1083 Chemistry I</td>
<td>4</td>
</tr>
<tr>
<td>ENG 1030 Composition</td>
<td>3 CHEM 1084 Chemistry II</td>
<td>4</td>
</tr>
<tr>
<td>MATH 1000 College Algebra</td>
<td>3 CHEM 2283 Quantitative Analysis</td>
<td>4</td>
</tr>
<tr>
<td>COMM 1402 Speech Communication</td>
<td>3 CHEM 2581 Organic Chemistry I</td>
<td>3</td>
</tr>
<tr>
<td>GE 2024 Research &amp; Technology</td>
<td>3 CHEM 2582 Organic Chemistry II</td>
<td>3</td>
</tr>
<tr>
<td>Disciplinary &amp; Interdisciplinary</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Distribution Requirements: 29 S.H.</td>
<td></td>
<td>1</td>
</tr>
<tr>
<td>Humanities 9 S.H. (from different areas)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>&quot;ENG 2403 World Literature</td>
<td>3 CHEM 3284 Instrumental Method of Analysis &quot;WE&quot;</td>
<td>4</td>
</tr>
<tr>
<td>Take two &quot;GE Approved&quot; courses from two areas below:</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Fine Arts/Art History</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Philosophy or Religion</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Foreign Languages (Must take I and II for credit)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Music or Theatre</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Interdisciplinary</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Social Sciences 9 S.H. (from different areas)</th>
<th><strong>GE and Major Capstone Course</strong>: 3 S.H.</th>
</tr>
</thead>
<tbody>
<tr>
<td>HIST 1062 Worlds of History</td>
<td>CHEM 4908 Seminar in Chemistry</td>
</tr>
<tr>
<td>Take two &quot;GE Approved&quot; courses from two areas below:</td>
<td></td>
</tr>
<tr>
<td>Psychology</td>
<td>FREE ELECTIVES 21 S.H.</td>
</tr>
<tr>
<td>Economics or ES 1010</td>
<td>at least 50% must be 3000/4000 level</td>
</tr>
<tr>
<td>Political Science</td>
<td></td>
</tr>
<tr>
<td>Sociology or Anthropology</td>
<td></td>
</tr>
<tr>
<td>Interdisciplinary</td>
<td></td>
</tr>
</tbody>
</table>

| Science and Mathematics 11 S.H.             |                                          |                |
| MATH 1054 Precalculus                      |                                          |                |
| PHYS 2095 Physics I                        | 4 Recommended: CHEM 1906 Introduction to Chemistry Research | 4 |
| PHYS 2195 Physics II                       | 4 Recommended: CHEM 3291-3293 Chemistry Co-Op Internship 1-3 | 1 |

<table>
<thead>
<tr>
<th>ADDITIONAL REQUIRED COURSES 24 S.H.</th>
<th>Special Notes:</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>BIO 1300 General Biology I</td>
<td>See pre-requisites and equivalencies (on page 2)</td>
<td></td>
</tr>
<tr>
<td>BIO 1400 General Biology II</td>
<td>All undergraduate requirement for graduation for all undergraduate students that must be satisfied in one of two ways: Complete GE 1000 (all freshmen and transfers enter with 0-29 credits) OR complete GE 3000 (transfers entering with 30 credits or more)</td>
<td></td>
</tr>
<tr>
<td>MATH 2415 Calculus I</td>
<td>4 ENG 1030 requires grade of C or higher</td>
<td></td>
</tr>
<tr>
<td>MATH 2416 Calculus II</td>
<td>4 *GE Distribution course required of all students</td>
<td></td>
</tr>
<tr>
<td>MATH 3415 Calculus III</td>
<td>4 **Course required by Major</td>
<td></td>
</tr>
<tr>
<td>PHYS 2197 Physics III</td>
<td>4 ***All Major courses require a grade of C or better</td>
<td></td>
</tr>
</tbody>
</table>

Rev. Rev. 7/3/2019
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

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 2021-2026 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 SVPA & Michael Graves College
GE 2026 Undecided Majors and other special populations
Prereqs: 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 one "Writing-Emphasis" course. The "W-E" course must be within the major portion of your program. Consult your major program advisor for specific information.