

# KEAN UNIVERSITY – COLLEGE OF SCIENCE, TECHNOLOGY & MATHEMATICS

## (BIOED) B.A. Biology Education 121 S.H.

Minimum GPA Required for Declaration and Graduation: 3.0 \*\*\*

| GENERAL EDUCATION: 31-32 S.H.                                                                                       |     | ACADEMIC MAJOR REQUIREMENTS: 34-35 S.H.                                                                                                                                                                        |     |
|---------------------------------------------------------------------------------------------------------------------|-----|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----|
| Essential Learning Courses <sup>*,1</sup> : 16 S.H.                                                                 |     | **Major Required Courses <sup>1</sup> : 24 S.H.                                                                                                                                                                |     |
| <b>Critical Reading &amp; Academic Study Skills</b>                                                                 | 4   | BIO 1300 General Biology I: Cell Biology and Genetics                                                                                                                                                          | 4   |
| <i>All students must take 1 credit in Academic Study Skills: either GE*1000 or GE*3000</i>                          | 1   | BIO 1400 General Biology II: Evolution, Biodiversity, and Ecology                                                                                                                                              | 4   |
| <i>All students must take 3 credits in Critical Reading from the GE PLO Course List.</i>                            | 3   | BIO 2500 Principles of Botany                                                                                                                                                                                  | 4   |
| <b>Written Communication**</b>                                                                                      | 3   | BIO 3400 Zoology: Form and Function                                                                                                                                                                            | 4   |
| <i>All students must take 3 credits in Written Communication from the GE PLO Course List.</i>                       |     | BIO 3614 Principles of Ecology (W-E)                                                                                                                                                                           | 4   |
| <b>Speech Communication</b>                                                                                         | 3   | BIO 3709 Genetics                                                                                                                                                                                              | 4   |
| <i>All students must take 3 credits in Speech Communication from the GE PLO Course List.</i>                        |     | <b>**Major Electives<sup>1</sup>: 7-8 S.H.</b> Bio courses intended for Biology majors at 2000-4000 level are eligible as Biology Major Electives (pg. 3)                                                      |     |
| <b>Quantitative &amp; Scientific Reasoning</b>                                                                      | 6-7 |                                                                                                                                                                                                                | 4   |
| <i>All students must take either MATH*1016 or MATH*1054 (3 credits each)<sup>3</sup>.</i>                           | 3   |                                                                                                                                                                                                                | 3   |
| <b>FOR EDUCATION MAJORS BIO 1200<sup>3</sup> or BIO 1000<sup>3</sup></b>                                            | 3-4 | <b>**Major/GE Capstone: 3 S.H.</b>                                                                                                                                                                             |     |
| <b>Core Competency Courses<sup>*</sup>: 12 S.H.</b>                                                                 |     | BIO 4970 Seminar Integrative Biology                                                                                                                                                                           | 3   |
| <b>Intercultural Knowledge &amp; Understanding</b>                                                                  | 3   | <b>***Required Professional Education Courses<sup>1</sup>: 34 S.H.</b>                                                                                                                                         |     |
| <i>All students must take 3 credits in Intercultural Knowledge &amp; Understanding from the GE PLO Course List.</i> |     | <b>COE: Sophomore Level Transition: Intended</b>                                                                                                                                                               |     |
| <b>Critical &amp; Creative Thinking</b>                                                                             | 3   | EMSE 2801 Clinical Experience I in Subject Area Instruction K-12 <sup>3</sup>                                                                                                                                  | 3   |
| <i>All students must take 3 credits in the Critical &amp; Creative Thinking from the GE PLO Course List.</i>        |     | <b>COE: Sophomore Level Transition: Declared<sup>6,7</sup></b>                                                                                                                                                 |     |
| <b>Ethical Reasoning</b>                                                                                            | 3   | SPED 2056 Human Exceptionality <sup>3</sup>                                                                                                                                                                    | 3   |
| <i>All students must take 3 credits in Ethical Reasoning from the GE PLO Course List.</i>                           |     | EMSE 3122 Technology in Education                                                                                                                                                                              | 3   |
| <b>Wellness</b>                                                                                                     | 3   | <b>COE: Junior Level Transition: Pre Professional A<sup>7</sup></b>                                                                                                                                            |     |
| <b>FOR EDUCATION MAJORS PSY 1000 ONLY</b>                                                                           | 3   | EDUC 3000 Curriculum, Evaluation and the Learner                                                                                                                                                               | 3   |
| <b>Inquiry &amp; Analysis Passion Project<sup>*</sup>: 3 S.H.</b>                                                   | 3   | RDG 3401 Language Arts/Reading in K-12 Content Area Teaching                                                                                                                                                   | 3   |
| <i>All students must take 3 credits in Inquiry &amp; Analysis from the GE PLO Course List.</i>                      |     | <b>COE: Junior Level Transition: Pre Professional B</b>                                                                                                                                                        |     |
|                                                                                                                     |     | EMSE 3903 English Language Learners in American Schools                                                                                                                                                        | 1   |
| <b>Additional Required Courses: 21 S.H.</b>                                                                         |     | OPTIONAL COURSES/NOT REQUIRED: EMSE 3811 Clinical Experiences II: Applied Practice and EDUC 3002 Lesson Plan Design and Implementation in early childhood, elementary education and middle/secondary education | 0-3 |
| CHEM 1083 Chemistry I <sup>4</sup>                                                                                  | 4   | <b>COE: Senior 1<sup>st</sup> Semester Transition: Professional A</b>                                                                                                                                          |     |
| CHEM 1084 Chemistry II                                                                                              | 4   | EMSE 3230 Science Education K-12 <sup>8</sup>                                                                                                                                                                  | 3   |
| ES 1000 Observing the Earth                                                                                         | 3   | EMSE 4711 Clinical I Practice in Subject area K-12 <sup>9,10</sup>                                                                                                                                             | 3   |
| Math 1016 Statistics <sup>3</sup> or MATH 1054 Precalculus <sup>5</sup>                                             | 3   | <b>COE: Senior 2<sup>nd</sup> Semester Transition: Professional B<sup>12, 13</sup></b>                                                                                                                         |     |
| PHYS 2091 General Physics I                                                                                         | 4   | EMSE 4811 Clinical II in Subject Area Instruction K-12 <sup>10,11</sup>                                                                                                                                        | 9   |
| PSY 2110 Psychology of Adolescence <sup>3</sup>                                                                     | 3   | EDUC 4000 Teacher and Classroom                                                                                                                                                                                | 3   |
|                                                                                                                     |     |                                                                                                                                                                                                                |     |
| For all prerequisites, equivalencies and notes, see page 2 and 3.                                                   |     |                                                                                                                                                                                                                |     |

# GENERAL EDUCATION AND UNIVERSITY REQUIREMENTS

## GENERAL EDUCATION INFORMATION AND REQUIREMENTS

### Testing and Placement

Incoming freshmen and transfer students may be placed in specific GE Essential Learning, 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 Essential Learning Courses

#### **GE\*1000**

Required of all freshmen & transfers entering with 0-29 credits

Pre-requisite: None

Equivalency: ID\*1001

#### **GE\*3000**

Required of transfers entering with 30 credits or more

Pre-requisite: 30 credits and ENG\*1030 (or equivalent)

#### **ENG\*1030**

Pre-requisite: Placement testing or exemption from placement testing

Equivalency: ENG\*1031/1032, ENG\*1033/1034, ENG\*1430, ENG\*1620, ENG\*1020, ENG\*1400

#### **MATH\*1016**

Pre-requisite: MATH\*0901 if required by placement testing

Co-requisite: MATH\*0902 should be taken concurrently with Math\*1016 if required by placement testing

#### **MATH\*1054**

Pre-requisite: MATH\*0901 if required by placement testing and MATH\*1000

#### **COMM\*1402**

Pre-requisite: ENG\*1031/1032 or ENG\*1033/1034 if required by placement testing; May be taken concurrently with ENG\*1030

Equivalency: COMM\*1400

### Inquiry & Analysis PLO

**GE 2021- 2026:** *Research and Technology* is offered as a college-based course.

Pre-requisite: CS\*0412 if required by placement testing; Written Communication course

Equivalency: GE\*2020

GE\*2021: College of Business and Public Management

GE\*2022: College of Education & College Health Professions and Human Services

GE\*2023: College of Liberal Arts

GE\*2024: College of Science, Mathematics, and Technology & College Health Professions and Human Services

GE\*2025: Departments of Fine Arts, Music, and Theatre & Michael Graves College

GE\*2026: Undecided Majors and other special populations

## GE PLO Courses

### Approved GE PLO Course List

All courses taken under the General Education Essential Learning and Core Competency requirements must be selected from the Approved General Education PLO Course List.

### Foreign Language Credit

The three credits for a foreign language that may satisfy the GE Intercultural Knowledge & Understanding 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 an elective.

## 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

To graduate, all students are required to complete at least one "Writing Emphasis" course within their major. Such courses are designed to provide students with an opportunity to explore writing as it is done in their chosen field. Typically, Writing Emphasis courses are taken in the junior or senior year, after the student's initial composition courses are completed. Students should consult their major program advisor for specific information about the Writing Emphasis course requirement.

**Special Notes:**

- \* GE required Courses
- \*\* All major courses require a grade of C or better
- \*\*\* All EDUC, EMSE, RDG, SPED courses require a grade of B or better

<sup>1</sup>See Prerequisites & Equivalencies (below).

<sup>2</sup>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).

<sup>3</sup>Requires a grade of B or higher

<sup>4</sup>Requires a grade of C or higher

<sup>5</sup>With qualifying placement test scores, this course may be substituted with a free elective. If you place into MATH 0901 or Math 1000, additional credits will be required beyond the 120 S.H.

<sup>6</sup>candidates must hold a valid substitute credential as a declaration requirement

<sup>7</sup>Should be completed prior to Clinical I

<sup>8</sup>should be done in conjunction with Clinical I

<sup>9</sup>Requires Submission of application for Clinical I prior to registration. Students must submit passing scores for the Praxis Biology Content Knowledge test and the Praxis General Science test prior to Clinical I. Please see the Office of Student Placement and Clinical Experiences for submission deadlines and the application process.

<sup>10</sup>Clinical I and II must be done back-to-back and in consecutive semesters

<sup>11</sup> Clinical II prerequisite: Passing score on the Praxis II: A passing score on the appropriate Praxis II score must be submitted to the advisor and the office of clinical placements by the required deadline. No student may enter Clinical II unless the passing score is submitted as required.

<sup>12</sup> As an NJDOE requirement, Clinical II must be done in the final semester prior to graduation and taken in conjunction with SPED 4200, the capstone education class. Any additional coursework left to that final Clinical II semester is discouraged and may only be done with the written permission of the dean of education. All students are highly encouraged to complete all course requirements beyond EMS 4811 and SPED 4200 prior to this final Clinical II semester, as even a few remaining credits will delay NJDOE's issue date of the Certificate of Eligibility with Advanced Standing.

<sup>13</sup> Students must successfully complete the Kean Educator Evaluation of Performance (KEEP) in order to be eligible for certification.

**Course Prerequisites**

BIO 1300: Prerequisite MATH 1000, Corequisite MATH 1054 (precalc)

BIO 1400: Prerequisite BIO 1300

BIO 2500: BIO 1300

BIO 3260: BIO 1400 and 12 credits in Biology or permission of instructor

BIO 3315: BIO 1400

BIO 3400: BIO 1400, CHEM 1084

BIO 3403: BIO 1400, CHEM 1084, GE 2024, or instructor permission

BIO 3404: BIO 3403

BIO 3614: BIO 1400, MATH 1016 or instructor permission

BIO 3709: BIO 1400

BIO 4316: 16 credits of Biology which must include BIO1400 or Instructor permissions

BCHM 4115: CHEM 2582

BIO 4970: 20 credits of biology plus senior biology major status

CHEM 1083: Prerequisite MATH 1000 (College Algebra); Corequisite MATH 1054 (Precalc)

CHEM 1084: MATH 1054, CHEM 1083 with grade of C or better

CHEM 2581 and 2581L: CHEM 1084 with grade of C or better

CHEM 2582 and 2582L: CHEM 2581 and CHEM 2581L with grade of C or better

MATH 2415: MATH 1054 (Precalc)

PHYS 2091: MATH 1054 (Precalc) or equivalent.

PHYS 2092: PHYS 2091