

**KEAN UNIVERSITY**  
**THE DOROTHY AND GEORGE HENNINGS COLLEGE OF SCIENCE, MATHEMATICS AND TECHNOLOGY**  
**(78295) B.A. IN MATHEMATICAL SCIENCES (Teacher Certification K-12) 128 S.H**  
**DUAL CERTIFICATION FOR TEACHERS OF STUDENTS WITH DISABILITIES K-12 MATH**  
**Minimum GPA Required for Declaration: 3.0**  
**Minimum GPA Required for Major: 3.0**  
**Overall Minimum GPA Required for Graduation: 3.0**  
**EFFECTIVE DATE: FALL 2019**

| <b>GENERAL EDUCATION 41-42 Semester Hours (S.H.)</b>  |                   | <b>ACADEMIC MAJOR</b>   | <b>40 S.H. (Total)</b> |
|---|-------------------|---|------------------------|
| <b>Foundation Requirements:<sup>1</sup></b>   | <b>13 S.H.</b>    | <b>*** Foundation Core Courses:</b>   | <b>18 S.H.</b>         |
| GE 1000 Transition to Kean <sup>2</sup> –or– GE 3000 Transfer Transitions <sup>2</sup>  | 1                 | MATH 2415 Calculus I  | 4                      |
| **ENG 1030 Composition  | 3                 | MATH 2416 Calculus II   | 4                      |
| MATH 1054 Precalculus <sup>3,4</sup>  | 3                 | MATH 2995 Matrix and Linear Algebra   | 3                      |
| **COMM 1402 Speech Communication  | 3                 | MATH 3415 Calculus III  | 4                      |
| GE 2024 Research & Technology   | 3                 | MATH 3544 Probability and Math Statistics   | 3                      |
|   |                   |   |                        |
| <b>Disciplinary &amp; Interdisciplinary Distribution Requirements:<sup>1</sup></b>  | <b>29-30 S.H.</b> | <b>*** Concentration Courses:</b>   | <b>13 S.H.</b>         |
| <b>Humanities 9 S.H. (from different areas)</b>   |                   | MATH 2526 Applied Statistics I  | 3                      |
| *ENG 2403 World Literature  | 3                 | MATH 2800 Mathematical Software   | 1                      |
| <b>Take two "GE Approved" courses from two areas below:</b>   |                   | MATH 3110 Intro to Proofs   | 3                      |
| Fine Arts or Art History  | 3                 | MATH 3342 Euclidean and Non-Euclidean Geometry  | 3                      |
| Philosophy or Religion  | 3                 | MATH 3891 History of Mathematics  | 3                      |
| Music or Theatre  | 3                 |   |                        |
| Interdisciplinary   | 3                 | <b>*** Major Elective Courses (with advisement, 3000-4000) 6 S.H</b>  |                        |
|   |                   | MATH  | 3                      |
|   |                   | MATH  | 3                      |
| <b>Social Sciences 9 S.H.</b>   |                   |   |                        |
| *HIST 1062 Worlds of History  | 3                 | <b>**** Major Capstone Course:</b>  | <b>3 S.H.</b>          |
| PSY 1000 General Psychology   | 3                 | MATH 4890 Senior Seminar in Mathematics (WE)  | 3                      |
| SOC 1000 Sociology or ANTH 1800 Cultural Anthropology   | 3                 |   |                        |
|   |                   | <b>PROFESSIONAL EDUCATION: (B or BETTER)</b>  | <b>33 S.H</b>          |
|   |                   | <i>Must pass Praxis I and have a GPA of 3.0 before applying for admission to the Middle and Secondary Education (MSE) Department.</i> |                        |
|   |                   | <b>Sophomore Level</b>  |                        |
| <b>Science and Mathematics S.H.</b>   | <b>10 or 11</b>   | +EMSE 2801 Intro to Field Exp.**  | 3                      |
|   |                   | +SPED 2200 Multicultural Learner in Diverse Settings **   | 3                      |
| CPS 1231 Fund of Comp Science   | 4                 | <b>Junior Level (2<sup>nd</sup> Semester)</b>   |                        |
| BIO 1000 Principles of Biology  | 4                 | EDUC 3000 Curriculum, Evaluation and Learner  | 3                      |
| Additional Science Course: Biology, Chemistry; Environmental Science, Earth Science, Forensics Science, Interdisciplinary, Physics, or Sustainability Science | 3,4               | +EDUC 3401 Lang/ Rdg. in Sec curriculum   | 3                      |
|   |                   | <b>Senior Level (1<sup>st</sup> Semester)</b>   |                        |
|   |                   | +SPED 3000 Prin & Practice Contemp. Educ. (WE)  | 3                      |
|   |                   | +EMSE 3220 Math Ed in K-12 (WE)   | 3                      |
|   |                   | +EMSE 4711 Clinical I Practice/ Subj  | 3                      |
| <b>ADDITIONAL REQUIRED COURSES S.H.</b>   | <b>12</b>         |   |                        |

|   |                  |   |            |
|---|------------------|---|------------|
| PSY 2110 Psychology of Adolescence <sup>5</sup><br>+ID 2052 Human Exceptionality**<br>ID 3051 Tech Universal Design<br>ID 3163 Classroom Management   | 3<br>3<br>3<br>3 | <b>Senior Level (2<sup>nd</sup> Semester)</b><br>EMSE 4811 Clinical II Practice/ Subj<br>(Prereq: Passing Score on Math Praxis II), (edTPA required and completed with state's qualifying score during Clinical II)<br>SPED 4200 Teacher and Classroom                              | 9<br><br>3 |
|   |                  | <b>FREE ELECTIVES:</b> <b>1-2</b><br><b>S.H****</b> Optional: MATH 1996 Research Methods<br>S.H.  | 1          |
| Special Notes:<br>1 See prerequisites and equivalencies.<br>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)<br>3 Students who do not qualify on the placement test to take MATH 1054 must take MATH 1000 first.<br>4 Students whose qualifying score on the placement test makes them eligible to take Math 2415 may take that course instead. In that case the student must take another 3 credits in free electives to total 128 S.H.<br>5 PSY 1000 is a prerequisite for PSY 2110. |                  | Special Notes:<br>+ Prerequisite: 3.0 Cumulative GPA<br>*G.E. required course;<br>WE: Writing Emphasis<br>**A grade of B- or higher required.<br>***All math major courses require a grade of C or better.<br>****No mathematics courses allowed other than MATH 1000 or MATH 1996, |            |

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## GENERAL EDUCATION AND UNIVERSITY REQUIREMENTS

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

### 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

**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.