KEAN UNIVERSITY
The Dorothy and George Hennings College of Science, Mathematics, and Technology
(70190) BA. BIOLOGY EDUCATION
120 Semester Hours (S.H.)
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 2023

GENERAL EDUCATION: 42 SH		**ACADEMIC MAJOR REQUIREMENTS: 64-65 SH**	
FOUNDATION REQUIREMENTS[1]: 13 SH		****Major Required Courses Biology[1]: 24 SH**	
*GE 1000 or Transition to Kean [2] or *GE 3000 Transfer Transitions[2]	1	BIO 1300 General Biology I	4
		BIO 1400 General Biology II	4
ENG 1030 College Composition[3]	3	BIO 2500 Principles of Botany	4
MATH 1054 Precalculus[4,6]	3	BIO 3400 Zoology: Form and Function	4
COMM 1402 Speech Communication[3]	3	BIO 3614 Principles of Ecology (W-E)	4
GE 2024 Research & Technology	3	BIO 3709 Genetics	4
DISCIPLINARY & INTERDISCIPLINARY DISTRIBUTION REQUIREMENTS: 29 SH		****Major Electives: 6-7 SH** **Bio courses intended for Biology majors at 2000-4000 level are eligible as Biology Major Electives (pg. 3)[6,7,8]** **A minimum of three credits must be at the 3000-4000 level**	
***Humanities:* 9 SH**			3 - 4
*ENG 2403 World Literature	3		2- 3
Take two "GE-Approved" Humanities courses from below		*Optional* Course BIO 1996 Freshman Research[8]	0 - 2
Fine Arts/ Art History	3	****Major/GE Capstone: 3 SH**	
Philosophy or Religion	3	BIO 4970 Seminar Integrative Biology	3
Foreign Languages (must take I and II for credit)[5]	3		
Music or Theatre	3	*****Professional Education Courses: 31 SH**	
Interdisciplinary (ID 1300, ID 1500, ID 3230)	3	**SOPHOMORE LEVEL**	
***Social Sciences:* 9 SH**		EMSE 2801 Clinical Experience I in Subject Area Instruction K-12[3,9,15]	3
*HIST 1062 Worlds of History	3	**JUNIOR LEVEL**	
PSY 1000 General Psychology	3	EDUC 3000 Curriculum, Evaluation and the Learner[9]	3
Choose one "GE-Approved" Social Science Course from below:		EDUC 3401 Language Arts/Reading in K-12 Subject Area Teaching[9]	3
ID 1350 or ID 2415	3	EMSE 3122 Technology in Education[9]	3
ES 1010 World Geography	3	**SENIOR LEVEL FIRST SEMESTER**	
Economics or Political Science or Sociology or Anthropology	3	EMSE 3230 Science Education K-12[12]	3
		EMSE 3903 English Language Learners in American Schools[12]	1
Science and Mathematics: 11 SH		EMSE 4711 Clinical I Pract. in Sub. Area K-12[10,11,16]	3
CHEM 1083 Chemistry I[6]	4	**SENIOR LEVEL SECOND SEMESTER**	
CHEM 1084 Chemistry II[6]	4	EMSE 4811 Clinical II Practice in Sub. Area Instruction K-12 [11,13,14]	9
ES 1000 Observing Earth	3	EDUC 4000 Teacher and the Classroom	3
ADDITIONAL REQUIRED COURSES: 13-14 SH			
PSY 2110 Psychology of Adolescence	3		

ID 2052 Human Exceptionality[9]	3		
MATH 1016 Stats. **or** MATH 2415 Calculus 1	3-4		
PHYS 2091 General Physics 1[6]	4	**See page 2 and 3 for superscript information.**	

Special Notes:
* GE required courses
**All major course requires a grade of C or better
*** All Professional Education courses require a grade of B- or better

[1]See Prerequisites & Equivalencies (below).
[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]Requires a grade of B- or higher
[4] With qualifying placement test scores, this course may be substituted with an elective. If you place into MATH 0901 or MATH 1000, additional credits will be required beyond the 120 S.H.
[5] Both I & II must be completed giving credit as a foreign language plus one free elective
[6] Requires a grade of C or higher
[7] Lecture course must be taken concurrently or prior to the corresponding lab.
[8] Maximum of 2 credits for BIO 1996 and BIO 3900 are allowed. BIO 2402, BIO 2403, BIO 2404 are excluded because these are non-major courses.

GENERAL EDUCATION INFO & 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 freshman and transfers enter in with 0-29 credits. Prereq: None; Equivalent ID 1001
GE 3000: Required of all transfers entering with 30 credits or more. Prereq: 30 credits and ENG 1030.
ENG 1030 Prereq: Placement testing or exemption from placement testing. ENG 1025 if required by placement testing. Equiv: ENG 1031/32; ENB 1033/34; ENG 1430 (ESL version); ENG 1620 (Honors version) ENG 1020; 1400
MATH 1000 or MATH 1044: Prereq: MATH 0901 if required by placement testing. *MATH 1044 is available as a Foundation option for CBPM students only. Equiv. of MATH 1000: MATH 1001/1002, MATH 1003/1004, MATH 1051
MATH 1010 or 1016 or 1030: Prereq: MATH 0901 if required by placement testing. Co-requisite: MATH 0902 (only required, with advisement, based on placement test score and intended major)
MATH 1054: Prereq: MATH 0901 if required by placement testing and MATH 1000
COMM 1402 Prereq: CS 0412 if required by placement testing. May be taken concurrently with ENG 1030; Equiv: COMM 1400

GE 2021-2026 Research & Technology is offered as college-based course
GE 2021 College of BPM; GE 2022 College of EDU; GE 2023 All College of CLA; GE 2024 College of SMT & NJSTEM & NWGC (Speech, Language, and Hearing Science majors); GE 2025 SFPA & Michael Graves College; GE 2026 Undecided Majors and other special populations. Prereqs: CS 0412 if required by placement testing; ENG 1030 or equivalent course. Equiv: GE 2020

General Education Distribution Courses

All courses under GE Disciplinary/Interdisciplinary Distribution requirements must be selected from the Approved GE Distribution Course List. (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 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.

Note: Equivalent courses may be prior General Education or prerequisite course work taken by students that is now discontinued.

Prerequisites and co-requisites may change; please consult KeanWise course descriptions for the most current information. Some courses may require approved petitions.

Your major's department is located in the George Hennings Hall, Room C-124 on the Main Campus. The telephone number is 908-737-3650.

Course Prerequisites (Pre/Corequisites may change, consult Keanwise; Some course may require approved petitions)
BIO 1300: Prerequisite MATH 1000, Corequisite MATH 1054 (precalc)
BIO 1400: Prerequisite BIO 1300 or STME 1700 and STME 1799
BIO 2500: BIO 1300 or STME 1700 and STME 1799
BIO 3400: BIO 1400 or STME 1800 and STME 1899, CHEM 1084 or STME 1100 and STME 1199
BIO 3403: BIO 1400 or STME 1800 and STME 1899, CHEM 1084 or STME 1100 and STME 1199, GE 2024, or instructor permission
BIO 3404: BIO 3403
BIO 3614: BIO 1400 or STME 1800 and STME 1899, MATH 1016 or instructor permission
BIO 3709: BIO 1400 or STME 1800 and STME 1899
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 or STME 1000 and STME 1099 with grade of C or better
CHEM 2581 and 2581L: CHEM 1084 or STME 1100 and STME 1199 with grade of C or better
CHEM 2582 and 2582L: CHEM 2581 or STME 2681 and CHEM 2581L or STME 2682 with grade of C or better
MATH 2415: MATH 1054 (Precalc)
PHYS 2091: MATH 1054 (Precalc) or equivalent.
PHYS 2092: PHYS 2091

Acceptance into the University is NOT acceptance into the Secondary Education Department. This is a separate process. No education courses beyond EMSE 2801 may be taken until student is declared into the program. The criteria for SE program admission/declaration includes:

A. Minimum Kean GPA of 3.0
B. Completion of the following courses/minimum grades
    1. ENG 1030 College Composition (minimum grade of B-)
    2. COMM 1402 Speech Comm as Critical Citizenship (minimum grade of B-)
    3. EMSE 2801 Intro to Field Experience in Subject Area P-12 (minimum grade of B-)
    4. Laboratory Science course (minimum grade of C)
    5. Math requirement (minimum grade of C)
C. Passing score on the Praxis Core Academic Skills Test

[9] must be completed prior to Clinical I
[10] Requires Submission of an application with the Office of Clinical Practice and Teacher Placement prior to registration
[11] Clinical I and II must be done back-to-back and in consecutive semesters
[12] should be done in conjunction with Clinical I
[13] 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 Practice and Teacher Placement by the required deadline. No student may enter Clinical II unless the passing score is submitted as required.
[14] As an NJDOE requirement, EMSE 4811 Clinical Practice II must be done in the final semester, prior to graduation and taken in conjunction with EDUC 4000 Clinical Education Capstone. Students are highly encouraged to complete all other course requirements prior to advancing to their final semester, as even a few remaining credits will delay the NJDOE's issue date of the Certificate of Eligibility with Advanced Standing (CEAS). Outstanding coursework beyond the final semester may only be done with the written permission from the Dean of the College of Education.
[15] Students are required to apply for and acquire their substitute credential prior to completion of EMSE 2801
[16] Students are required to apply for and acquire their substitute credential prior to submitting an application for EMSE 4711