KEAN UNIVERSITY—THE DOROTHY AND GEORGE HENNINGS COLLEGE OF SCIENCE, MATHEMATICS, AND TECHNOLOGY
(70307) B.S. in Biology: Health Professions Option 120 SH
Minimum GPA Required for Graduation: 2.00*

Effective date: Fall 2025

GENERAL EDUCATION: 32 S.H.		****ACADEMIC MAJOR REQUIREMENTS: 41 SH**	
Foundations Requirements[1]: 13 SH		***Major Required Courses[1,6,7]: 30 SH***	
GE 1000 Transition to Kean **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 3100 Medical Terminology	3
MATH 1054 Precalculus[4,6]	3	BIO 3403 Anatomy and Physiology I	4
COMM 1402 Speech Communication	3	BIO 3404 Anatomy and Physiology II	4
GE 2024 Research & Technology	3	BIO 3416 Neuroscience[7]	3
		BIO 3416L Neuroscience lab[7]	1
DISCIPLINARY & INTERDISCIPLINARY DISTRIBUTION REQUIREMENTS: 19 SH		BIO 3709 Genetics	4
		BIO 4316 Immunology[7]	3
GE Humanities (from different areas): 6 SH		******Major Elective Courses: 11 SH*** ***Bio courses intended for Biology majors at 2000-4000 level are eligible as Biology Major Electives[1,6,7,8] A minimum of 6 credits must be at the 3000-4000 level***	
ENG 2403 World Literature	3		
Take one "GE-Approved" Humanities course from below (GEHU): 3 SH			
Interdisciplinary	3	****Major/GE Capstone Course: 3 SH**	
Fine Arts/Art History	3	BIO 4970 Seminar in Integrative Biology	3
Philosophy or Religion	3	**Required: Special Concentration 14 – 18 SH *(choose ONE)*[9]**	
Foreign Language (Must take I and II for credit)[5]	3	**Physician Assistant Courses: 16 SH**	
Music or Theatre	3	BIO 3315 Principles of Microbiology[6,7]	3
GE Social Sciences: 6 SH		BIO 3315L Principles of Microbiology lab[6,7]	1
HIST 1062 Worlds of History	3	BIO 3400 Zoology Form and Function[6]	4
PSY 1000 General Psychology	3	HED 3600 Nutrition **or** BIO 3200 Bio Food Health/Disease[6]	3
GE Science and Mathematics: 7 SH		BCHM 4115 Biochemistry[6,7]	3
MATH 1016 Statistics	3	BCHM 4115L Biochemistry Lab (W-E)[6,7]	1
CHEM 1083 Chemistry I[6]	4	BIO 4316L Immunology Lab[6,7]	1
		Physical Therapy Concentration Courses: 14 SH	
ADDITIONAL REQUIRED COURSES: 20 SH		PHYS 2092 or PHYS 2196 Physics II	4
CHEM 1084 Chemistry II[6]	4	BIO 3400 Zoology Form and Function[6]	4
CHEM 2581 Organic Chemistry Lecture I[6,7]	3	PSY 3540 Abn Psych or PSY 3110 Lifespan-Dev. Psych	3
CHEM 2581L Organic Chemistry Lab I[6,7]	1	HED 3600 Nutrition **or** BIO 3200 Bio Food Health/Disease[6]	3
CHEM 2582 Organic Chemistry Lecture II[7]	3	**Occupational Therapy Concentration Courses: 15 SH**	
CHEM 2582L Organic Chemistry Lab II[7]	1	ANTH 1800 Cult. Anthro. **or** SOC 1000 Intro. Sociology	3
PHYS 2091 or PHYS 2095 Physics I[6]	4	OT 2400 Introduction to Occupational Therapy	3
MATH 2415 Calculus I	4	PSY 3110 Lifespan-Developmental Psychology	3
		PSY 3200 Psychological Statistics	3
		PSY 3540 Abnormal Psychology	3
See page 2-3 for additional footnotes and superscript information.		**Speech Language Hearing Concentration: 18 SH**	
		CDD 2254 Phonetics	3
		CDD 2256 Early Speech and Language Development	3
		CDD 2260 Anatomy and Phys. of the Ear and Speech Mec.	3
		CDD 3252 Speech, Language Communication Disorders Across the Lifespan	3
		CDD 3259 Basic Audiology	3
		CDD 3271 Speech and Hearing Science	3
		******FREE ELECTIVES: 6-10 SH (50% credits at 3000 – 4000 level)[9]**	
		BIO 1996 Res. Int. 1st Yr Students (optional)	

	BIO 3291-93 Internship (optional)[10]	

Special Notes:

* Most graduate programs require candidates to have a minimum GPA of 3.0

**All Major courses require a grade of C or better

***Students interested in pre-med, pre-dental, pre-pharmacy should check specific program prerequisites

**** Special concentration and free electives must add up to a minimum of 24 credits, while staying within the credit ranges of individual categories (i.e. 16 from PA concentration + 8 Free electives = 24 total)

[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]ENG 1030 requires a grade or C or higher

[4] With qualifying placement test scores, this course may be substituted with an elective

[5] Both I & II must be completed before receiving credit as a foreign language plus one free elective

[6]Requires a grade of C or higher

[7] Lecture course must be taken concurrently with or prior to the corresponding lab.

[8] BIO 2402, BIO 2403, BIO 2404 are excluded because these are non-major courses.

[9] Check admission requirements of graduate programs you are interested in, and fulfill additional admission requirements with free electives.

[10] Optional course. Grade is Pass or Fail. Biology major elective credits may be given instead of free elective credits (on a case-by-case basis).

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 & CHPHS (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 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, MATH 1016 or instructor permission
BIO 3709: BIO 1400
BIO 4970: 20 credits of biology plus senior biology major status (requires approved petition);
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 2583: Corequisite of CHEM 2581
CHEM 2582 and 2582L: CHEM 2581 and 2581L with grade of C or better
MATH 2415: MATH 1054 (Precalc)
PHYS 2091: MATH 1054 (Precalc) or equivalent.
PHYS 2092: PHYS 2091