

**KEAN UNIVERSITY – COLLEGE OF SCIENCE, MATHEMATICS AND TECHNOLOGY  
(76300) B.S. IN ENVIRONMENTAL SCIENCE: 120 SEMESTER HOURS (S.H.)**

Kean Declaration GPA 2.5, In the Major GPA 2.5, and Graduation GPA 2.5

**Kean University Courses are in Blue (36-37 S.H.)    Ocean County College Courses are in Green (84 S.H.)**

Effective Date: Fall 2021

See the Current Academic Catalog for Requirements to Graduate with Honors

GENERAL EDUCATION			32 Semester Hours S.H.	ACADEMIC MAJOR REQUIREMENTS		54 S.H.
Foundation Requirements: <sup>1</sup>			13 S.H.	MAJOR REQUIRED COURSES		40 S.H.
GE 3000 Transfer Transitions <sup>2</sup>			1	ENV 1100 Found Env Science	ENVI 152 Env Science	4
ENG 1030 Composition <sup>3</sup>	ENGL 151 English I		3	ENV 2100 Ecosystem Sc	BIO 3614 Principles of Ecology at KO <sup>7</sup>	4
MATH 1054 Precalculus <sup>1,5,**</sup>	MATH 191 Precalculus I		3	ENV 3051 OR ENV 4605 Field Methods Marine Research at KO <sup>7</sup>		4
COMM 1402 Speech Communication	MATH 165 or Any Unused Credits		3	ENV 3100 Principles of Environmental Soil Science		4
GE 2024 Research & Technology	ENGL 152 English II		3	ES 1101 Intro Earth/ Geo Systems		4
Disciplinary & Interdisciplinary Distribution Requirements: <sup>1</sup>			19 S.H.	ES 1300 Intro to Meteorology		4
Humanities			6 S.H. (from different areas)	ES 2101 Geo-Hydro Systems		4
ENG 2403 World Literature*	Humanities Gen Ed		3	ES 2400 Intro to Oceanography		4
Take one "GE Approved" course from one area below:				ES 3210 GIS for Env. and Health		4
Fine Arts/History	Humanities Gen Ed	3		ES 3011 Data Analysis for Environment and Health		4
Foreign Language (Must take I & II)				Major Elective Courses <sup>6</sup>		11 S.H.
Interdisciplinary				Optional: ES 3291-3293 Internship		1-2
Music or Theatre				Major Elective	Environmental Studies Elective	
Philosophy or Religion				Major Elective		
Social Sciences			6 S.H. (from different areas)	Major Elective		
HIST 1062 Worlds of History	Environmental Studies Elective		3	Major Capstone		3 S.H.
Take one "GE Approved" course from one area below:				SUST 4300 Independent Practicum in Sustainability Sciences		3
Political Science	Social Science Gen Ed	3		FREE ELECTIVES		8 S.H.
Economics or ES 1010 - World Geog				At least 50% must be 3000/4000 level		
Anthropology or Sociology				1000-4000 Elective	STSC 150 Student Success Sem	
Psychology				1000-4000 Elective	2 Credits from MATH 165 (if taken)	
Interdisciplinary				1000-4000 Elective	Any remaining 1 cr.	
Science and Mathematics			7 S.H.			
MATH 1016 Statistics**	MATH 156 Intro to Statistics		3			
CHEM 1083 Chemistry I <sup>4,****</sup>	CHEM 181 General Chemistry I		4			
Additional Requirements			26 S.H.			
BIO 1300 Introduction to Biology I <sup>4</sup>	BIOL 161 General Biology I		4			
BIO 1400 Introduction to Biology II	BIOL 162 General Biology II		4			
CPS 1231 Funds of Comp Science	Technology Gen Ed or any*!		4			
SUST 1000 Intro to Sust Science			3			
SUST 2200 Intro to Laws and Sust	ENVI 232 Environmental Policy		3			
Take any two (2) of the below three (3) courses						
CHEM 1084 Chemistry II	CHEM 182 General Chemistry II		4			
MATH 2415 Calculus I			4	Special Notes:		
PHYS 2091 General Physics			4	<sup>1</sup> See pre-requisites and equivalencies (on page 3)		
PHYS 171 Physics I			4	<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> ENG 1030 requires grade of C or higher		
				<sup>4</sup> MATH 1054 is a co-and /or pre-req.		
				<sup>5</sup> A student with course placement records may substitute it with 3 additional credits of free electives instead of MATH 1054 to total 120 credits		
				<sup>6</sup> Courses must be selected from the Approved Major Electives list		

**Special Notes:**

\*GE Distribution course required of all students

\*\*Course required by Major

\*\*\*All Major courses require a grade of C or better \*\*\*\*Must earn a grade of C or better to advance to CHEM 1084

## **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 and/or multiple measures placement prior to registration. Students may be exempt from testing due to SAT/ACT scores or prior college work.

#### **Prerequisites and Equivalencies for GE Foundations Courses**

##### **GE 1000/GE 3000 is a University Graduation**

##### **Requirement GE 1000**

Required of all freshmen & transfers entering with 0-29 credits  
Prerequisite: None  
Equivalent: ID 1001

##### **GE 3000**

Required of transfers entering with 30 credits or more  
Prerequisite: 30 credits and ENG 1030

##### **ENG 1030**

Prerequisite: Placement testing or exemption from placement testing  
ENG 1025 if required by placement testing  
Equivalent: ENG 1031/1032, ENG 1033/1034, ENG 1430 (ESL version), ENG 1620 (Honors version), ENG 1020, ENG 1400

##### **MATH 1000 or MATH 1044\***

Prerequisite: MATH 0901 if required by placement testing  
\*MATH 1044 is available as a Foundation option for CBPM students only  
Equivalent: MATH 1000: MATH 1001/1002, MATH 1003/1004, MATH 1051

##### **MATH 1010 or 1016 or 1030**

Prerequisite: 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**

Prerequisite MATH 0901 if required by placement testing and MATH 1000

##### **COMM 1402**

Prerequisite CS 0412 if required by placement testing  
ENG 1025 if required by placement testing  
May be taken concurrently with ENG 1030  
Equivalent 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 All  
College of CLA

GE 2024 College of NAHS & NJCSTM & NWGC (Speech Language and Hearing Science majors)

GE 2025 SFP & Michael Graves College

GE 2026 Undecided Majors and other special populations

Prerequisite CS 0412 if required by placement testing; ENG 1030 or equivalent course  
Equivalent: 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.

Prerequisite: CS 0412 if required by placement testing;  
ENG 1030 or equivalent  
Equivalent: ENG\*2203

**HIST 1062** is a required Social Sciences Distribution course. Prerequisite: 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.

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

### B.S. IN ENVIRONMENTAL SCIENCE APPROVED MAJOR-RELATED ELECTIVES\*

\*Subject to change as new courses are approved and old courses are eliminated. Independent Research, Independent Study, and/or Special Topics courses not listed, but will be approved on an individual basis if appropriate. Any combination of 11 semester hours may be selected to fulfill graduation requirements; however, students are strongly encouraged to select courses only after consultation with and approval of their advisor. Failure to do so may result in a less than optimal program experience.

1000 level courses	S.H.		S.H.
ECO 1020: Principles of Economics I	3	PS 1010: Introduction to Politics: Elements of Politics	3
ES 1200: Introduction to Geology	4	PSY 1000: General Psychology	3
ID 1350: Environmental Ethics	3	REC 1100: Introduction to the Recreation	3
<b>2000 level courses<sup>3</sup></b>			
BIO 2500: Principles of Botany	3	CHEM 2581 and CHEM 2581L: Organic Chemistry Lecture and Laboratory I**	4
CHEM 2180: Principles of Organic Chemistry 1	4	CHEM 2582L and 2582L: Organic Chemistry Lecture and Laboratory II***:	4
CHEM 2283: Quantitative Analysis**	4	ENV 2020: Evolutionary Biology	3
CHEM 2491: Inorganic Chemistry**	3	ENV 2500: Biomimicry	4
		SUST 2008: Introduction to Composting	4
<b>3000 level courses<sup>3</sup></b>			
BIO 3000: Marine Biology	4	ES 3264: Invertebrate Paleontology	4
BIO 3315: Microbiology*	3	ES 3265: Geomorphology	4
BIO 3315L: Microbiology Lab*	1	ES 3360: Air Pollution	3
BIO 3400: Zoology: Form and Function	4	HIST 3852: History of Science	3
BIO 3535: Field Botany	3	PHIL 3800: Environmental Philosophy	3
ENV 3180: Environmental Organic Chemistry	4	PSY 3420: Environmental Psychology	3
ENV 3201: Biodiversity	4	REC 3810: Recreation and the Environment	3
ENV 3230: Urban Ecology	4	SOC 3150: Urban Sociology	3
ENV 3250: Medicinal Botany	3	SOC 3420: Environment and society	3
ENV 3380: Environmental Instrumentation	4	SUST 3100: Renewable Energy	3
ENV 3400: Environmental Oceanography	4	SUST 3200: Environmental Health and Safety for Sustainability	3
ENV 3600: Coral Reefs and Coastal Systems	4	SUST 3300: LEED Lab and AP Credential Preparation	3
ENV 3720: Entomology	4	SUST 3400: Intro to Environmental Engineering	4
ES 3000: Global Climate Change and Society	4	SUST 3600: Global Sustainability Development	3
<b>4000 level courses<sup>3</sup></b>			
BIO 4415: Ichthyology	4	ENV 4601: Marine Conservation	4
BIO 4615: Applied Ecology	4	ENV 4602: Marine Resource Management	3
BCHM 4415: Biochemistry****	3	ENV 4605: Field Methods in Marine Research	4
BCHM 4415L: Biochemistry Lab****	1	ENV 4800: Environmental Toxicology and Human Health	4
ENV 4103L Environmental Hazards	4	ES 4200: Remote Sensing	4
ENV 4710: Physiological Ecology	4	GBUS 4320: Global Business and Technology	3
ENV 4210: Conservation Biology	4	SUST 4000 Technology for Sustainability	3
ENV 4435: Behavioral Ecology	3	SUST 4110 Life Cycle Assessment	4
ENV 4600: Plant-Animal Interactions	4	SUST 4300 LEED and AP Prep	4
		SUST 4500: Air and Solid Pollution Control	4
1 Students may not receive credit for CHEM 2180 and CHEM [2581, 2582, 2581L and 2582L]		* Courses need to be taken together for both lab and lecture sections	
		** Require CHEM1084 as a prerequisite course	
		*** Require CHEM2581 as a prerequisite course	
		**** Require CHEM2582 as a prerequisite course	