KEAN UNIVERSITY – COLLEGE OF SCIENCE, MATHMATICS, AND TECHNOLOGY
(76302) B.S. IN ENVIRONMENTAL SCIENCE 120 S.H.

Minimum GPA Required for Declaration: 2.5
Minimum GPA Required for Major: 2.5
Overall Minimum GPA Required for Graduation: 2.5

EFFECTIVE DATE: Fall 2022

GENERAL EDUCATION 32 Semester Hours (S.H.)		**ACADEMIC MAJOR REQUIREMENTS*** 54 S.H.**	
Foundation Requirements[1] 13 S.H.		**Major Required Courses 40 S.H.**	
G.E. 1000 Transition to Kean **–or–** GE 3000 Transfer Transitions[2]	1	ENV 1100 Foundations of Environmental Science	4
ENG 1030 Composition[3]	3	ENV 2100 Ecosystem Science	4
MATH 1054 Precalculus[1,5,] **	3	ENV 3051 Field Biology: Terrestrial Systems	4
COMM 1402 Speech Communication	3	ENV 3100 Principles of Environmental Soil Science	4
GE 2024 Research & Technology	3	ES 1101 Introduction to Earth and Geographical Systems	4
		ES 1300 Intro to Meteorology	4
Disciplinary & Interdisciplinary Distribution Requirements[1] 19 S.H.		ES 2101 Geo-Hydro Systems	4
Humanities: 6 S.H. (from different areas)		ES 2400 Intro to Oceanography	4
ENG 2403 World Literature*	3	ES 3210 GIS for Environment and Health	4
Take one "GE Approved" course from one area below		ES 3011 Data Analysis for Environment and Health	4
Fine Arts/Art History	3		
Foreign Languages (Must take I and II for credit)	3		
Interdisciplinary	3		
Music or Theatre	3		
Philosophy or Religion	3		
Social Sciences: 6 S.H. (from different areas)		**Major Elective Courses 11 S.H.[6]**	
HIST 1062 Worlds of History: Traditions and Encounters*	3	Optional: ES 1996 Research Initiative for First-Year Students	1
Take one "GE Approved" course from one area below		Optional: ES 3291-3293 Internship	1-3
Political Science	3		
Economics or ES 1010 (World Geography)			
Anthropology or Sociology	3		
Psychology	3		
Interdisciplinary	3		
Science and Mathematics: 7 S.H.		**Major Capstone 3 S.H.**	
MATH 1016 Statistics**	3	SUST 4300 Independent Practicum in Sustainability Sciences	3
CHEM 1083 Chemistry I [4, ****]	4		
ADDITIONAL REQUIREMENTS 26 S.H.		**FREE ELECTIVES 8 S.H.**	
BIO 1300 Introduction to Biology I [4]	4	**at least 50% must be 3000/4000 level**	
BIO 1400 Introduction to Biology II	4		
CPS 1231 Fundamentals of Computer Science	4		
SUST 1000 Introduction to Sustainability Science	3		
SUST 2200 Introduction to Laws and Sustainability	3		
Take any two (2) of the below three (3) courses			
CHEM 1084 Chemistry II	4		
MATH 2415 Calculus I	4		
PHYS 2091 General Physics I	4		
		Special Notes:	
		[1]See pre-requisites and equivalencies (on page 3)	
		[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 grade of C or higher	
Special Notes:		[4] MATH 1054 is a co-and /or pre-req.	
*GE Distribution course required of all students		[5] A student with course placement records may substitute it with 3 additional credits of free electives instead of MATH 1054 to total 120 credits	
**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			
		[6] Courses must be selected from the Approved Major Electives list	

PROGRAM REVISION DATE 2/15/2021

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 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
2000 level courses[3]			
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
3000 level courses[3]			
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
4000 level courses[3]			
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 pre-requisite course	
		*** Require CHEM2581 as a pre-requisite course	
		**** Require CHEM2582 as a pre-requisite course	

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 SFPA & 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 course work taken by students that is now discontinued