

KEAN UNIVERSITY
DOROTHY AND GEORGE HENNINGS COLLEGE OF SCIENCE,
MATHEMATICS AND TECHNOLOGY
(CHEM/CHEMI) B.S. CHEMISTRY (INSTRUMENTAL ACS OPTION)

120 S.H.

GENERAL EDUCATION: 31-32 S.H.		ACADEMIC MAJOR	
Essential Learning Courses*: 16-17 S.H.		Major Required Courses:	56
Critical Reading & Academic Study Skills	4	CHEM 1083 Chemistry I	4
<i>All students must take 1 credit in Academic Study Skills: either GE*1000 or GE*3000</i>	1	CHEM 1084 Chemistry II	4
<i>All students must take 3 credits in Critical Reading from the GE PLO Course List.</i>	3	CHEM 2283 Quantitative Analysis	4
Written Communication**	3	CHEM 2581 Organic Chemistry I	3
		CHEM 2581L Organic Chemistry Lab I ^{WE}	1
<i>All students must take 3 credits in Written Communication from the GE PLO Course List.</i>		CHEM 2582 Organic Chemistry II	3
		CHEM 2582L Organic Chemistry Lab II	1
Speech Communication	3	CHEM 2491 Inorganic Chemistry	3
<i>All students must take 3 credits in Speech Communication from the GE PLO Course List.</i>		CHEM 3284 Instrumental Method of Analysis ^{WE}	4
Quantitative & Scientific Reasoning	6-7	CHEM 3381 Physical Chemistry I	3
<i>All students must take either MATH*1016 or MATH*1054 (3 credits each).</i>	3	CHEM 3382 Physical Chemistry II	3
<i>All students must take 3 or 4 credits in Scientific Reasoning from the GE PLO course list.</i>	3-4	CHEM 3385 Physical Chemistry Laboratory	2
Core Competency Courses: 12 S.H.		BCHM 4115 Biochemistry	3
		BCHM 4115L Biochemistry Laboratory	1
Intercultural Knowledge & Understanding	3	CHEM 4908 Seminar in Chemistry	3
<i>All students must take 3 credits in Intercultural Knowledge & Understanding from the GE PLO Course List.</i>		Major Elective Courses	14
Critical & Creative Thinking	3	CHEM 4481 Advanced Inorganic Chemistry	3
<i>All students must take 3 credits in the Critical & Creative Thinking from the GE PLO Course List.</i>		CHEM 4285 Chemical Separations	3
Ethical Reasoning	3	CHEM 4190 Medicinal Chemistry	3
<i>All students must take 3 credits in Ethical Reasoning from the GE PLO Course List.</i>		CHEM 4150 Spectroscopic ID of Organic Compounds	3
Wellness	3	CHEM 4483 Advanced Inorganic Chemistry Lab	3
<i>All students must take 3 credits in Wellness from the GE PLO Course List.</i>		CHEM 3901/3902/4905/4906 Independent Chemistry Research	1-3
Inquiry & Analysis Passion Project 3 S.H.	3	CHEM 4180 Mass Spec and Drug Discovery	3
<i>All students must take 3 credits in Inquiry & Analysis from the GE PLO Course List.</i>			
Additional Required Courses	28	Free Electives	4-5
BIO 1300 General Biology	4		
PHYS 2095 Physics I	4		
PHYS 2196 Physics II	4		
PHYS 2197 Physics III	4		
MATH 2415 Calculus I	4		
MATH 2416 Calculus II	4		
MATH 3415 Calculus III	4		

GENERAL EDUCATION AND UNIVERSITY REQUIREMENTS

GENERAL EDUCATION INFORMATION AND REQUIREMENTS

Testing and Placement

Incoming freshmen and transfer students may be placed in specific GE Essential Learning, 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 Essential Learning Courses

GE*1000

Required of all freshmen & transfers entering with 0-29 credits

Pre-requisite: None

Equivalency: ID*1001

GE*3000

Required of transfers entering with 30 credits or more

Pre-requisite: 30 credits and ENG*1030 (or equivalent)

ENG*1030

Pre-requisite: Placement testing or exemption from placement testing

Equivalency: ENG*1031/1032, ENG*1033/1034, ENG*1430, ENG*1620, ENG*1020, ENG*1400

MATH*1016

Pre-requisite: MATH*0901 if required by placement testing

Co-requisite: MATH*0902 should be taken concurrently with Math*1016 if required by placement testing

MATH*1054

Pre-requisite: MATH*0901 if required by placement testing and MATH*1000

COMM*1402

Pre-requisite: ENG*1031/1032 or ENG*1033/1034 if required by placement testing; May be taken concurrently with ENG*1030

Equivalency: COMM*1400

Inquiry & Analysis PLO

GE 2021- 2026: *Research and Technology* is offered as a college-based course.

Pre-requisite: CS*0412 if required by placement testing; Written Communication course

Equivalency: GE*2020

GE*2021: College of Business and Public Management

GE*2022: College of Education & College Health Professions and Human Services

GE*2023: College of Liberal Arts

GE*2024: College of Science, Mathematics, and Technology & College Health Professions and Human Services

GE*2025: Departments of Fine Arts, Music, and Theatre & Michael Graves College

GE*2026: Undecided Majors and other special populations

GE PLO Courses

Approved GE PLO Course List

All courses taken under the General Education Essential Learning and Core Competency requirements must be selected from the Approved General Education PLO Course List.

Foreign Language Credit

The three credits for a foreign language that may satisfy the GE Intercultural Knowledge & Understanding 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 an elective.

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

To graduate, all students are required to complete at least one "Writing Emphasis" course within their major. Such courses are designed to provide students with an opportunity to explore writing as it is done in their chosen field. Typically, Writing Emphasis courses are taken in the junior or senior year, after the student's initial composition courses are completed. Students should consult their major program advisor for specific information about the Writing Emphasis course requirement.