

KEAN UNIVERSITY – COLLEGE OF CSMT

(MTHSC/DATA) Mathematical Sciences (Data A)

120 S.H.

GENERAL EDUCATION: 31-32 S.H.		ACADEMIC MAJOR	42
Essential Learning Courses*: 16-17 S.H.		Major Required Courses:	
Critical Reading & Academic Study Skills	4	Foundation Core Courses (18 S.H)	
<i>All students must take 1 credit in Academic Study Skills: either GE*1000 or GE*3000</i>	1	MATH 2415 Calculus I	4
<i>All students must take 3 credits in Critical Reading from the GE PLO Course List.</i>	3	MATH 2416 Calculus II	4
Written Communication**	3	MATH 2526 Applied Statistics I	3
<i>All students must take 3 credits in Written Communication from the GE PLO Course List.</i>		MATH 2995 Matrix and Linear Algebra	3
Speech Communication	3	MATH 3415 Calculus III	4
<i>All students must take 3 credits in Speech Communication from the GE PLO Course List.</i>		Concentration Courses (18 S.H)	
Quantitative & Scientific Reasoning	6-7	MATH 3544 Probability and Statistics	3
<i>All students must take either MATH*1016 or MATH*1054 (3 credits each).</i>	3	MATH 3700 Big Data Computing	3
<i>All students must take 3 or 4 credits in Scientific Reasoning from the GE PLO course list.</i>	3-4	MATH 3710 Foundations of Data Analysis	3
Core Competency Courses: 12 S.H.		MATH 4710 Data Visualization	3
Intercultural Knowledge & Understanding	3	MATH 4720 Statistical Data Mining	3
<i>All students must take 3 credits in Intercultural Knowledge & Understanding from the GE PLO Course List.</i>		MATH 3790 Applied Machine Learning	3
Critical & Creative Thinking	3	Major Electives (3 SH, 3000-4000)	
<i>All students must take 3 credits in the Critical & Creative Thinking from the GE PLO Course List.</i>		Major Capstone (3 S.H)	
Ethical Reasoning	3	MATH 4890 Senior Seminar in Mathematics (WE)	3
<i>All students must take 3 credits in Ethical Reasoning from the GE PLO Course List.</i>		Free Electives	
Wellness	3	Free Electives	34-35
<i>All students must take 3 credits in Wellness from the GE PLO Course List.</i>		At least 50% of free electives must be at the 3000-4000 level	
Inquiry & Analysis Passion Project 3 S.H.	3		
<i>All students must take 3 credits in Inquiry & Analysis from the GE PLO Course List.</i>			
		Up to 6 credits of MATH courses may be used as free electives.	
Additional Required Courses	12		
CPS 1231 Fund of Computer Science	4		
CPS 2231 Computer Org and Programming	4		
PHYS 2091 or PHYS 2095	4		
*For all prerequisites and equivalencies, see page 2.			
**Requires a minimum grade of C or higher			

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.