

EFFECTIVE DATE: FALL 2016

NAME:			
STUDENT ID #:			Credits
GENERAL EDUCATION: 37 Semester Hours (S.H.)			
Foundation Requirements: 14 S.H.			
GE 1000	Transition to Kean or GE 3000 Transfer Transition ¹	1	
*ENG 1030	College Composition ²	3	
STME 1403	Math. & Computational Methods of Science I ³	4	
*COMM 1402	Speech Communication As Critical Citizen ²	3	
GE 2024	Research & Technology ^{2, 7}	3	
DISCIPLINARY & INTERDISCIPLINARY REQUIREMENTS:			
Humanities: 6 S.H.			
*ENG 2403	World Literature	3	
Select ONE course from below - see GE Distribution Course List			
	Fine Arts/Art History		
	Philosophy or Religion		
	Foreign Languages ⁴		
	Music or Theater		
	Interdisciplinary		
Social Sciences: 6 S.H.			
*HIST 1062	Worlds of History	3	
Select ONE course from below - see GE Distribution Course List			
	Psychology		
	Economics or Geography		
	Political Science		
	Sociology or Anthropology		
	Interdisciplinary		
Science and Mathematics: 8 S.H.			
*STME 1603	Math. & Computational Methods of Science II	4	
*STME 1401	Chemical Systems I	4	
MAJOR / GE CAPSTONE COURSE ⁵ : 3 S.H.			
*STME 4610	Science & Technology Seminar (WE)	3	
ADDITIONAL REQUIRED COURSES ² : 13 S.H.			
STME 2601	Living Systems I	4	
STME 2401	Physical Systems I	4	
STME 2603	Probabilistic Methods in Science	4	
STME 1903	Research Methods-RFI	1	

TRANSFER INSTITUTIONS (X)		
		Credits
ACADEMIC MAJOR⁵: 62-65 S.H.		
Program Core Requirements⁵: 28 S.H.		
STME 1605	Intro. Programming In Sci. & Engineering	4
STME 2403	Math. & Computational Methods of Science III	4
CPS 2231	Computer Organization & Programming	4
CPS 2232	Data Structures & Algorithm Analysis	4
MATH 2110	Discrete Structures	3
CPS 3962 CPS 4301	Information Systems Analysis & Design or Software Engineering I (WE)	3
<i>Select ONE course from below</i>		
CPS 5965	High Performance Computing	3
STME 5630	Modeling and Simulation of Dynamic Systems	3
<i>Select ONE course from below</i>		
STME 5410	Modeling and Simulation of Continuous Systems	3
STME 5631	Data Analysis and Visualization	3
Program Track Requirements⁵: 34-37 S.H.		
(Select based on track, see additional sheets)		
	Applied Math Track	34
	Bioinformatics Track	34
	Physics Track	37
FREE ELECTIVES: 9-12 S.H.		
(Select w/advisement, at least 50% must be at 3000-4000 level)		
	TRACK CREDITS (page 2)	
	TOTAL CREDITS:	

¹ University Requirement for Graduation for all undergraduate students that must be satisfied in one of two ways: Complete GE 1000 (all freshmen & transfers entering with 0-29 credits) OR complete GE 3000 (transfers entering with 30 credits or more)

² Foundation & Additional Requirements require a grade of C or better, except ENG 1030 requires B or better.

³ Prerequisite of qualifying placement test score or the equivalent of MATH 1054.

WE: Writing Emphasis course.

KEAN UNIVERSITY - N.J. CENTER FOR SCIENCE, TECHNOLOGY & MATHEMATICS
(30112) B.S. IN SCIENCE & TECHNOLOGY (Computational Science & Engineering
Option) 124 S.H. (3.0 minimum GPA required for Graduation).

EFFECTIVE DATE: FALL 2016

START TERM: _____

TRACK SPECIFIC REQUIREMENTS: APPLIED MATH: 34 S.H.				TRACK SPECIFIC REQUIREMENTS: BIOINFORMATICS: 34 S.H.			
Program Track Requirements ⁵ : 25-29 S.H.				Program Track Requirements ⁵ : 30-34 S.H.			
STME 2402	Physical Systems II	4		STME 2602	Living Systems II	4	
MATH 3225	Computational Methods Linear Algebra II	3		STME 1601	Chemical Systems II	4	
MATH 3451	Calculus III	4		STME 2681	Organic Chemistry Honors Lecture I	3	
MATH 3455	Differential Equations	3		STME 2683	Organic Chemistry Honors Lab I	2	
MATH 3940	Numerical Analysis	3		BIO 3709	Genetics	4	
MATH 4805	Math Modeling with Applications	3		BIO 4105	Essentials of Biochemistry ⁶ OR	4	
STME 3610	Current Issues ⁶ OR	1		STME 3401	Biochemistry Honors I ⁷	4	
STME 2903	Research Experience-RFI ⁷	2		BIO 4700	Molecular Genetics	4	
STME 3903	Advanced Research Experience-RFI ⁷	3		BIO 3305	Principles of Microbiology	4	
Select ONE course from below				STME 3610	Current Issues ⁶ OR	1	
STME 1601	Chemical Systems II	4		STME 2903	Research Experience-RFI ⁷	2	
STME 2602	Living Systems II	4		STME 3903	Advanced Research Experience-RFI ⁷	3	
MAJOR ELECTIVES ⁵ : 5-9 S.H. (Select major elective courses with advisement)				MAJOR ELECTIVES ⁵ : 0-4 S.H. (Select major elective courses with advisement)			
TRACK SPECIFIC REQUIREMENTS: PHYSICS: 37 S.H.							
Program Track Requirements ⁵ : 33-37 S.H.							
STME 1603	Chemical Systems II	4					
STME 2402	Physical Systems II	4					
PHYS 2907	Physics III	4					
PHYS 4592	Modern Physics	4					
PHYS 4593	Landmarks in 20 th Century Physics or PHYS 4901 Independent Research in Physics	3					
MATH 3451	Calculus III	4					
MATH 3455	Differential Equations	3					
MATH 3940	Numerical Analysis	3					
MATH 4805	Mathematical Modeling	3					
STME 3610	Current Issues ⁶ OR	1					
STME 2903	Research Experience-RFI ⁷	2					
STME 3903	Advanced Research Experience-RFI ⁷	3					
MAJOR ELECTIVES ⁵ : 0-4 S.H. (Select major elective courses with advisement)							

Special Notes:	
¹ University Requirement for Graduation for all undergraduate students that must be satisfied in one of two ways: Complete GE 1000 (all freshmen & transfers entering with 0-29 credits) OR complete GE 3000 (transfers entering with 30 credits or more) [*] (G.E.) General Education required course. ² Foundation & Additional Requirements require a grade of C or better, except ENG 1030 requires B or better. ³ Prerequisite of qualifying placement test score or the equivalent of MATH 1054.	⁴ Credit granted only upon completion of two semesters of elementary or intermediate foreign language. ⁵ A minimum grade of C in no more than two major courses, including capstone. A grade of B- or higher in remaining major courses. ⁶ Non-RFI students only. ⁷ Required for RFI students – must complete with RFI sponsor faculty. WE: Writing Emphasis course.