

**KEAN UNIVERSITY**  
**NATHAN WEISS GRADUATE COLLEGE**  
**NJ CENTER FOR SCIENCE, TECHNOLOGY & MATHEMATICS EDUCATION (STME)**  
**(30105) B.S. in Science and Technology (Molecular Biology Option): 126 - 129 S.H.**  
**(EFFECTIVE: Fall/2009)**

START TERM: \_\_\_\_\_

STUDENT NAME:	Credits	TRANSFER INSTITUTIONS (X)	Credits
STUDENT ID#			
<b>GENERAL EDUCATION: 34 Semester Hours (S.H.)</b>		<b>ACADEMIC MAJOR REQUIREMENTS<sup>5</sup>: 69 – 72 S.H.</b>	
<b>Foundation Requirements: 14 S.H.</b>		STME 2601 Living Systems (formerly ID 1401)	4
GE 1000 Transition to Kean <sup>1</sup>	1	STME 2610 Current Issues in Science & Technology I (formerly ID 2610)	1
ENG 1030 College Composition <sup>2</sup>	3	STME 3610 Current Issues in Science & Technology II (formerly ID 2611)	1
STME 1403 Math. & Computational Methods of Science I <sup>3</sup>	4	CHEM 2283 Quantitative Analysis	4
COMM 1402 Speech Communication As Critical Citizenship <sup>2</sup>	3	CHEM 2581 Organic Chemistry I (formerly CHEM 3181)	3
GE 2024 Research & Technology <sup>2</sup>	3	CHEM 2583 Organic Chemistry Lab I (formerly CHEM 3183)	2
<b>DISCIPLINARY / INTERDISCIPLINARY DISTRIBUTION REQUIREMENTS: 20 S.H.</b>		CHEM 2582 Organic Chemistry II (formerly CHEM 3182)	3
<b>Humanities: 6 S.H.</b>		CHEM 2584 Organic Chemistry Lab II (formerly CHEM 3184)	2
*ENG 2403 World Literature	3	CHEM 3284 Instrumental Methods of Analysis WE	4
<i>(Select one course from below)</i>		BIO 3403 Anatomy / Physiology I	4
Fine Arts or Art History	3	BIO 3404 Anatomy / Physiology II	4
Music or Theater	3	BIO 3305 Principles of Microbiology	4
Philosophy or Religion	3	BIO 3704 Principles of Genetics	3
Foreign Language <sup>4</sup> (Must take I and II for credit)	3	BIO 3705 Principles Genetics Lab	2
Interdisciplinary	3	BIO 3820 Basic Tissue Culture	4
<b>Social Sciences: 6 S.H.</b>		BIO 4105 Essentials of Biochemistry	4
*HIST 1000 History of Civil Society in America	3	BIO 4700 Molecular Genetics	4
<i>(Select one course from below)</i>		STME 5020 Ethics in Biotechnology	1
PSY 1000 General Psychology	3	STME 5103 Scientific Writing and Presentation	3
SOC 1000 or ANTH 1800	3		
Economics or Geography	3	<b>Major/ GE Capstone Course: 3 S.H.</b>	
Interdisciplinary	3	STME 4610 Science & Technology Seminar WE (formerly ID 4610)	3
<b>Science and Mathematics: 8 S.H.</b>		<b>Major Electives: 9-12 S.H.</b>	
STME 1603 Math & Computational Methods of Science II	4	<i>(Select with advisement courses in STME, BIO or CHEM at the 3000 level or higher)</i>	
STME 1401 Chemical Systems I	4		3-4
			3-4
<b>ADDITIONAL REQUIREMENTS<sup>2</sup>: 20 S. H.</b>			3-4
STME 2403 Math. & Computational Methods of Science III (formerly ID 2403)	4		
STME 2603 Probabilistic Methods in Science (formerly ID 2603)	4	<b>FREE ELECTIVE: 3 S.H.</b>	
STME 1601 Chemical Systems II (formerly ID 2601)	4		3
STME 2401 Physical Systems (formerly ID 1601)	4		
PHYS 2096 Physics II	4		
<sup>1</sup> Required of all Freshmen and Transfers with fewer than 10 credits. *(G.E) General Education required course.		<sup>4</sup> Credit granted only upon completion of two semesters of elementary or intermediate foreign language.	
<sup>2</sup> Foundations & Additional Requirements require grade of C or better, except ENG 1030 requires B or better. <sup>3</sup> Prerequisite of qualifying placement test score or the equivalent of MATH 1054.		<sup>5</sup> A minimum grade of C in no more than two major courses, including capstone. A grade of B- or higher in remaining major courses.  WE: Writing Emphasis course.	

## GENERAL EDUCATION INFO & 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 prior to registration. Students may be exempt from testing due to SAT scores or prior college work.

### Prerequisites and Equivalencies for GE Foundations Courses

#### **ENG 1030**

Prereq: Placement testing  
Equiv: ENG 1031/32; 1033/34; 1430;  
ENG 1020; 1400

#### **MATH 1000**

Prereq: Placement testing  
Equiv: MATH 1001/02; 1003/04; 1051

#### **COMM 1402**

Prereq: CS 0411 or 0412 if required  
by placement testing  
ENG 1031/32; 1033/34  
May be taken concurrently  
with ENG 1030  
Equiv: COMM 1400

**GE 2021-2024** Research & Technology is offered as college-based course

GE 2021 College of BPA

GE 2022 College of ED

GE 2023 College of AHSS

GE 2024 College of NAHS

Prereq: ENG 1030 or equivalent  
MATH 1000 or equivalent

Equiv: GE 2020

#### **Course Paired with Reading**

Must be taken concurrently with CS 0412 if required by placement testing.

### GE Distribution Courses

All courses under the General Education Disciplinary/Interdisciplinary Distribution requirements must be selected from the Approved General Education Distribution Course List, printed in Registration Bulletin. These courses are designated as GEHU, GESS, GESM, GEHPE or GECF.

GEHU Humanities

GESS Social Sciences

GESM Science and Mathematics

GEHPE Health and Physical Education

### Required GE Distribution Courses

ENG 2403 is a required Humanities Distribution course with an emphasis on diversity.

HIST 1000 is a required Social Sciences Distribution course with an emphasis on diversity.

## 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 two semesters of study at the introductory or intermediate level.

## Major/GE Capstone Course

A Capstone course is a major course that satisfies three credits of GE requirements.

Each major guide sheet will count three credits for the Capstone as either GE credits or major credits, but not both.

## UNIVERSITY REQUIREMENT

### 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.

### Course Prerequisites

**ENG 2403:** ENG 1030 (or equivalent) & completion of any freshmen placement requirements in reading.

**CHEM 2283:** CHEM 1084 or equivalent with minimum grade of C.

**CHEM 2181:** CHEM 1084 or instructor permission.

**CHEM 2183:** CHEM 2181

**CHEM 2182:** CHEM 2181, CHEM 2183 with minimum grade of C.

**CHEM 2184:** CHEM 2183 with minimum grade of C.

**CHEM 3284:** CHEM 2283, MATH 2411 (Calculus I), PHYS 3097 or instructor permission.

**BIO 3403:** BIO 2400, CHEM 2180 or CHEM 3181 or instructor permission.

**BIO 3404:** BIO 3403

**BIO 3305:** BIO 2400 or instructor permission

**BIO 3404:** BIO 3403

**BIO 3704:** BIO 2400, CHEM 1084

**BIO 3705:** BIO 3704

**BIO 3820:** 16 credits biology or instructor permission

**BIO 4105:** One semester of organic chemistry,

BIO 2400 or instructor permission.

**BIO 4700:** BIO 3704, BIO 4105

**PHYS 2096:** PHYS 2095 (Physics I), MATH 2412 (Calculus II).

**STME 1403:** Qualifying testing placement or equivalent Math 1054 (Precalculus).

**STME 1601:** STME 1401

**STME 1603:** STME 1403

**STME 2401:** STME 1603

**STME 2403:** STME 1603

**STME 2601:** STME 1601

**STME 2603:** STME 1603

**STME 2610:** GE 2024

**STME 3610:** STME 2610, STME 2603, STME 2601

**STME 4610:** Senior standing in the five year science, technology & math education program.