KEAN UNIVERSITY
College of Natural, Applied, and Health Sciences
(70302) B.S. in Biology- Cell and Molecular Option: 124 S.H.

EFFECTIVE DATE: Fall 2014 START TERM:_____

Name:				TRANSFER INSTITUTIONS (X)			
Student ID#				In Progress			
GENERAL EDUCATION: 35 Semester Hours				**ADDITIONAL REQUIRED COURSES: 26 SH**			
FOUNDATION REQUIREMENTS[1]: 13 SH				CHEM 1084 General Chemistry II[3]	4		
GE 1000	Transition to Kean[2]	1		CHEM 2581 Organic Chemistry Lect I[3]	3		
ENG 1030	College Composition[3]	3		CHEM 2582 Organic Chemistry Lect II	3		
MATH 1054	Precalculus[4]	3		CHEM 2583 Organic Chemistry Lab I[3]	2		
COMM 1402	Speech Communication	3		CHEM 2584 Organic Chemistry Lab II	2		
GE 2024	Research & Technology	3		MATH 2415 Calculus I	4		
DISCIPLINARY & INTERDISCIPLINARY DISTRIBUTION REQUIREMENTS				PHYS 2091 General Physics I	4		
				PHYS 2092 General Physics II	4		
Humanities: 6 SH				**ACADEMIC MAJOR COURSES[3]: 51-52 SH**			
†ENG 2403 World Literature		3		**Major Required Courses: 24**			
Select <u>one</u> course from the following				BIO 1300 General Biology I[6]	4		
Fine Arts/ Art History		3		BIO 1400 General Biology II[7]	4		
Philosophy or Religion		3		BIO 3305 Microbiology	4		
Foreign Languages (must take I and II for credit)		3		BIO 3709 Genetics	4		
Music or Theatre		3		BIO 4105 Essentials of Biochemistry	4		
Interdisciplinary		3		BIO 4315 Immunology	4		
Social Sciences: 6 SH				**Major Electives: 27-28**			
†HIST 1062 Worlds of History or HIST 1000		3		*Selected with departmental advisement*			
				BIO 2500 Principles of Botany	4		
Select <u>one</u> course from the following				BIO 3260 Histology	4		
Economics / Geography		3		BIO 3400 Principles of Zoology	4		
Political Science		3		BIO 3403 Anatomy & Physiology I	4		
Psychology		3		BIO 3404 Anatomy & Physiology II	4		
Sociology / Anthropology		3		BIO 3406 Neuroscience	4		
Interdisciplinary		3		BIO 3420 Parasitology	4		
				BIO 3614 Principles of Ecology	4		
Science and Mathematics: 7 SH				BIO 3820 Basic Tissue Culture	4		
MATH 1016 Statistics (BIO Section)		3		BIO 4225 Cell Physiology	4		
CHEM 1083 General Chemistry I[3]		4		BIO 4310 Virology	4		
				BIO 4325 Applied Microbiology	4		
				BIO 4395,6,7,8 Cooperative Educ	1-4		
				BIO 4700 Molecular Genetics	4		
				BIO 4704 Molec Biology of Genes	3		
				BIO 4911,2,3,4 Special Topics BIO	1-4		
				BIO 4961,2,3 Independent Research	1-3		
Major/GE Capstone Course: 3 SH				**FREE ELECTIVES** No less than 50% at the 3000-4000 level	11-12		
BIO 4970 Seminar in Integrative Biology[3]		3		1)			
				2)			
				3)			

See superscript notes on backpage. **Must complete Major with 3.0 GPA**

Notes:

† GE required course
[1] See prerequisites and equivalencies
[2] Required of all freshmen / transfers with < than 10 credits
[3] ENG1030, CHEM, major courses, and capstone (BIO 4970) all require a grade of C or better.
[4] With qualifying placement test scores, this course may be substituted with an elective
[5] Both I & II must be completed giving credit as a foreign language plus one free elective
[6] Students enrolled before 9/2014 may substitute BIO 2200
[7] Students enrolled before 9/2014 may substitute BIO 2400

YOUR MAJOR'S DEPARTMENT IS LOCATED IN THE SCIENCE BUILDING, ROOM C-124 ON MAIN CAMPUS (TELEPHONE 908-737-3650)
YOU MUST BRING THIS GUIDESHEET AND YOUR KEANWISE PROGRAM EVALUATION TO ALL ADVISING / REGISTRATION SESSIONS.

Grade Point Average (GPA) Requirement for the Major
As of May 8, 2012, the Biological Sciences program has formally adopted the following standard for the B.S. Biology (Cell & Molecular Option) major:
1. Minimum cumulative GPA of 3.0 at the time of application for acceptance as a declared major.
2. Minimum cumulative GPA of 3.0 must be maintained in order to remain in the Biology major.

_____
Evaluator's Signature Date

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 1054 Precalc Prereq: 3 yrs secondary school math including 2 yrs algebra + 1 yr geometry or equivalent & qualifying score on placement exam or equivalent
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.

General Education Distribution Courses

All courses under GE Disciplinary/Interdisciplinary Distribution requirements must be selected from the Approved GE Distribution Course List. (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. Prereq: ENG 1030 or equivalent

PSY 1000 & HIST 1062 (formerly 1000 was required) 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.

Course Prerequisites (Pre/Corequisites may change, consult Keanwise Course Descriptions; Some course may require approved petitions)
BIO 1300: Corequisite MATH 1000 or equivalent placement
BIO 1400: Prerequisite BIO 1300 and Corequisite MATH 1054 (Precalculus)
BIO 2500: BIO 2400 (Genes, Org, Pop) or 1400 (Gen Bio II)
BIO 3400: BIO 2400 or 1400, CHEM 1084 (Gen Chem I)
BIO 3403: BIO 2400 or 1400, CHEM 2180 (Principals of Organic Chem) or CHEM 2581 (Organic Chemistry I), or instructor permission.
BIO 3404: BIO 3403
BIO 3614: BIO 2200 or 1300, or instructor permission
BIO 3709: BIO 2400 or 1400
BIO 4835: MATH 1054 (Precalculus) & 16 credits of biology
BIO 4970: 20 credits of biology plus senior biology major status (requires approved petition)
CHEM 1083: Prerequisite MATH 1000 (College Algebra); Corequisite MATH 1054 (Precalc)
CHEM 1084: MATH 1054, & CHEM 1083 with grade of C or better
CHEM 2581: CHEM 1084 with grade of C or better
CHEM 2583: Corequisite of CHEM 2581
CHEM 2582: CHEM 2581 with grade of C or better
CHEM 2584: Prerequisite of CHEM 2583 grade of C or better & corequisite of CHEM 2582
MATH 2415: MATH 1054 (Precalc)
PHYS 2091: MATH 1054 (Precalc) or equivalent
PHYS 2092: PHYS 2091