



## Five-Year Molecular Biology/Biotechnology

### Sample Pathway to Graduation

124 S.H. – non-RFI Track  
125 S.H. – RFI Track

Freshman Year: Summer Semester			
GE 1000: Transition to Kean	1		
Freshman Year: Fall Semester		Freshman Year: Spring Semester	
STME 1903: Research Methods	1	STME 2903: Research Experience (RFI track)	2
STME 2601: Living Systems I	4	STME 2602: Living Systems II	4
STME 1403: Math & Computational Methods I	4	STME 1603: Math & Computational Methods II	4
STME: 1401: Chemical Systems I	4	STME 1601: Chemical Systems II	4
ENG 1030: Composition	3	COMM 1402: Speech Communication	3
	16		15 – 17
Sophomore Year: Fall Semester		Sophomore Year: Spring Semester	
GE 2024: Research and Technology	3	HIST 1062: Worlds of History (RFI track)	3
STME 3903 Advanced Research Experience (RFI track)	3	CHEM 2283: Quantitative Analysis	4
STME 2681: Organic Chemistry I	3	STME 2682: Organic Chemistry II	3
STME 2683: Organic Chemistry I Lab	2	STME 2684: Organic Chemistry II Lab	2
STME 1605: Intro to Programming	4	STME 2603: Probabilistic Methods of Science	4
HIST 1062: Worlds of History (non-RFI track)	3		
	15		13 – 16
Junior Year: Fall Semester		Junior Year: Spring Semester	
STME 2401: Physical Systems I	4	GE Approved Humanities Requirement	3
BIO 3305: Principles of Microbiology	4	BIO 3403: Anatomy & Physiology I	4
CHEM 3284: Instrumental Methods	4	BIO 3709: Genetics	4
ENG 2403: World Literature	3	STME 3401: Biochemistry OR BIO 4105: Essentials of Biochemistry	4
Major elective (non-RFI)*	3	STME 3610: Current Issues in Sci & Tech (non-RFI track)**	1
	15 – 18		15 – 16
Senior Year: Fall Semester		Senior Year: Spring Semester	
Free Elective	3	STME 4610: Science & Technology Seminar (Capstone)	3
BIO 4700: Molecular Genetics	4	GE Social Sciences Requirement	3
BIO 3820: Basic Tissue Culture	4	Free Elective	3
STME 5020: Ethics of Biotechnology	1	Free Elective	3
STME 5103: Scientific Writing	3	Free Elective	3
	15		15

\*Major Electives: RFI Track = 0 cr.; non-RFI Track = 3 cr.

\*\*STME 3610 to be taken by students who did not complete both STME 2903 & 3903 (RFI Research Experience)

### 5<sup>th</sup> Year Courses

Summer prior to start of 5 <sup>th</sup> Year			
STME 5610: Advanced Seminar in Science & Technology	3		
5 <sup>th</sup> Year: Fall Semester		5 <sup>th</sup> Year: Spring Semester	
STME 5010: Molecular Cell Biology I	3	STME 5240: Molecular Cell Biology II	3
STME 5510: Biostats & Comp Analysis OR MATH 5505 Applied Stats	3	Approved Graduate Elective Course	3
STME 5170: Molecular Techniques OR STME 5140: Cellular Techniques (Spring)	3	STME 5140: Cellular Techniques OR STME 5170: Molecular Techniques (Fall)	3
Biotech Intern/Externship OR STME 5400 Biotech Lit Review	3	Biotech Intern/Externship OR Approved Grad Lab Course	3
Approved Graduate Elective Course	3		
	15		12