

KEAN UNIVERSITY – COLLEGE OF NATURAL, APPLIED AND HEALTH SCIENCES

(72100) B.A. IN CHEMISTRY (GENERAL OPTION) : 124 S.H.

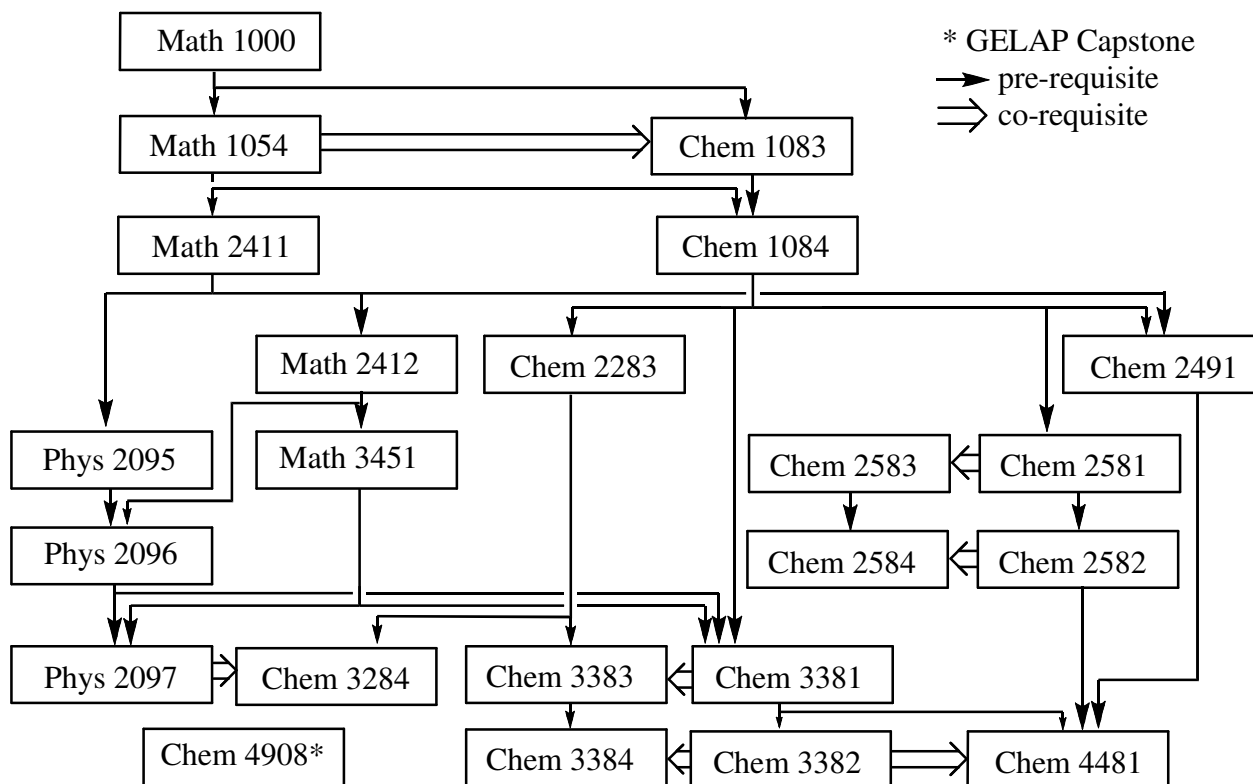
EFFECTIVE DATE: Fall 2009

START TERM: _____

NAME		TRANSFER INSTITUTIONS (X)	Credits:	
STUDENT ID#		In Progress		
GENERAL EDUCATION¹: 44-45 Semester Hours (S.H.)		**ACADEMIC Major and Capstone Requirements 45 S.H.		
Foundation Requirements: 13 S.H.				
		CHEM 1083 Chemistry I		4
GE 1000 Transition to Kean	1	CHEM 1084 Chemistry II		4
ENG 1030 College Composition ¹	3	CHEM 2283 Quantitative Analysis		4
MATH 1000 Algebra for College Students ⁴	3	CHEM 2581 Organic Chemistry I		3
COMM 1402 Speech Communication	3	CHEM 2582 Organic Chemistry II		3
GE 2024 Research & Technology	3	CHEM 2583 Organic Chemistry Lab and Recitation I ^{WE}		2
		CHEM 2584 Organic Chemistry Lab and Recitation II		2
Disciplinary & Interdisciplinary Distribution Requirements:				
		CHEM 2491 Inorganic Chemistry		3
		CHEM 3284 Instrumental Method of Analysis ^{WE}		4
		CHEM 3381 Physical Chemistry I		3
Humanities: 9 S.H.				
		CHEM 3382 Physical Chemistry II		3
*ENG 2403 World Literature	3	CHEM 3383 Physical Chemistry Lab and Recitation I		2
Select two courses from different areas:				
		CHEM 3384 Physical Chemistry Lab and Recitation II		2
Fine Arts/Art History	3	CHEM 4481 Advanced Inorganic Chemistry		3
Philosophy or Religion	3			
Foreign Languages (Must take I and II for credit)	3	**G.E. and Major Capstone:		
Music or Theatre	3	CHEM 4908 Seminar in Chemistry		3
Interdisciplinary	3			
Social Sciences: 9 S.H.				
		FREE ELECTIVES: 21 or 22 S.H.		
*HIST 1000 Civil Society in America or HIST 1062 Worlds of History	3	at least 50% must be 3000/4000level		
Select two courses from different areas:				
Psychology	3			
Economics or Geography	3			
Political Science	3			
Sociology or Anthropology	3			
Interdisciplinary	3			
Science and Mathematics: 11 S.H.				
MATH 1054 Precalculus ⁴	3			
PHYS 2095 Physics I	4			
PHYS 2096 Physics II	4			
		Other Transfer:		
Health & Physical Education : 2 or 3 S.H.				
ID 1225 Issues in Contemporary Health or ID 1010 Leisure & Recreation in Multicultural Society	3	Special Notes:		
		¹ Requires a grade of C or better		
Or TWO one-credit P.E.D. courses	1, 1	*G.E. required course		
		**All Major courses require a grade of C or better		
Additional Required Courses: 13 S.H.		Note: See foreign language requirements		
MATH 2411 Calculus I	3			
MATH 2412 Calculus II	3	TOTAL CREDITS:		
MATH 3451 Calculus III	3	Advisor:		
PHYS 2097 Physics III	4	Advisor Signature:		

Rev. 07/11

Recommended Course Sequence for General Option



First Year

Fall Semester

Math 1000 Algebra for Coll St 3 Cr.

Spring Semester

Chem 1083 Chemistry I 4 Cr.
Math 1054 Precalculus 3 Cr.

Second Year

Fall Semester

Chem 1084 Chemistry II 4 Cr.
Math 2411 Calculus I 3 Cr.

Spring Semester

Chem 2283 Quant Analysis 4 Cr.
Chem 2591 Inorganic Chem 3 Cr.
Math 2412 Calculus II 3 Cr.

Third Year

Fall Semester

Chem 2581 Organic Chem I 3 Cr.
Chem 2583 Org Chem Lab I 2 Cr.
Phys 2095 Physics I 4 Cr.
Math 3451 Calculus III 3 Cr.

Spring Semester

Chem 2582 Organic Chem II 3 Cr.
Chem 2584 Org Chem Lab II 2 Cr.
Phys 2096 Physics II 4 Cr.

Fourth Year

Fall Semester

Chem 3381 Physical Chem I 3 Cr.
Chem 3382 Phys Chem Lab I 2 Cr.
Chem 3284 Instrumental Analysis 4 Cr.
Phys 2097 Physics III 4 Cr.

Spring Semester

Chem 3382 Physical Chem II 3 Cr.
Chem 3384 Phys Chem Lab II 2 Cr.
Chem 4481 Adv. Inorg Chem 3 Cr.
Chem 4908 Seminar in Chemistry 3 Cr.

Prerequisite and Corequisite for Chemistry/Physics courses

Course	Prerequisite	Corequisite	Semester Offered			
			F	S	SI	SII
General Chemistry						
Chem 1010: Prep Chem	One 1000 level Math course		x	x		
Chem 1030: Essent. Chem	One 1000 level Math course		x	x		
Chem 1083: Chem I	Math 1000, H.S. Chemistry	Math 1054	x	x	x	
Chem 1084: Chem II	Math 1054 & Chem 1083(C)		x	x		x
Chem 1200: Chem in World	One 1000 level Math course		x	x		
Organic Chemistry						
Chem 2180: Princ O-Chem	Chem 1084			x		
Chem 2581: O-Chem I	Chem 1084		x	x	x	
Chem 2582: O-Chem II	Chem 2581(C)		x	x		x
Chem 2583: O-Chem Lab I		Chem 2581	x	x		
Chem 2584: O-Chem Lab II	Chem 2583 (C)	Chem 2582	x	x		
Chem 4150: Spec ID	Chem 2582 & Chem 3382		x			
Chem 4181: O-Chem III	Chem 2582		variable			
Chem 4182: Adv O-Prep	Chem 2584		variable			
Chem 4183: Phys Org Chem	Chem 2582 & Chem 3382		variable			
Chem 4184: Mol Modeling	Chem 2582 & Chem 3382			x		
Analytical Chemistry						
Chem 2283: Quant Anal	Chem 1084(C)		x	x		
Chem 3284: Inst Anal	Chem 2283, Math 2411, Phys 2096		x	x		
Chem 4284: Exp Anal Prob Solv	Chem 2584, 3284, 3383		variable			
Chem 4285: Chem Sep	Chem 2582, 3284 & 3382		variable			
Physical Chemistry						
Chem 3381: P-Chem I	Chem 1084, Math 3451 Phys 2096		x			
Chem 3382: P-Chem II	Chem 3381			x		
Chem 3383: P-Chem Lab I	Chem 2283	Chem 3381	x			
Chem 3384: P-Chem Lab II	Chem 3383	Chem 3382		x		
Chem 4381: P-Chem III	Chem 3382 & Math 3452		variable			
Chem 4382: P-Chem IV	Chem 3382 & Math 3452		variable			
Inorganic Chemistry						
Chem 2491: Inorg Chem	Chem 1084(C)		x	x		
Chem 2493: Desc Inorg Lab		Chem 2491				
Chem 4481: Adv. Inorg Chem	Chem 2491, 2582, 3381	Chem 3382		x		
Chem 4483: Inorg. Chem Lab	Chem 3284, 4481		x			

Course	Prerequisite	Corequisite	Semester Offered			
			F	S	SI	SII
<i>Biochemistry</i>						
Chem 3581: Biochem	Chem 2582			x		
Chem 3583: Biochem Lab	Chem 3581(C)			x		
<i>Research and Seminar</i>						
Chem 3500: Chem/Phys Coop	Chem 2283, 2581, 2583	Jr or Sr	upon request			
Chem 3901-4: Ind Chem Res	8 cr. Chem 12 cr. Sci/Math (2000 level)	Chair approval	upon request			
Chem 4905-6: Senior Res	Chem 3381, 3383	Chair approval	upon request			
Chem 4908: Sem in Chem	GELAP req.			x		
Chem 4909: Special Topics	25 cr. Chem	Inst permission	variable			
<i>Physics Course</i>						
Phys 2091: Gen Phys I	Math 1054		x	x	x	
Phys 2092: Gen Phys II	Phys 2091		x	x		x
Phys 2095: Physics I	Math 2411	Math 2412	x			
Phys 2096: Physics II	Phys 2095, Math 2412			x		
Phys 2097: Physics III	Phys 2096, Math 3451		x			
Phys 4592: Modern Phys	Phys 2096		variable			
Phys 4593: Landmark Phys	Phys 2096		variable			
Phys 4901: Ind Phys Research	Phys 2096	Chair approval	upon request			