2016-2017 B.S. Chemistry-Biochemistry: Life Sciences and Pre-Health Concentration

NAME _____**ID#**_____

CORE CURRICULUM – 43-44 Semester Hours (SH)

UNIVERSITY CORE

A. Core Foundations

CORE 101	_____	**3**
CORE 102	_____	**3**
CORE 103*	_____	**3**
CORE 201	_____	**3**
CORE 202	_____	**3**

NOTE: Courses listed in multiple areas can only be used to fulfill a single area requirement.

Students can use only one course with their major prefix to fulfill core requirements.

*** Honors course – will replace CORE 101 & 102 for those students in the RU honors program**

B. Core Skills & Knowledge

Courses must be from different disciplines:

MATHEMATICAL SCIENCES (3 SH)

MATH 138/MATH 151 **3**

NATURAL SCIENCES (4 SH)

CHEM 101 **4**

HUMANITIES (3 SH)

_____ _____ _____ **3**

One of the following: **ENGL** 200; **HIST** 101, 102; **PHIL** 111, 112, 114; **POSC** 110; **RELN** 111, 112, 200, 202, 206

VISUAL & PERFORMING ARTS (3 SH)

_____ _____ _____ **3**

One of the following: **ART** 111, 215, 216; **CVPA** 266; **DNCE** 111; **MUSC** 100, 121, 123; **THEA** 100, 180

SOCIAL/BEHAV. SCIENCES (3 SH)

_____ _____ _____ **3**

One of the following: **ANSC** 101; **APST** 200; **ECON** 105; 106 **GEOG** 101, 102, 103; **HIST** 111, 112;, **POSC** 120; **PSYC** 121; **RELN** 205; **SOCY** 110, 121

COLLEGE CORE

A. National & International Perspectives

Courses must be from different disciplines:

U. S. PERSPECTIVES (3 SH)

_____ _____ _____ **3**

One of the following: **APST** 200; **ECON** 101, 105, 106; **ENGL** 203; **GEOG** 201, 202, 203; **HIST** 111, 112; **POSC** 120; **SOCY** 110

GLOBAL PERSPECTIVES (3 SH)

_____ _____ _____ **3**

One of the following: **CVPA** 266; **ENGL** 201; **FORL** 103; **GEOG** 101, 102, 140, 280; **HIST** 101, 102; **INST** 101; **ITEC** 112; **PEAC** 200; **RELN** 112, 205; **SOCY** 121;,**THEA** 180; **WMST** 101

B. Supporting Skills & Knowledge

NATURAL OR MATHEMATICAL SCI. (3-4 SH)

MATH 152 **4**

HUMANITIES, VISUAL & PERFORMING ARTS, OR FOREIGN LANGUAGES (3-4 SH)

_____ _____ _____ **3-4**

One of the following: **ENGL** 200; **HIST** 101, 102; **PHIL** 111, 112, 114; **POSC** 110; **RELN** 111, 112, 203, 206; **Or ART** 111, 215, 216; **CVPA** 266; **DNCE** 111; **MUSC** 100, 121, 123; **THEA** 100, 180 **Or CHNS** 101, 102, 201, 202; **FORL** 100, 109, 200, 209, 210, 309, 409; **FREN** 100, 200,210, 300, 320; **GRMN** 100, 200, 210, 300; **LATN** 101, 201, 350; **RUSS** 100, 200, 210, 300; **SPAN** 101, 102, 201, 202

SOCIAL/ BEHAV. SCI. OR HEALTH & WELLNESS (3 SH)

_____ _____ _____ **3**

One of the following: **ANSC** 101**; APST** 200; **ECON** 105, 106; **GEOG** 101, 102, 103; **HIST** 111, 112; **POSC** 120; **PSYC** 121; **RELN** 205; **SOCY** 110**,** 121; **HLTH** 111,200; **NURS** 111; **NUTR** 214; **RCPT** 200

Biochemistry: Life Sciences and Pre-Health CONCENTRATION

					Prerequisites
CHEM	101	_____ (4)	General Chemistry	F/S/SU	
CHEM	102	_____ (4)	General Chemistry	F/S/SU	CHEM 101
CHEM	216	_____ (3)	Inorganic Chemistry	F	CHEM 102
CHEM	301	_____ (4)	Organic Chemistry	F/S/SU	CHEM 102
CHEM	302	_____ (4)	Organic Chemistry	S/SU	CHEM 301
CHEM	324	_____ (4)	Analytical Chemistry	F	CHEM 102
CHEM	401	_____ (4)	Physical Chemistry I	F	CHEM 102, MATH 152, PHYS 112 or 222
CHEM	450	_____ (2)	Career & Professional Development	F	CHEM 302
CHEM	471	_____ (3)	Biochemistry	F/S	BIOL 105 or 132; CHEM 302
BIOL	132	_____ (4)	Biology of Cells and Microorganisms	F/S	"C" or better in CHEM 101
MATH	151	_____ (3)	Calculus & Analytic Geometry I	F/S	Math SAT ≥ 550,or college pre-calc ≥ "C" or ALEKS exam
MATH	152	_____ (3)	Calculus & Analytic Geometry II	F/S	MATH 151

Additional Requirements needed for completion of the Biochemistry: Life Sciences and Pre-Health Concentration:

CHEM	472	_____ (3)	Biochemistry	S	CHEM 471
CHEM	474	_____ (1)	Biochemistry Laboratory	F	CHEM 471
BIOL	231	_____ (4)	Genetics, Evolution, & Development	F/S	"C" or better in BIOL 132
BIOL/CHEM	3/4XX	_____ (8)	8 semester hours to be chosen from 300- or 400-level BIOL or CHEM courses		

B.S. (Non Teaching) Requirements (8 hours):

PHYS	111	_____ (4)	General Physics I	F/S	MATH 137 or equivalent
PHYS	112	_____ (4)	General Physics II	F/S	PHYS 111
OR					
PHYS	221	_____ (4)	Physics I	F	MATH 151
PHYS	222	_____ (4)	Physics II	S	PHYS 221

Sample Schedule B.S. Chemistry Biochemistry: Life Sciences and Pre-Health Concentration – 16/17

Fall Semester		**Spring Semester**	
Freshman Year	**Cr.**	**Freshman Year**	**Cr.**
CORE 101	3	CORE 102 CORE 101	3
CHEM 101	4	CHEM 102 CHEM 101	4
MATH 151 Math SAT ≥ 550,or college pre-calc ≥ "C" or ALEKS exam	3	MATH 152 MATH 151	3
UNIV 100	1	BIOL 132 "C" or better in CHEM 101	4
CORE	3	CORE	3
	14		**17**
The Biochemistry concentration is a rigorous four-year program provides a comprehensive foundation for graduate study in biochemistry, pharmacology, or related fields and prepares students for careers in industrial, governmental, healthcare or academic settings.			
Sophomore Year	**Cr.**	**Sophomore Year**	**Cr.**
CORE 201 CORE 101 & 102	3	CORE 202 CORE 101, 102 & 201	3
CHEM 301 (F ONLY) CHEM 102	4	CHEM 302 (S ONLY) CHEM 301	4
CHEM 216 (F ONLY) CHEM 102	3	CHEM 324 CHEM 102	4
BIOL 231"C" or better in BIOL 132	4	CORE	3
	14		**15**
CORE 101, 102, 201, and 202 must be completed in succession. Students should complete CORE 202 prior to their junior year			
Junior Year	**Cr.**	**Junior Year**	**Cr.**
CHEM 471 (F ONLY) BIOL 105 or 132; CHEM 302	3	CHEM 472 (S ONLY)	3
CHEM 474 (F ONLY)	1	CORE	3
B.S. requirement: PHYS 111 MATH 137 or equivalent **OR** PHYS 221 (F ONLY) MATH 151	4	B.S. requirement: PHYS 111 MATH 137 or equivalent **OR** PHYS 221 (F ONLY) MATH 151	4
CORE	3	FREE ELECTIVE to reach 120 credit hrs	3-4
FREE ELECTIVE to reach 120 credit hrs	3-4		
	14-15		**14-15**
Senior Year	**Cr.**	**Senior Year**	**Cr.**
CHEM 401 (F ONLY) CHEM 102, MATH 152, PHYS 112 or 222	4	Required 3/4XX or above CHEM/BIOL Elective	4
CHEM 450	2	CORE	3
Required 3/4XX or above CHEM/BIOL Elective	4	FREE ELECTIVE to reach 120 credit hrs	3-4
CORE	3	FREE ELECTIVE to reach 120 credit hrs	3-4
FREE ELECTIVE to reach 120 credit hrs	3-4		
	16-17		**13-15**