

Current Chemistry B.A.

Proposed Changes to Chemistry B.A.

Chemistry Major-B.A. Degree

52 cr

A. Core Requirements

CHE 111/212 - General Chemistry
 CHE 322 - Analytical Chemistry
 CHE 331/332 - Organic Chemistry
 CHE 341/342 - Physical Chemistry
 CHE 343L or 343L - Physical Chemistry Lab

Select one of the following three choices:

1. CHE 425 - Instrumental Analysis
2. CHE 451/451L - Inorganic Chemistry and Lab
3. CHE 461, and 461L or 462L - Biochemistry and Lab

Select one course from the following:

CHE 494 - Capstone Research
 CHE 498 - Internship

A. Core Requirements

CHE 111/212 - General Chemistry
 CHE 322 - Analytical Chemistry
 CHE 331/332 - Organic Chemistry
 CHE 341/342 - Physical Chemistry
 CHE 343L - Physical Chemistry Lab

Select one of the following three options:

1. CHE 425 - Instrumental Analysis
2. CHE 451/451L - Inorganic Chemistry and Lab
3. CHE 360/360L - Introductory Biochemistry with Lab

Select one course from the following:

CHE 494 - Capstone Research
 CHE 498 - Internship

B. Cognate Requirements

MAT 210 - Calculus I
 MAT 220 - Calculus II
 MAT 318 - Statistics in the Sciences
 One of the following two sequences:
 PHY 112/213 - General University Physics
 PHY 111/212 - General College Physics

19 cr

B. Cognate Requirements

MAT 210 - Calculus I
 MAT 220 - Calculus II
 MAT 318 - Statistics in the Sciences
 Select one of the following two sequences:
 PHY 112/213 - General University Physics
 PHY 111/212 - General College Physics

19 cr

4
 4
 3
 8

9 February 2015

TO: Dean Adrienne McCormick

FROM: Lawrence Fuller, Chemistry Dept Chair *LF*

RE: Chem BA & Adolescence: 7-12 program changes

The Chemistry Department is recommending the following curricular changes to better serve our students:

1. CHE 341L – Physical Chemistry Lab is no longer being offered and has been replaced by CHE 343L – Comprehensive Physical Chemistry Lab.
2. CHE 461 and either 461L/462L is the first semester of a 2 semester biochemistry majors sequence course. It is being replaced by a 1 semester CHE 360/360L – Introductory Biochemistry with the corresponding lab course. This one semester introductory course and lab will give the students a more complete picture of biochemistry which includes some material that is covered in our 2nd semester sequence course CHE 462.

The number of credits hours in these programs does not change.

Current Degree

Biochemistry Major – B.S. Degree

77cr

American Chemical Society certification requirements are satisfied in the BS Biochemistry degree curriculum.

A. Core Requirements

CHE 111/212 - General Chemistry	8
CHE 322 - Analytical Chemistry	4
CHE 331/332 - Organic Chemistry	8
CHE 425 - Instrumental Analysis	4
CHE 451 - Inorganic Chemistry	3
CHE 461/461L and 462/462L – Biochemistry with Lab	8
CHE 341/342 - Physical Chemistry	6
CHE 344L or 343L – Physical Chemistry Lab	1
CHE 494 Capstone Research	2

A. Core Requirements

CHE 111/212 - General Chemistry	8
CHE 322 - Analytical Chemistry	4
CHE 331/332 - Organic Chemistry	8
CHE 425 - Instrumental Analysis	4
CHE 451 - Inorganic Chemistry	3
CHE 461/461L and 462/462L – Biochemistry with Lab	8
CHE 341/342 - Physical Chemistry	6
CHE 343L – Physical Chemistry Lab	1

Select one of the following two options:

CHE 494 – Capstone Research

CHE 498 – Internship

B. Cognate Requirements

MAT 210 – Calculus I	4
Math 220 – Calculus II	4
MAT 318 – Statistics in the Sciences	3
PHY 111 OR 112 – College or General University Physics I	4
PHY 212 OR 213 – College or General University Physics II	4
Bio 120 – Molecular and Cellular Foundations	4
Bio 309 – Cellular Physiology	3
Bio 310 – Microbiology	3
Bio 315 – Genetics	3
Bio 316 – Genetics Lab	1

B. Cognate Requirements

MAT 210 – Calculus I	4
Math 220 – Calculus II	4
MAT 318 – Statistics in the Sciences	3
PHY 111 OR 112 – College or General University Physics I	4
PHY 212 OR 213 – College or General University Physics II	4
Bio 120 – Molecular and Cellular Foundations	4
Bio 309 – Cellular Physiology	3
Bio 310 – Microbiology	3
Bio 315 – Genetics	3
Bio 316 – Genetics Lab	1

Proposed changes

Biochemistry Major – B.S. Degree

77cr

American Chemical Society certification requirements are satisfied in the BS Biochemistry degree curriculum.

CHE 111/212 - General Chemistry	8
CHE 322 - Analytical Chemistry	4
CHE 331/332 - Organic Chemistry	8
CHE 425 - Instrumental Analysis	4
CHE 451 - Inorganic Chemistry	3
CHE 461/461L and 462/462L – Biochemistry with Lab	8
CHE 341/342 - Physical Chemistry	6
CHE 343L – Physical Chemistry Lab	1

Select one of the following two options:

CHE 494 – Capstone Research

CHE 498 – Internship

9 February 2015

TO: Dean Adrienne McCormick

FROM: Lawrence Fuller, Chemistry Dept Chair *LF*

RE: BS Biochemistry Major Program changes

The Chemistry Department is recommending the following curricular changes to better serve our students:

1. CHE 341L – Physical Chemistry Lab is no longer being offered and has been replaced by CHE 343L – Comprehensive Physical Chemistry Lab.
2. We added CHE 498 – Internship as an option for our students to select. This will give our students two choices to select from to complete a research experience.

The number of credits hours in these programs does not change.

Current Degree Chemistry Major- BS Degree (69-76)		Proposed changes	
Chemistry Major		Current Degree Chemistry Major- BS Degree (70-80)	
Track I – Chemistry		Chemistry Major	
A. Core Requirements		Track I – Chemistry	
	(69-76 cr)		(70-80 cr)
CHE 111/212 - General Chemistry	8	A. Core Requirements	70 cr
CHE 322 - Analytical Chemistry	4	CHE 111/212 - General Chemistry	47 cr
CHE 331/332 - Organic Chemistry	8	CHE 322 - Analytical Chemistry	8
CHE 341/342 - Physical Chemistry	6	CHE 331/332 - Organic Chemistry	4
CHE 343L or 343L - Physical Chemistry Lab	1	CHE 341/342 - Physical Chemistry	8
CHE 425 - Instrumental Analysis	4	CHE 343L - Physical Chemistry Lab	6
CHE 434L - Advanced Organic Chemistry Lab	1	CHE 425 - Instrumental Analysis	1
CHE 451 - Inorganic Chemistry	3	CHE 434L - Advanced Organic Chemistry Lab	4
CHE 461 – Biochemistry	3	CHE 451 - Inorganic Chemistry	1
Select one of the following choices:	1		3
CHE 451L – Inorganic Lab or		Select one of the following sequences:	7
CHE 461L – Biochemistry Lab		1. CHE 360/360L – Introductory Biochemistry with Lab	4
CHE 462L – Biochemistry Lab		and a 400-level chemistry elective under advisement	3
Chemistry electives under advisement, must be from	6	2. CHE 461/462 – Biochemistry	6
two areas of Chemistry		and either CHE 461L or 462L	1
CHE 494 Capstone Research	2	Choose one additional 400-level chemistry elective	3
		under advisement.	
		Select one of the following choices:	2
		CHE 494 – Capstone Research	
		CHE 498 – Internship	
		B. Cognate Requirements	23 cr
		MAT 210 – Calculus I	4
		MAT 220 – Calculus II	4
		MAT 318 – Statistics in the Sciences	3
		PHY 112/213 – General University Physics	8
		Physics elective, under advisement	4

NOTE: American Chemical Society certification requirements are satisfied in the BS Chemistry degree curriculum in Arts & Sciences.

NOTE: American Chemical Society certification requirements are satisfied in the BS Chemistry degree curriculum in Arts & Sciences.

9 February 2015

TO: Dean Adrienne McCormick

FROM: Lawrence Fuller, Chemistry Dept Chair

RE: BS Chemistry Major – Track I Program changes *LF*

The Chemistry Department is recommending the following curricular changes to better serve our students:

1. CHE 341L – Physical Chemistry Lab is no longer being offered and has been replaced by CHE 343L – Comprehensive Physical Chemistry Lab.
2. CHE 461 and either 461L/462L is the first semester of a 2 semester biochemistry majors sequence course. It is being replaced by a 1 semester CHE 360/360L – Introductory Biochemistry with lab course along with a 400-level chemistry elective. This one semester introductory course will give the students a more complete picture of biochemistry which includes some material that is covered in our 2nd semester sequence course CHE 462. Or the students may choose to complete the 2 semester course sequence of CHE 461/462 and CHE 461L/462L biochemistry major's courses.
3. The number of electives has been reduced from 2 to 1 depending on which option a student selects from Item #2 above
4. We added CHE 498 – Internship as an option for our students to select. This will give our students two choices to select from to complete a research experience.
5. We are replacing the Physics elective with Bio 120 – Molecular and Cellular Foundations to align the major with current trends in the field. This course will add one additional credit to the major.

These changes add 1 additional credit to this program making a total to 70 credits. The 76-80 credit change applies to the Environmental Chemistry - Track II program.

Current Degree Chemistry BS Track II – Environmental Chemistry*

A. Core Requirements

CHE 111/212 - General Chemistry	8	75-76 cr
CHE 322 - Analytical Chemistry	4	46-47 cr
CHE 331/332 - Organic Chemistry	8	
CHE 341/342 - Physical Chemistry	6	
CHE 343L - Physical Chemistry Lab	1	
CHE 425 - Instrumental Analysis	4	
CHE 451 - Inorganic Chemistry	3	
CHE 473 - Environmental Chemistry	3	
Select one of the following three courses:	3-4	
GCH 436 - Solid Earth Geochemistry	4	
GCH 437 - Earth Surface Geochemistry	4	
GCH 438 - Isotope Geochemistry	3	
Select one of the following four courses:	1	
CHE 451L - Inorganic Lab	1	
CHE 461L - Biochemistry Lab	1	
CHE 462L - Biochemistry Lab	1	
CHE 434L - Advanced Chemistry Lab	1	

CHE 461 - Biochemistry

3

CHE 494 - Capstone Research

2

B. Cognate Requirements

MAT 210 - Calculus I	4	29 cr
MAT 220 - Calculus II	4	
MAT 318 - Statistics in the Sciences	3	
BIO 120 - Molecular and Cellular Foundations	4	
GEO 100 - Physical Geology	3	
Biology or geology elective, under advisement, at the 300-400 level	3	
Select one sequence from the following:	8	
PHY 111/212 - College Physics		
PHY 112/213 - General University Physics		

*American Chemical Society certification requirements are satisfied in the BS Chemistry degree curriculum in Arts and Sciences

Proposed Changes

Chemistry BS Track II – Environmental Chemistry*

A. Core Requirements

CHE 111/212 - General Chemistry	8	79-80 cr
CHE 322 - Analytical Chemistry	4	50-51 cr
CHE 331/332 - Organic Chemistry	8	
CHE 341/342 - Physical Chemistry	6	
CHE 343L - Physical Chemistry Lab	1	
CHE 425 - Instrumental Analysis	4	
CHE 451 - Inorganic Chemistry	3	
CHE 473 - Environmental Chemistry	3	
Select one of the following three courses:	3-4	
GCH 436 - Solid Earth Geochemistry	4	
GCH 437 - Earth Surface Geochemistry	4	
GCH 438 - Isotope Geochemistry	3	
Select one of the following two courses:	1	
CHE 451L - Inorganic Lab	1	
CHE 434L - Advanced Chemistry Lab	1	

Select one of the following choices

7

1. CHE 360/360L - Introductory Biochemistry with Lab

4

and a 400-level chemistry elective under advisement

3

2. CHE 461/462 - Biochemistry

6

and CHE 461L or 462L

1

Select one of the following two courses:

2

CHE 494 - Capstone Research

CHE 498 - Internship

B. Cognate Requirements

MAT 210 - Calculus I	4	29 cr
MAT 220 - Calculus II	4	
MAT 318 - Statistics in the Sciences	3	
BIO 120 - Molecular and Cellular Foundations	4	
GEO 100 - Physical Geology	3	
Biology or geology elective, under advisement, at the 300-400 level	3	
Select one sequence from the following:	8	
PHY 111/212 - College Physics		
PHY 112/213 - General University Physics		

*American Chemical Society certification requirements are satisfied in the BS Chemistry degree curriculum in Arts and Sciences

9/11/2014

9 February 2015

TO: Dean Adrienne McCormick

FROM: Lawrence Fuller, Chemistry Dept Chair *LF*

RE: BS Chemistry Major – Environmental Chemistry - Track II Program changes

The Chemistry Department is recommending the following curricular changes to better serve our students:

1. CHE 341L – Physical Chemistry Lab is no longer being offered and has been replaced by CHE 343L – Comprehensive Physical Chemistry Lab.
2. We are moving the CHE 461L & 462L biochemistry lab choices to another category.
3. CHE 461 and either 461L/462L is the first semester of a 2 semester biochemistry majors sequence course. The students will now have two biochemistry choices in this category. Choice #1 is the 1 semester CHE 360/360L – Introductory Biochemistry with lab course along with a 400-level chemistry elective. This one semester introductory course will give the students a more complete picture of biochemistry which includes some material that is covered in our 2nd semester sequence CHE 462 course. For choice #2 the students may choose to complete the 2 semester course sequence of CHE 461/462 and CHE 461L/462L biochemistry major's courses.
4. We added CHE 498 – Internship as an option for our students to select. This will give our students two choices to select from to complete a research experience.

These changes add 4 additional credits to this program making a total program of 69-70 credits.