

## SUGGESTED PROGRAM OF STUDY

### Bachelor of Science - Major in Chemistry<sup>1</sup> General Track with MATH 111 Placement PHYS 201/202 2017 & 2018 bulletin

#### First Year

##### Fall Semester

CHEM 111	(General Chem. I) <sup>1</sup>	(4)_____
MATH 111	(Pre-Calc. I)	(3)_____
ENGL 101	(Composition) <sup>2</sup>	(3)_____
BIOL 121	(Biology I)	(4)_____
AFCI 101	(Critical Inquiry)	(1)_____

15 credit hours

##### Spring Semester

CHEM 112	(General Chem. II) <sup>1</sup>	(4)_____
MATH 112	(Pre-Calc. II)	(3)_____
ENGL 102	(Comp. and Lit.) <sup>2</sup>	(3)_____
History of Civ.	(either HIST 101 or 102)	(3)_____
Humanities or Social Science <sup>3</sup>		(3)_____

16 credit hours

#### Second Year

##### Fall Semester

CHEM 331	(Org Chem. I) <sup>1</sup>	(3)_____
CHEM 331L	(Org. I Lab) <sup>1</sup>	(1)_____
PHYS 201	(Gen. Physics I)	(4)_____
MATH 141	(Calc. I)	(4)_____
Amer. Gov't (HIST 201 or 202 or POLI 201)		(3)_____

15 credit hours

##### Spring Semester

CHEM 332	(Org Chem. II) <sup>1</sup>	(3)_____
CHEM 332L	(Org. Lab II) <sup>1</sup>	(1)_____
PHYS 202	(Gen. Physics II) <sup>4</sup>	(4)_____
MATH 142	(Calc. II)	(4)_____
CHEM 310	(Research Meth.) <sup>1</sup>	(1)_____
Communications (COMM 201 or 241)		(3)_____

16 credit hours

#### Third Year

##### Fall Semester

CHEM 321	(Quant. Analysis) <sup>1</sup>	(3)_____
CHEM 321 L	(Quant. Anal. Lab) <sup>1</sup>	(1)_____
CHEM 541	(Phys. Chem I) <sup>1</sup>	(3)_____
CHEM 541 L	(Phys Chem I Lab) <sup>1</sup>	(1)_____
BIOL 541	(Biochem)	(4)_____
Second Language 1 <sup>5</sup>		(4)_____

16 credit hours

##### Spring Semester

CHEM 311	(Intro Inorg. Chem.) <sup>1</sup>	(3)_____
CHEM 311L	(Intro Inorg. Chm Lab)	(1)_____
CHEM 542	(Phys. Chem II) <sup>1</sup>	(3)_____
CHEM 542L	(Phys Chem. II Lab) <sup>1</sup>	(1)_____
CHEM 500 Level Elective <sup>1,7</sup> or Humanity <sup>3</sup>		(4/3)_____
Second Language 2 <sup>5</sup>		(4)_____

16/15 credit hours

#### Fourth Year

##### Fall Semester

CHEM 499	(Senior Res.) <sup>1,8</sup>	(2)_____
CHEM 500+ Elective <sup>1,7</sup> or Cognate/Minor		(3/4)_____
Human. <sup>3</sup> /Soc. Science <sup>3</sup> or Cognate <sup>3,6</sup> /Minor		(3/4)_____
Human. <sup>3</sup> /Soc. Science <sup>3</sup> or Cognate <sup>3,6</sup> /Minor		(3/4)_____
Human. <sup>3</sup> /Soc. Science <sup>3</sup> or Cognate <sup>3,6</sup> /Minor		(3/4)_____

14-18 credit hours

##### Spring Semester

CHEM 499	(Senior Res.) <sup>1,8</sup>	(1/2)_____
CHEM 500+ Elective <sup>1,7</sup>		(4/5)_____
CHEM 500+ Elective <sup>1,7</sup> or Cognate/Minor		(4/3)_____
Human. <sup>3</sup> /Soc. Science <sup>3</sup> or Cognate <sup>3,6</sup> /Minor		(3/4)_____
Human. <sup>3</sup> /Soc. Science <sup>3</sup> or Cognate <sup>3,6</sup> /Minor		(3/4)_____

14-18 credit hours

- 1 - A grade of C or higher is required in all chemistry courses counting toward the degree. Students placing in Mathematics 108 or below will successfully complete these courses before enrolling in any chemistry course.
- 2 - Students must complete English 101/102 with a grade of C or better in order to fulfill general education requirements. Students must complete ENGL 102 with a grade of C or better before taking other English courses and for any course to count as Writing Intensive including CHEM 541L, 542L, and 511L
- 3 - At least three (3) credit hours of the degree must be in non-Western studies. See the bulletin for a complete list.
- 4 - PHYS 212 and BIOL 541 can be counted toward a cognate.
- 5 - Two (2) semesters of the same language are required.
- 6 - All graduates must complete either a Cognate or Minor. The cognate requirement is completed with a total of 12 credit hours earned in BIOL 514 plus any combination of accepted cognates (any 300+ course and selected 200 level courses). A partial list of the approved 200 level courses includes BIOL 244, 250, PHYS 212, MATH 241, 242, ENCP 200, 210, 260, and 290.
- 7 - Choose two 500 Level Chemistry Electives during junior or senior year – CHEM 511 Adv. Inorg. (4) in Fall, CHEM 522 Inst. Anal. (5) in Spring, or CHEM 550 Adv. BioChem. (4) in Spring.
- 8 - Completion of a thesis and seminar on the research project are required for graduation.

## SUGGESTED PROGRAM OF STUDY

### Bachelor of Science - Major in Chemistry<sup>1</sup> General Track with MATH 111 Placement APHY211/212 2017 & 2018 bulletins

#### First Year

##### Fall Semester

CHEM 111 (General Chem. I) <sup>1</sup>	(4)_____
ENGL 101 (Composition) <sup>2</sup>	(3)_____
MATH 111 (Pre-Calc. I)	(3)_____
MATH 112 (Pre-Calc. II)	(3)_____
Humanities or Social Science <sup>3</sup>	(3)_____
16 credit hours	

##### Spring Semester

CHEM 112 (General Chem. II) <sup>1</sup>	(4)_____
ENGL 102 (Comp. and Lit.) <sup>2</sup>	(3)_____
MATH 141 (Calc. I)	(4)_____
BIOL 121 (Biology I)	(4)_____
AFCI 101 (Critical Inquiry)	(1)_____
16 credit hours	

#### Second Year

##### Fall Semester

CHEM 331 (Org Chem. I) <sup>1</sup>	(3)_____
CHEM 331L (Org. I Lab) <sup>1</sup>	(1)_____
PHYS 211 (Physics I)	(4)_____
MATH 142 (Calc. II)	(4)_____
History of Civ. (either HIST 101 or 102)	(3)_____
15 credit hours	

##### Spring Semester

CHEM 332 (Org Chem. II) <sup>1</sup>	(3)_____
CHEM 332L (Org. Lab II) <sup>1</sup>	(1)_____
PHYS 212 (Physics II) <sup>4</sup>	(4)_____
Amer. Gov't (HIST 201 or 202 or POLI 201)	(3)_____
CHEM 310 (Research Meth.) <sup>1</sup>	(1)_____
Communications (COMM 201 or 241)	(3)_____
15 credit hours	

#### Third Year

##### Fall Semester

CHEM 321 (Quant. Analysis) <sup>1</sup>	(3)_____
CHEM 321 L (Quant. Anal. Lab) <sup>1</sup>	(1)_____
CHEM 541 (Phys. Chem I) <sup>1</sup>	(3)_____
CHEM 541 L (Phys Chem I Lab) <sup>1</sup>	(1)_____
BIOL 541 (Biochem)	(4)_____
Second Language 1 <sup>5</sup>	(4)_____
16 credit hours	

##### Spring Semester

CHEM 311 (Intro Inorg. Chem.) <sup>1</sup>	(3)_____
CHEM 311L (Intro Inorg. Chm Lab)	(1)_____
CHEM 542 (Phys. Chem II) <sup>1</sup>	(3)_____
CHEM 542L (Phys Chem. II Lab) <sup>1</sup>	(1)_____
CHEM 500 Level Elective <sup>1,7</sup> or Humanity <sup>3</sup>	(4/3) _____
Second Language 2 <sup>5</sup>	(4)_____
16/15 credit hours	

#### Fourth Year

##### Fall Semester

CHEM 499 (Senior Res.) <sup>1,8</sup>	(2)_____
CHEM 500+ Elective <sup>1,7</sup> or Cognate/Minor	(3/4) _____
Human. <sup>3</sup> /Soc. Science <sup>3</sup> or Cognate <sup>3,6</sup> /Minor	(3/4)_____
Human. <sup>3</sup> /Soc. Science <sup>3</sup> or Cognate <sup>3,6</sup> /Minor	(3/4)_____
Human. <sup>3</sup> /Soc. Science <sup>3</sup> or Cognate <sup>3,6</sup> /Minor	(3/4)_____

##### Spring Semester

CHEM 499 (Senior Res.) <sup>1,8</sup>	(1/2)_____
CHEM 500+ Elective <sup>1,7</sup>	(4/5) _____
CHEM 500+ Elective <sup>1,7</sup> or Cognate/Minor	(4/3) _____
Human. <sup>3</sup> /Soc. Science <sup>3</sup> or Cognate <sup>3,6</sup> /Minor	(3/4)_____
Human. <sup>3</sup> /Soc. Science <sup>3</sup> or Cognate <sup>3,6</sup> /Minor	(3/4)_____

- 1 - A grade of C or higher is required in all chemistry courses counting toward the degree. Students placing in Mathematics 108 or below will successfully complete these courses before enrolling in any chemistry course.
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- 8 - Completion of a thesis and seminar on the research project are required for graduation.