

Full name: _____ Hamline ID: _____ Phone #: _____
 Anticipated graduation date (such as: May, 2020) _____

16-17 COURSES, SEMINAR, AND AN INDEPENDENT RESEARCH PROJECT FOR MAJOR

DEPT	COURSE	TITLE	GRADE	CREDITS	TERM/ YEAR	SUBSTITUTE COURSE*	BREADTH OF STUDY**
1-2. Two general chemistry courses or one advanced general chemistry course:							
CHEM	1130	General Chemistry I		4			no
CHEM	1140	General Chemistry II		4			no
or							
CHEM	1500	Advanced General Chemistry		4			no
3. CHEM	3240	Analytical Chemistry		4			no
4. CHEM	3450	Organic Chemistry I		4			no
5. CHEM	3460	Organic Chemistry II		4			no
6. CHEM	3550	Physical Chemistry I		4			no
7. BIOL	3060	Principles of Cell Biology		4			no
8. BIOL	5900	Molecular Cell Biology		4			no
9. MATH	1170	Calculus I		4			yes
10. MATH	1180	Calculus II		4			yes
11. MATH	3320	Multivariable and Vector Calculus		4			yes
12. BIOC	3820	Biochemistry I		4			no
13. BIOC	3830	Biochemistry II		4			no
14. PHYS	1230	General Physics I		4			yes
15. PHYS	1240	General Physics II		4			yes
16. One of the following electives:							
BIOL	3050	Principles of Genetics		4			no
BIOL	3830	Applied Biotechnology					no
BIOL	5550	Microbiology					no
BIOL	5760	Immunology					no
BIOL	5870	Genomics and Bioinformatics					no
CHEM	3330	Instrumental Methods					no
CHEM	3560	Physical Chemistry II					no
CHEM	3700	Chemical Biology					no
CHEM	3840	Inorganic Chemistry					no
CHEM	3980	Special Topics: Molecular Biophysics					no
CHEM	5840	Advanced Inorganic Chemistry					no
17. An additional course from #16 above or 5000-level math, biology, or physics or 3000-level with program director permission:							
				4			yes
Seminar--Three semesters of BIOL/CHEM 5950 and one semester of BIOL/CHEM 5951:							
BIOL/CHEM	5950	Biology/Chemistry Seminar A		0.5			no
BIOL/CHEM	5950	Biology/Chemistry Seminar A		0.5			no
BIOL/CHEM	5950	Biology/Chemistry Seminar A		0.5			no
BIOL/CHEM	5951	Biology Presentation/Chemistry Seminar B		0.5			no
Independent research project, choose one of the following:							
BIOC	5970	Independent Study		4			no
BIOC	4010	Collaborative Research					
BIOL	5700	Research in Biology					
CHEM	5960	Chemistry Research					
Writing intensive course in the major:							

*Department approval is required for transfer courses or other substitutions. Courses used as substitutions must be initialed by Department Chair.

**In order to graduate, you must have at least 76 Breadth of Study credits (credits outside your major department). See above for courses in your major that also count toward Breadth of Study.

 Student signature: _____ Date: _____
 (required)

 Biochemistry advisor signature: _____ Date: _____
 (required)

 Department chair/director signature: _____ Date: _____
 (required for course substitutions and waivers)