

Full name: \_\_\_\_\_ Hamline ID: \_\_\_\_\_ Phone #: \_\_\_\_\_

Anticipated graduation date (such as: May, 2018) \_\_\_\_\_

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

DEPT	COURSE	TITLE	GRADE	CREDITS	TERM/ YEAR	SUBSTITUTE COURSE*	BREADTH OF STUDY**
<b>1-2. Two general chemistry courses or one advanced general chemistry course:</b>							
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
<b>16. One of the following electives:</b>							
BIOL	5600	Developmental Biology		4			yes
BIOL	5760	Immunology					
CHEM	3330	Instrumental Methods					
CHEM	3560	Physical Chemistry II					
CHEM	5840	Advanced Inorganic Chemistry					
<b>17. An additional course from #16 above or 5000-level math, biology, or physics or 3000-level with program director permission:</b>							
				4			yes
<b>Seminar--Three semesters of BIOL 5950 and one semester of BIOL 5951 or four semesters of CHEM 5950:</b>							
BIOL/CHEM	5950	Biology/Chemistry Seminar		0.5			no
BIOL/CHEM	5950	Biology/Chemistry Seminar		0.5			no
BIOL/CHEM	5950	Biology/Chemistry Seminar		0.5			no
BIOL/CHEM	5951/5950	Biology Presentation/Chemistry Seminar		0.5			no
<b>Independent research project:</b>							
BIOC	5970	Independent Study; or		4			no
	4010	Collaborative Research					
<b>Writing intensive course in the major:</b>							

\*Department approval is required for transfer courses or other substitutions. Approval must be initiated in the Department Approval column.

\*\*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)