

Full name: _____ Hamline ID: _____ Phone #: _____

Anticipated graduation date (such as: May, 2023) _____

DEPT	COURSE	TITLE	GRADE	CREDITS	TERM/ YEAR	SUBSTITUTE COURSE*	BREADTH OF STUDY**
Core Physics Courses:							
PHYS	1230	General Physics I		4			no
PHYS	1240	General Physics II		4			no
PHYS	3540	Modern Physics		4			no
PHYS	3600	Mathematical & Computational Methods		4			no
PHYS	3750	Thermodynamics & Statistical Mechanics		4			no
PHYS	5900	Junior Seminar		0.5			no
PHYS	5900	Junior Seminar		0.5			no
PHYS	5910	Senior Seminar		0.5			no
PHYS	5910	Senior Seminar		0.5			no
PHYS	5920	Research Project-Based Adv Lab		2			no
PHYS	5920	Research Project-Based Adv Lab		2			no
Core Mathematics Courses:							
MATH	1170	Calculus I		4			yes
MATH	1180	Calculus II		4			yes
MATH	3320	Multivariable & Vector Calculus		4			yes
MATH	3720	Differential Equations		4			yes
Core Chemistry Courses:							
CHEM	1130	General Chemistry I		4			yes
CHEM	1140	General Chemistry II		4			yes
or							
CHEM	1500	Advanced General Chemistry		4			yes
Materials Science Emphasis:							
CHEM	3450	Organic Chemistry I		4			yes
CHEM	3840	Inorganic Chemistry		4			yes
PHYS	3700	Condensed Matter Physics		4			no
PHYS	5940	Adv Electromagnetic Field Theory		4			no
PHYS	5950	Adv Quantum Mechanics		4			no
One of the following:							
PHYS	3520	Physical Optics		4			no
PHYS	3800	Electronics & Instrumentation		4			no
One of the following:							
CDS	1010	Introduction to Programming		4			yes
INTD	3900	Innovation		4			yes
MATH	3330	Linear Algebra		4			yes
MATH	3410	Mathematical Modeling		4			yes
MATH	3810	Probability & Mathematical Statistics		4			yes
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 48 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)

 Physics advisor signature: _____ Date: _____
(required)

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