



Undergraduate Degree Map for Completion in Four Years

College:	College of Science, Engineering & Technology <input type="button" value="v"/>
Department:	Physics & Astronomy <input type="button" value="v"/>
Name of Program:	PHYSICS EDUCATION <input type="button" value="v"/>
Degree Designation:	BS <input type="button" value="v"/>
Emphasis/Concentration:	<input type="text"/> <input type="button" value="v"/>
Option:	<input type="text"/>
Version:	2 <input type="button" value="v"/>
Version Explanation:	In this version, students take upper division physics courses as required physics electives.
Type of Program:	Standard Major <input type="button" value="v"/>
Minor Required:	No <input type="button" value="v"/>
Specific Minor (if required):	<input type="text"/>

<p>Program Description:</p> <p>Physics education degree is the physics science teaching degree. Completion of the degree requirements certifies the graduates to be high school physics teachers in the state of Minnesota.</p>
<p>Admission Requirements:</p> <p>Earned at least 32 Credit hours and GPA > 2.75. Registration for the Minnesota Teacher Licensure Exam Basic Skills exam. Enrollment or completion of KSP220. C grade or better in ENG 101 and General Education Math courses.</p>
<p>Advising:</p> <p>You are expected to meet with your advisor on a regular basis to ensure courses are taken in an order that will lead to successful completion of the degree.</p> <p><input type="text"/></p> <p>A complete listing of program faculty, policies, and course descriptions is available in the undergraduate bulletin.</p>

TERM 1 - FALL

Designator:	Course:	Course Name:	Credits:	Milestones:
				Overall GPA \geq 2.0 Course Completion Rate \geq 67% Completion of \geq 15 credit hours
Math	121	Calculus I	4.0	

<i>Designator:</i>	<i>Course:</i>	<i>Course Name:</i>	<i>Credits:</i>	<i>Milestones:</i>
				Overall GPA \geq 2.0 Course Completion Rate \geq 67% Completion of \geq 15 credit hours
Biol	105	General biology I	4.0	
Ast	101	Introduction to Astronomy	3.0	
General education		any general education course	5 -7	

Insert item

Term 1 Notes:

A student pursuing this option will have heavier physics loads later in his/her academic career and should take 7 general education credits.

TERM 2 - SPRING

<i>Designator:</i>	<i>Course:</i>	<i>Course Name:</i>	<i>Credits:</i>	<i>Milestones:</i>
				Overall GPA \geq 2.0 Course Completion Rate \geq 67% Completion of \geq 30 credit hours Advance to Sophomore status
Math	122	Calculus II	4	
Phys	221	General Physics I	4	
Biol	106	General biology II	4	
General education		Any general education courses cover the required Goal Areas	3 - 6	

Insert item

Term 2 Notes:

A student pursuing this option will have heavier physics loads later in his/her academic career and should take at least 3 general education credits.

TERM 3 - FALL

<i>Designator:</i>	<i>Course:</i>	<i>Course Name:</i>	<i>Credits:</i>	<i>Milestones:</i>
				Overall GPA \geq 2.0 Course Completion Rate \geq 67%
Phys	222	General Physics II	3	
Phys	232	General Physics II lab	1	
Chem	201	General Chemistry I	5	
HLTH	240	Drug Education	3	
General education		General education courses	3-4	

Insert item

Term 3 Notes:

Check uncovered Goal Areas in general education courses. You need two Diverse culture courses and two writing intensive courses in general education.

TERM 4 - SPRING

<i>Designator:</i>	<i>Course:</i>	<i>Course Name:</i>	<i>Credits:</i>	<i>Milestones:</i>
				Overall GPA \geq 2.0 Course Completion Rate \geq 67% Completion of \geq 60 credit hours Advance to Junior status
PHYS	223	General Physics III	3	
Phys	233	General Physics III lab	1	
Phys	335	Modern Physics I	3	
Geol	121	Physical geology	4	
KSP	202	Technology integration in the classroom	2	
General education		General education courses	2-4	

Insert item

Term 4 Notes:

Students should apply for admission to professional education
Check uncovered Goal Areas in general education courses. You need two Diverse culture courses and two writing intensive courses in general education.

TERM 5 - FALL

<i>Designator:</i>	<i>Course:</i>	<i>Course Name:</i>	<i>Credits:</i>	<i>Milestones:</i>
				Overall GPA \geq 2.0 Course Completion Rate \geq 67% Apply for Graduation
Phys	336	Modern Physics II	3	
Phys	381	Tutoring physics	2	
KSP	220W	Human relations in a multicultural society	3	
KSP	222	Introduction to the learner and learning	5	
Phys or Math electives		Take a course which is the prerequisite of other upper division physics courses in the electives	3-4	

Insert item

Term 5 Notes:

CS 110, Computer science I is the prerequisite of Phys 465. This course is only offered in fall semesters.

TERM 6 - SPRING

<i>Designator:</i>	<i>Course:</i>	<i>Course Name:</i>	<i>Credits:</i>	<i>Milestones:</i>
				Overall GPA \geq 2.0 Course Completion Rate \geq 67% Completion of \geq 90 credit hours Advance to Senior status
Phys	482	Teaching methods and Materials in physical science	4	
KSP	330	Planning, instruction and evaluation in the classroom	5	
Geol	310	Earth and space systems	3	
Phys or Math electives		Physics or mathematics course	3-4	

Insert item

Term 6 Notes:

Math 321, differential equation is the prerequisite of several upper division physics courses. A student intend to take 400-level physics courses should take Math 321. Math 223, Calculus III will also be a useful math course for upper division physics courses. Apply for graduation.

TERM 7 - FALL

<i>Designator:</i>	<i>Course:</i>	<i>Course Name:</i>	<i>Credits:</i>	<i>Milestones:</i>
				Overall GPA \geq 2.0 Course Completion Rate \geq 67%
Phys	465	Computer applications in physics	3	
Phys	493	Undergraduate research	2	
KSP	440	Creating learning environments to engage children, families and communities	3	
KSP	442	Reading, literacy, and differentiated instruction in the inclusive classroom	3	
electives		Phys or Math electives, or general education courses	3-4	

Insert item

Term 7 Notes:

TERM 8 - SPRING

<i>Designator:</i>	<i>Course:</i>	<i>Course Name:</i>	<i>Credits:</i>	<i>Milestones:</i>
				Overall GPA \geq 2.0 Course Completion Rate \geq 67%
KSP	464	Professional seminar	1	
KSP	477	Student teaching	11	

Insert item

Term 8 Notes:

PROGRAM NOTES

DEGREE MAP CHECKLIST: GRADUATION REQUIREMENTS

<input checked="" type="checkbox"/>	1. Minimum of 15 credits per semester
<input checked="" type="checkbox"/>	2. General Education = 44 credits
<input checked="" type="checkbox"/>	3. Diverse Cultures = 2 course (6 credits minimum) from two disciplines
	4. Writing Intensive = 2 courses (6 credits minimum)

<input checked="" type="checkbox"/>	
<input checked="" type="checkbox"/>	5. Major = <input type="text" value="21"/> credits
<input checked="" type="checkbox"/>	6. Upper-Division Requirements = 40 credits minimum
<input checked="" type="checkbox"/>	7. Professional Education (if required) = 30 credits
<input type="checkbox"/>	8. Language Requirements (if BA) = 8 credits minimum
<input type="checkbox"/>	9. Minor = <input type="text"/> credits
<input checked="" type="checkbox"/>	10. Total credits required for degree <input type="text" value="120"/>

DEGREE MAP COMPLETE

<input checked="" type="checkbox"/>	<p>Map is complete and ready for review</p> <ol style="list-style-type: none"> 1. Faculty please send an email to your Department Chair when map is ready to review. 2. Department Chair please send an email to your Dean when map is ready to review. 3. Dean please send an email to the Assistant Vice President for Undergraduate Studies when map is ready to review.
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DEAN APPROVAL

<input checked="" type="checkbox"/>	Map reviewed and approved by Dean
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Save and Close