

# Grinnell College Education Department Secondary Teaching Licensure Program Advising Guide

#156 5-12 Physics – Updated February 2021

This worksheet will assist you and your advisor in planning your courses.

## EDUCATION DEPARTMENT REQUIRED COURSES FOR LICENSURE

Introductory Required Courses			
	EDU 101	Principles of Education in a Pluralistic Society	4 credits
	EDU 102	Participant Observation in Schools	2 credits

Four credits from the following:			
	EDU 210	Historical Perspectives on U.S. Education	4 credits
	EDU 211	The Politics of Educational Assessment	4 credits
	EDU 213	Cultural Politics of Language Teaching	4 credits
	EDU 214	Critical Literacy	4 credits
	EDU 215	Reading and Writing Youth and Youth Cultures	4 credits
	EDU 217	Comparative and International Education	4 credits
	EDU 218	Place Based Education	4 credits
	EDU 295	Education Special Topic	2-4 credits

Education Department Upper-Level Required Courses			
	EDU 221	Educational Psychology	4 credits
	EDU 250	Differentiating Instruction for All Students	4 credits
	EDU 340	Research and Methods in Teaching the Young Adult	4 credits
	EDU 345	Research and Methods in Teaching and Learning in the Sciences	2 credits

Student Teaching Semester Courses			
	EDU 460	Seminar in Teaching the Young Adult	2-4 credits
	EDU 469	Student Teaching Internship in the Disciplines	4-8 credits

## K-12 FIELD EXPERIENCE

80 hours of K-12 based field experience are also required. 10 of those hours must be completed in an ethno-racially, linguistically, and/or culturally diverse placement.

## GENERAL EDUCATION REQUIREMENTS

Students must complete coursework in each of the following content areas. AP credit, courses taken S/D/F, and courses taken at other institutions can fulfill these requirements.

	American History or Government
	Humanities
	Mathematics
	Biological Science
	Physical Science
	Demonstrated Proficiency in Writing (met by Tutorial)

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Special topics courses (295, 395), OCS coursework, independent, directed and mentored advanced projects (299, 399, 499), and other classes with relevant content to the endorsement area may serve as substitutions if those courses are reviewed and granted permission by the appropriate education department faculty member. Permission to substitute courses must be granted in writing and recorded in the student's electronic folder.

## PHYSICS ENDORSEMENT REQUIREMENTS

Students may choose among two options for completing their content-area requirements for their Physics endorsement at Grinnell College.

### **Option 1- Total Credit Hours-24**

Completion of 24 semester hours in Physics to include the following courses:

Institutional Requirements			
	PHY 131	General Physics I	4 credits
	PHY 132	General Physics II	4 credits
	PHY 232	Modern Physics	4 credits
	PHY 234	Mechanics	4 credits

Two electives in Physics at the 200-level or above (8 credits)			
			4 credits
			4 credits

### **Option 2- Total Credit Hours-30**

Completion of thirty semester hours in the broad area of Sciences (Mathematics, Biological Science, Chemistry, Physics) to include fifteen hours semester hours in Physics:

Institutional Requirements			
	PHY 131	General Physics I	4 credits
	PHY 132	General Physics II	4 credits
	PHY 232	Modern Physics	4 credits
	PHY 234	Mechanics	4 credits

Electives in the Broad Area of Science (14 credits)			
			4 credits
			4 credits
			4 credits
			4 credits