

# Grinnell College Education Department

## Secondary Teaching Licensure Program Advising Guide

#143 5-12 Mathematics – 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 344	Research and Methods in Teaching and Learning in the Mathematics	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

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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.

### MATHEMATICS ARTS ENDORSEMENT REQUIREMENTS

#### **Total Credit Hours-24**

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

One course in linear algebra OR abstract algebra			
	MAT 215	Linear Algebra	4 credits
	MAT 321	Foundations of Abstract Algebra	4 credits

One course in computer programming			
	CSC 151	Functional Problem Solving	4 credits

Two semester sequence in calculus			
	MAT 123	Functions and Differential Calculus	4 credits
	MAT 124	Functions and Integral Calculus	4 credits
	MAT 133	Calculus II	4 credits
OR			
	MAT 131	Calculus I	4 credits
	MAT 133	Calculus II	4 credits

One course in geometry			
	MAT 222	Bridges to Advanced Mathematics (Geometry)	4 credits
		Another course wholly focused on geometry	2-4 credits

One course in statistics			
	MAT 209	Applied Statistics	4 credits
	MAT 335	Probability and Statistics I	4 credits

One course in discrete mathematics			
	MAT 218	Discrete Bridges to Advanced Mathematics	4 credits
	MAT 208	Discrete Structures	4 credits