



## Complementary Secondary Endorsement STEM 5-8

**Complementary teaching endorsements support initial Secondary Education teaching licenses. These complementary endorsements authorize a teacher to teach in additional content areas in grades 5-8.** Students must earn a minimum 3.0 GPA in courses required for each endorsement. No D grades are accepted. Please see the Secondary Education major sheet and/or the university catalog for additional information.

After completing a 5-12 mathematics OR a 5-12 science endorsement, a STEM endorsement may be added.

### Iowa Teaching Endorsement: #976

**Requirements for the Endorsement: 32 – 41 credits**

Students must complete the designated coursework in each of the categories (A, B, C, D).

#### Category A: Science – 12 credits

#### Essential Competencies-Outcome Iterations

\*\*Transfer courses do not receive outcome iterations\*\*

				CI	IL	W	O	Q	GA	V
	CHEM 107 or CHEM 111	Fundamentals of Organic and Biochemistry or General Chemistry I	4	x				x		
	BIOL 101	General Biology I	4	x	x			x		
	PHSC 101 or PHYS 131/241 and EDUC 408	Physical and Earth Science or Introduction to Physics I/General Physics I and STEM Teaching: Earth Science	4 or 4/5 and 3	x				x		
OR										
	A minimum of 12 credit hours of approved college level science coursework including content in Chemistry, Biology, Physics, and Earth Science		12							

#### Category B: Mathematics – 8-12 credits

#### Essential Competencies-Outcome Iterations

\*\*Transfer courses do not receive outcome iterations\*\*

				CI	IL	W	O	Q	GA	V
	MATH 232 and CPSC 155 or CPSC 241 or Approved CPSC course	Calculus with Analytic Geometry II and Programming Using Visual Basic or Computer Science I or Approved computer programming course	5 and 3 Or 3 or 3							
OR Take 9 credits from:										
	MATH 121	College Algebra	3	x				x		
	MATH 122	Trigonometry	3							
	MATH 231	Calculus with Analytic Geometry I	5	x				x		
	STAT 241	Principles of Statistics	4	x				x		
	STAT 261	Applied Statistics								
And take:										
	CPSC 155 or CPSC 241 or Approved CPSC course	Programming Using Visual Basic or Computer Science I or Approved CPSC course	3							

**ANY CHANGES/SUBSTITUTIONS MUST BE APPROVED BY THE GRAND VIEW UNIVERSITY EDUCATION DEPARTMENT CHAIR.**

This information must be used in conjunction with the 2018-2019 Grand View University Catalog and does not reflect a student's official record of progress. Students are expected to use the Progress tool found on myView > GV Self Service when monitoring and planning coursework. Other available resources include: Course Planning Documents (found on myView under Academics) and the faculty and staff who work with academic requirements.

**Category C: Engineering – 3 credits****Essential Competencies-Outcome Iterations****\*\*Transfer courses do not receive outcome iterations\*\***

				CI	IL	W	O	Q	GA	V
	EDUC 410	Engineering, Programming, and Design for Educators	3							

**Category D: Methods – 11 credits****Essential Competencies-Outcome Iterations****\*\*Transfer courses do not receive outcome iterations\*\***

				CI	IL	W	O	Q	GA	V
	EDUC 348	Secondary Science Teaching Methods	2							
	EDUC 349	Secondary Mathematics Teaching Methods	2							
	EDUC 411	Problem Solving, Inquiry, and The Nature of STEM	3							
	EDUC 450	Models and Methods of Teaching STEM	3							
	EDUC 451	Experiential STEM	1							

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