



# **Program Map: Math Education**

Completion Award **Associate in Math Education, DTA/MRP** 

Program Length
6 Quarters

Program Code **AM**  Apply Online pencol.edu/GetStarted

This is the Associate in Math Education program map for the Math & Science Area of Study. This map is intended as a general guide. The degree was developed for students planning to prepare for teacher certification in secondary math at Central Washington University, Eastern Washington University, Washington State University, and City University. Please work with your academic advisor regarding your specific goals and transfer requirements.

Order	Category	Course	Credits
1	Communication Skills	ENGL& 101: Composition I	5
2	Quantitative Skills	MATH& 151	5
3	Elective 1/First Year Experience	Choose one:	5
		COLL 101: College Success ECED& 105: Introduction to Early Childhood Education	
4	Communication Skills	ENGL& 102: Composition II	5
5	Social Science 1	PSYC& 100: General Psychology (required)	5
6	Natural Science 1	MATH& 152: Calculus II: Analytic Geometry	5
redits 7	Required Additional Course	MATH& 163: Calculus 3: Analytic Geometry	5
8	Natural Science 2	Choose one:	5
	(Lab)	BIOL&100L: Survey of Biology BIOL 150L: Introduction to Marine Biology BOT 101L: Introduction to Botany CHEM& 110L: Chemical Concepts with Lab CHEM& 121L: Introduction to Chemistry GEOL& 101L: Introduction to Physical Geology	
9	Humanities 1	CMST&220: Public Speaking (required)	5
redits			
10	Additional Courses (required)	MATH 210: Linear Algebra	5
11	Humanities 2	Choose one:	5
		ART& 100: Art Appreciation	

Order	Category	Course	Credits
11	Humanities 2	Continued options:	
		CMST 201: Social Media & Society DRMA& 101: Intro to Theatre ENGL& 111: Introduction to Literature ENGL& 112: Introduction to Fiction ENGL& 113: Introduction to Poetry ENGL& 114: introduction to Drama ENGL& 220: Introduction to Shakespeare ENGL& 226: British Literature I ENGL 240 Children's Literature ENGL& 244: American Literature I ENGL 250: Intercultural Literature ENGL& 254: World Literature I FILM 100: Art of Film FILM 101: Great Directors in Film FILM 102: Film Genre FILM 110: Literature and Film FILM 120: Introduction to Screenwriting IS 101: Understanding the Humanities IS 107: History of Reason MUSC& 105: Music Appreciation PHIL& 101: Introduction to Philosophy PHIL& 115: Critical Thinking PHIL 130: Ethics	
12	Social Sciences 2	Choose one:	5
		ECON& 201: Microeconomics ECON& 202: Macroeconomics HIST& 126, 127, or 128: World Civilizations I, II, or III POLS& 101: Intro Political Science POLS& 202: American Government POLS& 203: International Relations POLS& 204: Comparative Government SOC& 101: Introduction to Sociology SOC 115: Understanding Diversity SOC 230: Sociology of Gender and Sexuality SOCSI 101: Contemporary Global Issues	
13	Additional Courses (required)	MATH 224: Intermediate Analysis	5
14	Humanities 2	Choose one:	5
		ART& 100: Art Appreciation CMST& 102: Introduction to Mass Media CMST 201: Social Media & Society DRMA& 101: Intro to Theatre ENGL& 111: Introduction to Literature ENGL& 112: Introduction to Fiction ENGL& 113: Introduction to Poetry ENGL& 114: introduction to Drama ENGL& 220: Introduction to Shakespeare ENGL& 226: British Literature I ENGL 240 Children's Literature ENGL& 244: American Literature I ENGL 250: Intercultural Literature ENGL& 254: World Literature I	

## Suggested Order

Order	Category	Course	Credits
14	Humanities 2	Continued options:	
		FILM 101: Great Directors in Film FILM 102: Film Genre FILM 110: Literature and Film FILM 120: Introduction to Screenwriting IS 101: Understanding the Humanities IS 107: History of Reason MUSC& 105: Music Appreciation PHIL& 101: Introduction to Philosophy PHIL& 115: Critical Thinking PHIL 130: Ethics	
15	Natural Science 3	Choose one:	5
	(Non Lab)	ENVS& 100: Survey of Environmental Science NUTR& 101: Introduction to Human Nutrition OCEA& 101: Introduction to Oceanography	
16	Additional Courses (required)	MATH 238: Differential Equations	5
17	Additional Course (required)	EDUC& 205: Introduction to Education with Field Experience	5
18	Social Sciences 3	Choose one:	5
		ECON& 201: Microeconomics ECON& 202: Macroeconomics HIST& 126, 127, or 128: World Civilizations I, II, or III POLS& 101: Intro Political Science POLS& 202: American Government POLS& 203: International Relations POLS& 204: Comparative Government SOC& 101: Introduction to Sociology SOC 115: Understanding Diversity SOC 230: Sociology of Gender and Sexuality SOCSI 101: Contemporary Global Issues	

Total credits required:

90



# **Math & Science**



### **Area of Study Outcomes**

#### **Communication Competencies**

- Comprehend the difference between written opinions vs ideas supported by scientific inquiry.
- Demonstrate the ability to communicate scientific ideas and the process of science.

#### **Quantitative Reasoning**

- Manipulate numbers (large and small), use common measurement systems, and solve simple linear algebraic problems.
- Recognize functional relationships between and among measurable phenomena.
- Apply systematic approaches and logic to solving quantitative problems.
- Translate mathematical symbols into words and words into mathematical symbols.
- Demonstrate the ability to use modeling and simulation to solve scientific problems.

#### **Information Competencies**

- Recognize the difference between questions of high scientific impact vs those unlikely to provide critical information about a scientific phenomenon or process.
- · Ability to apply the process of science.

#### **Critical Thinking**

- · Identify and troubleshoot scientific problems.
- Demonstrate the ability to use quantitative reasoning and analyze data.
- Demonstrate the ability to apply the process of science.

#### **Personal and Interpersonal Competencies**

- Gain an understanding of the relationships between science and society.
- Gain familiarity with and an appreciation for the interdisciplinary nature of science.
- Demonstrate the ability to collaborate and understand the importance of collaboration in science.

#### **Career Pathways**

By earning a degree or certificate in the area of Math & Science you'll be on your way to any of the following career opportunities listed below:

- Astronomer
- Atmospheric scientist
- Bioengineer
- · Biologist
- Chemist
- · Computer Scientist
- Engineer
- Environmental scientist
- Mathematician
- Materials scientist
- Physicist
- Sustainable agriculturist

#### **Program Notes**

Please note that many universities require a foreign language and intermediate algebra (Math 98 at PC) as admissions criteria. Select from three subject areas to fulfill Social Science, Natural Science, and Humanities Distribution requirements. Please refer to the AA degree guide for additional information.

Possible additional pre-college classes depending upon placement level: Engl 90 (5 credits) and Math 63/90 (5-10 credits).