

MATHEMATICS - ASSOCIATE OF ARTS OREGON TRANSFER (AAOT)

Description

The study of mathematics develops analytic and quantitative skills which are valuable in today's data-driven economy. The Associate of Arts Oregon Transfer (AAOT) with a focus in mathematics includes courses that are commonly required for a math major and meets lower division general education requirements at all Oregon public universities.

A bachelor's degree with a major in math is great preparation for graduate school (such as schools of law, medicine, education, or business) as well as direct employment in industry, government, research, and business.

Learning Outcomes

Arts & Letters

1. Interpret and engage in the Arts & Letters, making use of the creative process to enrich the quality of life; and
2. Critically analyze values and ethics within a range of human experience and expression to engage more fully in local and global issues.

Cultural Literacy

1. Identify and analyze complex practices, values, and beliefs and the culturally and historically defined meanings of difference.

Health

1. Explain the relationship between human behavior and health.

Mathematics

1. Use appropriate mathematics to solve problems; and
2. Recognize which mathematical concepts are applicable to a scenario, apply appropriate mathematics and technology in its analysis, and then accurately interpret, validate, and communicate the results.

Science or Computer Science

1. Gather, comprehend, and communicate scientific and technical information in order to explore ideas, models and solutions and generate further questions;
2. Apply scientific and technical modes of inquiry, individually, and collaboratively, to critically evaluate existing or alternative explanations, solve problems, and make evidence-based decisions in an ethical manner; and
3. Assess the strengths and weaknesses of scientific studies and critically examine the influence of scientific and technical knowledge on human society and the environment.

Social Science

1. Apply analytical skills to social phenomena in order to understand human behavior; and

2. Apply knowledge and experience to foster personal growth and better appreciate the diverse social world in which we live.

Speech/Oral Communication

1. Engage in ethical communication processes that accomplish goals;
2. Respond to the needs of diverse audiences and contexts; and
3. Build and manage relationships.

Writing and Information Literacy

1. Read actively, think critically, and write purposefully and capably for academic and, in some cases, professional audiences;
2. Recognize and articulate the need for information, and then locate, evaluate, and ethically utilize that information to communicate effectively; and
3. Demonstrate appropriate reasoning in response to complex issues.

Entrance Requirements

While this program has no formal entrance requirements, individual courses may have prerequisites which must be met prior to enrollment.

Course Requirements

Course	Title	Credits
General Education/Foundational		
Health: (https://catalog.cocc.edu/degree-certificate-overview/general-education/#fhe)		
Choose three credits		3
Mathematics: (https://catalog.cocc.edu/degree-certificate-overview/general-education/#fma)		
Choose one course		4
Recommend: MTH 251		
Oral Communication: (https://catalog.cocc.edu/degree-certificate-overview/general-education/#foc)		
Choose one course		3-4
Writing: (https://catalog.cocc.edu/degree-certificate-overview/general-education/#fwi)		
WR 121	Academic Composition	4
WR 122	Argument, Research, and Multimodal Composition	4
or WR 227	Technical Writing	
General Education/Discipline studies		
Cultural Literacy: (https://catalog.cocc.edu/degree-certificate-overview/general-education/#dcl)		
One course from the following categories must be designated as cultural literacy on the Discipline Studies list (credits count once).		
Arts and Letters: (https://catalog.cocc.edu/degree-certificate-overview/general-education/#dal)		
Choose three courses from at least two prefixes		9-12
Social Science: (https://catalog.cocc.edu/degree-certificate-overview/general-education/#dss)		
Choose four courses from at least two prefixes		12-16

Science/Math/Computer Science: (<https://catalog.cocc.edu/degree-certificate-overview/general-education/#dsn>)

Choose four courses from at least two prefixes including at least three laboratory courses in biological and/or physical science 12-20

Recommend: MTH 252, PH 211, PH 212, PH 213

Electives

Choose any course numbered 100 or above that brings the total credits to 90 quarter hours. This may include up to 12 credits of Career and Technical Education courses designated by COCC as acceptable. 39

Recommend: MTH 253, MTH 254, MTH 255, MTH 256, MTH 261A ²

Total Credits 90-106

¹ HHPA activity courses (1 credit each) are not to be duplicated

² Related courses to consider: CIS 120 Computer Concepts, CIS 122 Introduction to Programming, MTH 243 Introduction to Probability and Statistics I, MTH 244 Introduction to Probability and Statistics 2. Note: Some four year colleges require CIS 122 for math majors. See an advisor for details.

Advising Notes

- MTH 256 Applied Differential Equations and MTH 261A Introduction to Linear Algebra are only offered in fall and spring terms
- MTH 254 Vector Calculus I is only offered winter term and MTH 255 Vector Calculus II is only offered spring term.
- PH 211 General Physics I is only offered winter term, PH 212 General Physics II is only offered spring term and PH 213 General Physics III is only offered fall term.

Performance Standards

- Academic Requirements:
 - Students must have a 2.0 cumulative GPA to earn a COCC certificate or degree.
 - All courses in the program must be completed with a grade of C or higher.

Sample Plan

First Term	Credits
Discipline Studies Arts & Letters	3-4
Oral Communication: (https://catalog.cocc.edu/degree-certificate-overview/general-education/#foc)	3-4
Mathematics (recommend MTH 251)	4
WR 121 Academic Composition	4
Credits	14-16

Second Term

Discipline Studies Science/Math/Computer Science (recommend MTH 252)	4
Discipline Studies Science/Math/Computer Science (recommend PH 211)	5
Discipline Studies Social Science	3-4
WR 122 Argument, Research, and Multimodal or WR 227 Composition Technical Writing	4
Credits	16-17

Third Term

Discipline Studies Science/Math/Computer Science (recommend PH 212)	5
Elective (recommend MTH 253)	4
Elective (recommend MTH 261A)	2
Health (3 credits with HHP or HHPA prefix)	3
Credits	14

Fourth Term

Discipline Studies Science/Math/Computer Science (recommend PH 213)	5
Discipline Studies Social Science	3-4
Discipline Studies Arts & Letters	3-4
Elective (recommend MTH 256)	4
Credits	15-17

Fifth Term

Discipline Studies Arts & Letters	3-4
Discipline Studies Social Science	3-4
Elective (recommend MTH 254)	4
Elective	3-4
Elective	3-4
Credits	16-20

Sixth Term

Discipline Studies Social Science	3-4
Elective (recommend MTH 255)	4
Elective	3-4
Elective	3-4
Elective	3-4
Credits	16-20
Total Credits	91-104