

# MATH AND COMPUTER SCIENCE DUAL DEGREE

## A PARTNERSHIP BETWEEN ALVERNO COLLEGE AND THE UNIVERSITY OF WISCONSIN-MILWAUKEE (UWM)

This dual degree program will provide you with a powerful combination of knowledge and skills in both math and computer science. The logic you gain in your math classes at Alverno will assist you with programming tasks, including theory, computation complexity and algorithms, in your studies at UWM. With both degrees, you can move into computer science careers at a higher level.

### Math at Alverno

Alverno's approach to math focuses on making the connections between theory and applications. Study areas, including logic, techniques of proof and problem solving, are integrated in your work.

With a faculty-student ratio of 10:1, you will develop meaningful first-name relationships with your professors, who are partners in your success. And Alverno's abilities-based curriculum and rigorous performance-based assessment process will help you practice and perfect the skills most in demand by today's employers, including problem solving, leadership and analysis.

While studying at Alverno, you will complete an internship that can help you translate your skills learned in the classroom to the professional world, strengthening critical and analytical thinking skills.

### Computer Science at UWM

Building upon your math foundation, the Computer Science component of this dual degree will provide you with a strong technical background, permitting you to concentrate in one of five areas: artificial intelligence, software engineering, computer networking, algorithm design and programming language design and implementation.

Leading-edge research with faculty will be the cornerstone of your two years at UWM, with opportunities in cryptography, robotics, intelligent dialog systems and more.

### How the dual degree program works

Before attending UWM, students must complete the Alverno math coursework, receive a positive recommendation from the Alverno dual degree advisor and meet all UWM undergraduate admissions requirements.

Once the Computer Science Degree coursework is completed, UWM transcripts will be transferred back to Alverno. Students will then apply for graduation at both institutions and are eligible to participate in both commencement ceremonies.

For the first three years, students will pay Alverno tuition, applying for financial aid through the college, if needed. While at UWM, students will pay tuition and apply for aid at UWM.

#### Math Major (UWM CS) Beginning

MT-152	Calculus 1	4
MT-221	Discrete Structures & Algorithms	3
MT-253	Calculus 2	4

#### Math Major (UWM CS) Intermediate

MT-267	Introduction to Programming:java	4
MT-254	Calculus 3	4
MT-255	Linear Algebra	4
MT-256	Probability and Statistics	4
MT-399	Formal Introduction to Advanced Work	0
MT-260	Introduction/Mathematical Problem Solvng	2

#### Math Major (UWM CS) Advanced

INTERN-383	Internship Seminar	2
Take 4 upper level math electives <sup>One will be taken at UWM</sup>		
PH-241	Calculus-Based Physics 1	4
PH-242	Calculus-Based Physics 2	4

#### Bachelor 120 Credit Requirement

## Requirements

Code	Title	Credits
Math Major Prerequisites		
MT-123	College Algebra	3
MT-124	Trigonometry	2
MT-148	Functions & Modeling	3