

# Mathematics Secondary Education

*This Associate of Arts in Teaching degree program is designed to provide students with an opportunity to prepare to become mathematics secondary education teachers. Successful graduates of this program will be able to transfer seamlessly to the University of Delaware to complete their bachelor's degree in mathematics secondary education.*

*The program includes rigorous mathematics content course work. It also develops competencies in proven instructional strategies and offers educational technology and field experiences in a secondary school setting.*

## **You'll Learn**

- Mathematical concepts that provide a comprehensive foundation for teaching math
- Proven instructional strategies for mathematics teachers
- Educational technology skills for teaching and learning
- Basic theories of psychology and educational psychology

## **You'll Earn**

- An opportunity to make a difference in children's lives
- A seamless pathway to a bachelor's degree and cost effective to becoming a certified teacher
- Exciting career opportunities and well-paying positions available
- Preparation for the Praxis I exam (Professional assessment of academic skills for beginning teachers)

## **You'll Succeed**

- More than half of all new jobs created require education beyond high school.
- Employees with degrees have better chances for promotion.
- Associate degree holders generally earn 30 percent more than high school graduates (according to the U.S. Department of Commerce, Census Bureau).
- College credit or advanced placement may be given for relevant work experience.
- Many credits from an associate degree can be applied toward a bachelor's degree.

# Get in, Get smart, Get going. . .

You can enroll in the Mathematics Secondary Education Technology Program on either a full-time or part-time basis. The length of time required to complete an associate degree depends on the number of courses you take each semester. Some students may need refresher courses at the basic or pre-tech level; others may receive transfer credit or credit for prior learning.

For further information contact Nancy Campbell (Collegewide Coordinator) at 302-855-1654, [ncampbel@college.dtcc.edu](mailto:ncampbel@college.dtcc.edu); Patricia Strocko (Stanton/Wilmington Campus) at 302-454-3909, [pstrocko@college.dtcc.edu](mailto:pstrocko@college.dtcc.edu); or John Buckley (Terry Campus) at (302)857-1222, [jbuckley@college.dtcc.edu](mailto:jbuckley@college.dtcc.edu).

## TECHNICAL COURSES

**Internet Literacy** Utilize Internet services including list servs, news groups, ftp, chats, and telnet; create web pages using screen-design principles, images, wave form audio recording and multimedia integration; develop web page for personal instructional application.

**Educational Psychology** will focus on the developmental concerns of adolescents and how these issues may influence the adolescent learner in formal and informal learning situations. Academic motivation, interpersonal relationships, learning styles, and teacher expectations will be studied. A field placement in a secondary school setting will be essential course component.

**Problem Solving Strategies** course is a study of the various problem solving strategies that are used in solving mathematical problems. There will be an emphasis on the use of these strategies with the content of a traditional secondary mathematics curriculum.

**Calculus I** is a study of functions, limits, and continuity, differential calculus of algebraic and trigonometric functions with applications, and an introduction to the development of the definite integral.

**Calculus II** is integral calculus of algebraic, trigonometric, exponential, and logarithmic functions with applications. Topics include methods and application of integrations, infinite series, parametric equations, and polar coordinates.

**Calculus III** is a study of partial derivatives, multiple integrals, line integrals, and vectors.

**Linear Algebra** is the study of linear equations, determinants, vector spaces, linear transformations, eigenvalues and eigenvectors.

**Ordinary Differential Equation** is the study of solutions of ordinary differential equations of first and second order using qualitative, numeric and analytic approaches. Mathematical modeling of real life phenomena will be studied.

**Physics I with Calculus** is a calculus-based physics course includes vectors, kinematics, dynamics, energy, momentum, gravitation, rotational motion and dynamics, equilibrium, and mechanical properties of matter.

**Principles of Discrete Math** is a study of sets, logic, induction, the integers, functions, sequences, counting and an introduction to graph theory. Proofs will be emphasized throughout the course.

## SUPPORT COURSES

Into to Computer & Applications

Composition

Critical Reading and Thinking

Business Communications

U.S. History: Pre-Civil War

U.S. History: Post-Civil War

General Psychology

Child & Adolescent Psychology

Sociology

Spanish Communications I

## TO APPLY FOR ADMISSION

1. Obtain an admission application by calling (302) 888-5288. Admission applications are also available online at [www.dtcc.edu/prospective](http://www.dtcc.edu/prospective). Complete and return the application to the Stanton Campus with a \$10 fee.
2. Request that your high school and/or college transcripts be sent to the Admissions Office.
3. Arrange to take the Computerized Placement Test (CPT) unless you have already completed college-level Math and English courses with a "C" grade or better. The CPT is administered by the Admissions Office (302) 454-3954 and is used to determine appropriate course placement.
4. Meet with a Delaware Tech counselor to discuss your CPT results and select your course schedule.
5. Remember to apply and register early for the best selection of courses.