

Program Overview

The mission of Central Ohio Technical College is to meet the technical education and training needs of students and employers in the area.



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Information Technology Programming and Software Development Major

This program is designed to prepare students for entry-level positions in the information technology field and also upgrade computer language skills for students seeking career advancement.

Programming and Software Development offers hands-on courses in the most widely used programming languages, as well as strong grounding in the areas where those languages are applied. The curriculum includes:

- Database (Microsoft Access®, and Microsoft SQL Server®)
- Visual Basic.Net (language)
- C++ (language)
- Internet Programming & Design (Web pages - HTML5, XML, CSS, JavaScript, ASP.Net, VB.Net, ADO.Net, CMS & APIs)
- System Analysis and Design (includes Microsoft Project)
- Operating Systems and Security
- Java (language-includes Android App development)
- IT Project Management

Programming is done using state-of-the-art software and computers connected to the internet and campus intranet. Much of the work can be done on students' personal computers via internet connections or by downloading appropriate software (available for free via Microsoft's Dreamspark program; free open-source resources; and textbook publishers' websites). Carefully planned hands-on programming experiences are an integral part of most programming language courses, so that students can graduate with confidence in their programming skills.

Students begin the sequence of Programming and Software Development courses in autumn semester. However, students beginning any other semester have the advantage of gaining a head start. They can take other courses in the Programming and Software Development curriculum, such as business, composition, math, humanities and science courses. The business and core general education courses prepare students with the broader perspective that is necessary for success in today's business world.

Learning Outcomes

After completing the plan of study the student will be able to:

- Given a description of required computer processes, construct a diagram of a solution which follows structured programming guidelines and produces the expected results;
- Code, test and debug entry-level computer programs using an appropriate computer language and techniques based on descriptions of the incoming data, the expected results and any specific processes required to complete the programs;
- Given an existing computer program and a request for new processes to occur, analyze the current processes and revise the program so that it performs as required;
- Provided with an object-oriented programming environment, create a class structure, with corresponding properties and methods;

- Provided with browser software, create a web site consisting of several pages, with hyperlink navigation between the pages;
- Provided with the initial entities, create a flexible database schema and analyze the schema to 3rd normal form;
- Given a database environment, design effective and efficient queries to retrieve data.
- Analyze and select application and operating system settings to create optimal user environment.

Important Student Characteristics

- Potential for good verbal and written communications
- Basic computer skills helpful
- Detail-oriented
- Enjoyment of problem solving
- Reasoning/logic skills

Career Opportunities

Business, industry, government, and hospitals have a continuing need for trained computer processing personnel capable of creating customized computer programs and the ability to rework inadequate programs. COTC graduates are prepared to meet that need because they have designed many programs and found solutions to a variety of programming problems in a hands-on lab environment. COTC graduates can expect to find employment as:

- Computer call-center associate
- Computer sales associate

See reverse side for more information.

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- Entry-level software developer
- Data-processing technician
- Entry-level systems analyst
- Help-desk technician
- Website developer

The Bureau of Labor and Statistics (<http://www.bls.gov/>) shows an employment increase of 8%-22 % in this area.

Transferability

Many COTC graduates choose to continue their education by pursuing a bachelor's degree at other nearby four-year institutions. DeVry, Franklin, Mount Vernon Nazarene, Ohio Dominican, Ohio University, and Otterbein universities work closely with COTC for ease of transfer credit.

COTC shares its Newark campus with The Ohio State University at Newark. Many of the credits earned in the Programming and Software Development degree program apply toward the Bachelor's in Technical Education and Training offered by Ohio State. There are two tracks for this degree. One prepares graduates to teach in technical programs at the secondary level such as those at C-TEC in Licking County. The other track prepares graduates to become corporate trainers in business and industry. Coursework can be completed at the Newark campus or via distance education to complete this degree.

How do I Start?

New students can complete the **free** online application for admission at cotc.edu/apply. Current or returning students can contact The Gateway at any of our four campus locations for your next steps.

The Gateway:

Newark Campus	740.366.9222 800.963.9275
Coshocton Campus	740.622.1408
Knox Campus	740.392.2526
Pataskala Campus	740.755.7090

cotc.edu/gateway

COTC Admissions:
cotcadmissions@mail.cotc.edu

COTC Academic Advising:
cotcadvising@mail.cotc.edu

Accreditation/ Membership

Central Ohio Technical College is accredited by The Higher Learning Commission and is a member of the North Central Association. Phone: 312.263.0456
hlcommission.org

COTC is also a member of the American Association for Higher Education, the American Association of Community Colleges, the American Council on Education, the American Technical Education Association, Inc., the Ohio Association of Two-Year Colleges and the Ohio College Association.

Non-Discrimination Statement

Central Ohio Technical College is committed to building and maintaining a diverse community to reflect human diversity, and to improve opportunities for all. The college is committed to equal opportunity and eliminating discrimination. This commitment is both a moral imperative consistent with an intellectual community that celebrates individual differences and diversity, as well as matter of law. Central Ohio Technical College does not discriminate on the basis of age, ancestry, color, disability, gender, gender identity or expression, genetic information, HIV/AIDS status, military status (past, present or future), national origin (ancestry), race, religion, sex, sexual orientation, protected veteran status, status as a parent during pregnancy and immediately after the birth of a child, status as a parent of a young child, status as a foster parent or any other basis under the law, in its activities, programs, admission and employment. General information, questions, concerns or complaints related to these matters are to be directed to the Title IX Coordinator Holly Mason, Warner Center, Suite 236, Ohio State Newark/COTC, 1179 University Drive, Newark, Ohio 43055-1797 (740.364.9578) or ADA/504 Coordinator Connie Zang at the same location.



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