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 Option

Program Summary
COTC awards the Associate of Applied Business Degree to graduates of the Programming and Software Development Option.
The program is designed to:
- Prepare students for entry-level positions in the information technology field
- Upgrade computer language skills when students seek 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, such that students can graduate with confidence in their programming skills.

Students begin the sequence of Programming and Software Development courses 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.

Because many Information Technology students prefer to work while pursuing their degree, students may enroll part-time or full-time. Currently, the Programming and Software Development courses are only offered on the Newark Campus. Other required courses are offered at all four of our locations. Most classes are offered during daytime and evening hours, Monday through Friday. Some classes are offered during the weekend or online.

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.

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.

See reverse side for more information.
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
- 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.

Important Student Characteristics

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

How do I Start?

If you are a new student, you should apply online at cotc.edu. If you are a current or returning COTC student, contact one of the Gateway Offices listed below, send an e-mail to cotcadmissions@cotc.edu or connect with the Gateway website at http://www.cotc.edu/current-students/Gateway/Pages/Gateway.aspx.

Newark Campus 740.366.9222
800.963.9275 Ext. 222
Coshocton Campus 740.622.1408
Knox Campus 740.392.2526
Pataskala Campus 740.755.7090

For specific questions regarding the Information Technology - Programming and Software Development program contact:

- Connie Philips, Associate Professor, Lead Faculty for Information Technology at cphilips@cotc.edu, or
- Dr. Fred Ghooorkhanian, Associate Professor of Information Technology at fghoorkh@cotc.edu
- Tom Jarosinski, Associate Professor of Information Technology at tjarosin@cotc.edu

Faculty Advisors can be reached during the academic year from August to May.

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 ncahigherlearningcommission.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 does not discriminate on the basis of sex, race, age, national origin, sexual orientation, religion, color, veteran status, and/or disability. General information, questions, concerns, or complaints related to these matters are to be directed to the Title IX Coordinator, Dr. John Berry, or designee, Warner Center Suite 226, Ohio State Newark/COTC, 1179 University Drive, Newark, Ohio 43055-1797 (740-364-9578) or ADA/504 Coordinator, Connie Zang, at the same location.