COMPUTER TECHNOLOGY
(CTEC)

PROGRAMMING
CTEC 112
5 Credits/Units
55 hours of lecture
Prerequisite: Eligibility for ENGL 101 or PTWR 135 and a "C" or better in PTCS 110 or a MATH course with a prerequisite of MATH 096 or higher.
Course provides a participatory overview of essential foundational information technology and computer programming concepts. Topics include computing as a creative activity, abstraction, principles of computer operations, debugging, algorithmic thinking and problem solving, programming functions and operations, iteration principles, ethics in computing and the limitations of computing. Students will design and code simple programs. [GE]

INTERNET RESEARCH AND LIVING ONLINE
CTEC 115
2 Credits/Units
22 hours of lecture
Prerequisite: Eligibility for ENGL 098.
Introduction to global networking and the Internet with an emphasis on the basic skills for interacting and utilizing the Internet for research. Topics include strategies for locating, analyzing and evaluating information, as well as network fundamentals, Internet origins, social, legal and ethical issues regarding Internet interactions. [GE]

INTRO TO PROGRAMMING & PROBLEM SOLVING
CTEC 121
5 Credits/Units
55 hours of lecture
Prerequisite: Eligibility for ENGL 098.
Introduction to website development through the mastery of the fundamentals of HTML, XHTML, and CSS coding for web pages. Intended to give the student the basic skills required to hand-code web pages from scratch. A website will be developed in compliance with current web standards, practices, and usability. Topics include: XHTML, HTML5, CSS, CSS#, web server organization and structure, text editors, images, links, lists, forms, tables, and code validation. [SE]

HTML FUNDAMENTALS
CTEC 122
4 Credits/Units
44 hours of lecture
Prerequisite: Eligibility for ENGL 098.
Introduction to website development through the mastery of the fundamentals of HTML, XHTML, and CSS coding for web pages. Intended to give the student the basic skills required to hand-code web pages from scratch. A website will be developed in compliance with current web standards, practices, and usability. Topics include: XHTML, HTML5, CSS, CSS#, web server organization and structure, text editors, images, links, lists, forms, tables, and code validation. [SE]

JAVASCRIPT
CTEC 126
5 Credits/Units
55 hours of lecture
Prerequisite: A grade of "C" or better in CTEC 112, CTEC 121, or CSE 121 and a grade of "C" or better in CTEC 122.
Introduction to the fundamentals and concepts of JavaScript including web scripting with jQuery, AJAX, and related libraries. Student will create dynamic websites and code demonstrating for debugging and testing JavaScript based design and code functionality. [GE]
Office highly recommended. [GE]

This course is an introduction to the server-side programming language PHP and its use in creating dynamic web applications, providing students with a functional knowledge of database design, SQL statements, dynamic web applications, and the methods implemented in PHP for manipulating MySQL databases. [GE]

**MICROSOFT WINDOWS OS FUNDAMENTALS**

CTEC 130 3 Credits/Units

33 hours of lecture

**Prerequisite:** Eligibility for ENGL 098.

Fundamental Windows interactions and key skills and issues important in providing support for Windows users. Topics include basic interactions with Windows, system configuration, installing and upgrading systems, managing devices, system maintenance and other support issues. Course is based on the Windows Operating System Microsoft Technology Associate (MTA) Certification, which students will have an opportunity to earn as a component of the course curriculum. [GE]

**MICROSOFT NETWORKING FUNDAMENTALS**

CTEC 131 3 Credits/Units

33 hours of lecture

**Prerequisite:** Eligibility for ENGL 098.

Foundational concepts and skills associated with computer networking. Topics include basics of local area networking and wide area networks, the OSI Model, wired and wireless networks, Internet Protocol/Transmission Control Protocol (TCP/IP), and network security. Course is based on the Networking Fundamentals Microsoft Technology Associate (MTA) Certification which students will have an opportunity to earn as a part of the course curriculum. [GE]

**MICROSOFT SECURITY FUNDAMENTALS**

CTEC 133 3 Credits/Units

33 hours of lecture

**Prerequisite:** Eligibility for ENGL 098.

Introduces concepts and fundamentals of network security. Topics include security layers, operating system security, network security and security software. Course is based on the Security Fundamentals Microsoft Technology Associate (MTA) Certification which students will have an opportunity to earn as a component of the course curriculum. [GE]

**MICROSOFT DATABASE ADMIN**

CTEC 134 5 Credits/Units

55 hours of lecture

**Prerequisite:** Eligibility for ENGL 098.

Provides a foundational overview of concepts, practices, and operation as associated with designing, developing and administrating a database. Topics include core database concepts, creating database objects, manipulating data, data storage, and administrating a database. Students will have an opportunity to earn the Microsoft Database Administration Fundamentals Microsoft Technology Associate (MTA) certification as a component of the course curriculum. Familiarity with Windows and MS Office highly recommended. [GE]
HELP DESK TECHNICIAN I
CTEC 200  3 Credits/Units
11 hours of lecture / 66 hours of clinical
Prequisite: A grade of "C" or better in CTEC 104 or consent of
Instructor Unit.
Technical support work experience for a real world learning environment
that supports technology needs for the local community. All areas of
customer technology support environments are emphasized including
communication, networking, customer tracking, troubleshooting,
documentation and customer relations. Activities include help desk
service projects and professional development activities. [GE]
HELP DESK TECHNICIAN II
CTEC 201  3 Credits/Units
11 hours of lecture / 66 hours of clinical
Prequisite: A grade of "C" or better in CTEC 200 or consent of
Instructor Unit.
Continuation of CTEC 200 Help Desk Technician I. Technical support
work experience for a real world learning environment that supports
technology needs for the local community with opportunities
and experience to serve in project supervisory roles. All areas of
customer technology support environments are emphasized including
communication, networking, customer tracking, troubleshooting,
documentation and customer relations. Activities include help desk
service projects, professional development activities, meeting attendance
and managing a help desk. [GE]
INTRODUCTION TO MANAGED INFORMATION SYSTEMS
CTEC 205  5 Credits/Units
55 hours of lecture
Prequisite: A grade of "C" or better in ENGL 101.
Overview of the role of management information systems in business
by supporting a wide range of organizational functions from routine
organizational transactions to managerial strategic decision making.
Emphasis is on terminology associated with IT and hands-on labwork
utilizing common business and IT applications. Familiarity and prior
experience with Microsoft Excel spreadsheets and Access databases is
highly recommended. [GE]
COMPTIA A+ FUNDAMENTALS
CTEC 213  4 Credits/Units
44 hours of lecture
Prequisite: Eligibility for ENGL 098, a grade of "C" or better in CTEC 106
or instructor consent.
Covers the skills required to install, configure and troubleshoot PC
operating systems and networking software for desktop computers and
mobile devices. Course is based on outcomes and objectives related to
the CompTIA A+ certifications. [GE] [PNP]
COMPTIA A+ OPERATING SYSTEMS & NETWORKING
CTEC 214  4 Credits/Units
44 hours of lecture
Prequisite: Eligibility for ENGL 098, a grade "C" or better in CTEC 106 or
instructor consent.
Covers the skills required to install, configure and troubleshoot PC
operating systems and networking software for desktop computers and
mobile devices. Course is based on outcomes and objectives related to
the CompTIA A+ certification. [GE] [PNP]
PHP WITH SQL II
CTEC 227  5 Credits/Units
55 hours of lecture
Prequisite: A grade of "C" or better in CTEC 127, or consent of
Instructor Unit.
A continuation of the CTEC 127, PHP I course, extending PHP skills with
object-oriented programming, API management, PHP security, AJAX
integration, and version control. Current best practices in the commercial
web industry will be emphasized. [GE]
COMPTIA SECURITY+
CTEC 235  5 Credits/Units
55 hours of lecture
Prequisite: Eligibility for ENGL 098, a grade of "C" or better in CTEC 131,
or consent of Instructional Unit.
Covers the essential principles for network security and risk
management. Topics include cloud security, expansion of Virtualization
and how to secure it, mobile device security and analysis of metrics
obtained from monitoring and tracking tools. Course is based on, and is
intended for, students to prepare for the CompTIA Security+ certification.
[GE]
APPLIED WEB DEVELOPMENT
CTEC 293  3 Credits/Units
99 hours of lab
Prequisite: Concurrent enrollment in, or completion of CTEC 265 with a
grade of "C" or better.
Development of applied web programming skills and a coding portfolio
website that will demonstrate a student's proficiency in various aspects
of web development. [GE]