OAKWOOD UNIVERSITY
LEAP
Adult Degree Completion Program

It's time. You can do this.

BACHELOR OF SCIENCE:

INFORMATION TECH

Careers in information technology/computer information systems-related areas are among the high-earning, fast-growing, and high-demand fields in many areas of the country including North Alabama. Professionals who hold the proper certifications and degrees can make tremendous advancement in their careers. With this in mind, Oakwood University's Information Technology degree was developed for people with existing knowledge of the field to be able to earn both a four-year degree and certification in one or more areas of specialization through an intense training program. Applicants are expected to have either a minimum of 10 hours of IT-related coursework or one year of experience in an IT-related field.

COURSE DESCRIPTIONS | INFORMATION TECHNOLOGY

CM 210 3 hours
Computer Science I w/C++
CM 210 offers an introduction to computers and structured programming using the C++ programming language. Topics include problem-solving methods and algorithms, data types, loops, arrays, functions, structures, character strings, pointers, operations on bits, and files. Program design and program styles are stressed.

CM 220 3 hours
Computer Science Data Structures II w/C++
This course is a continuation of the study of data representation and algorithm design using C++. Principles of good programming style and step wise refinement are stressed. Topics include string processing, searching and sorting, recursion, and dynamic data structures.

CM 340 3 hours
Computer Logic Design
Computer Logic Design provides an introduction to formal methods in design of computer logic circuits and systems, contemporary design practices, and devices used in the synthesis of digital logic systems. Topics include combinational and sequential systems, gates, memory elements, registers, bus structure, timing and control, arithmetic and logical unit, I/O units.

CM 350 3 hours
Computer Architecture
The course explores the organization and structuring of major hardware components of digital computers; information transfers and transformations which occur inside a computer; architecture-instruction sets, instruction formats, addressing modes, and register usage; organization computer units–ALU, CPU, memory, I/O hardware description methodologies; and taxonomy of computer architectures. A study of an assembly language is the case study of the course.

CM 367 3 hours
Programming Languages
This course explores the organization of programming languages, especially routine behavior of programs; it involves formal study of programming language specification and analysis and the study, comparison, and evaluation of commercially available programming. BNF and syntax diagrams, grammars, program constituents, scoping rules, precedence, binding, parameter passing, and compile-versus interpretation as also examined.

IT Program Requirements

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Total General Education Requirements	**45 hours**
Adult Education Orientation Seminar	1 semester hour
Computer and Health	5 semester hours
Humanities	15 semester hours
Natural Science and Math	9 semester hours
Religion	6 semester hours
Social and Behavioral Sciences	9 semester hours
Elective Credits	**39 hours**
Information Technology Credits	**44 hours**
Total Degree Requirements for Graduation	**128 hours**

> **The LEAP program has allowed me to continue my education and still give my undivided attention to my family. Just do it because you won't regret it!**

— MARY CRUTCHER, FORMER LEAP STUDENT
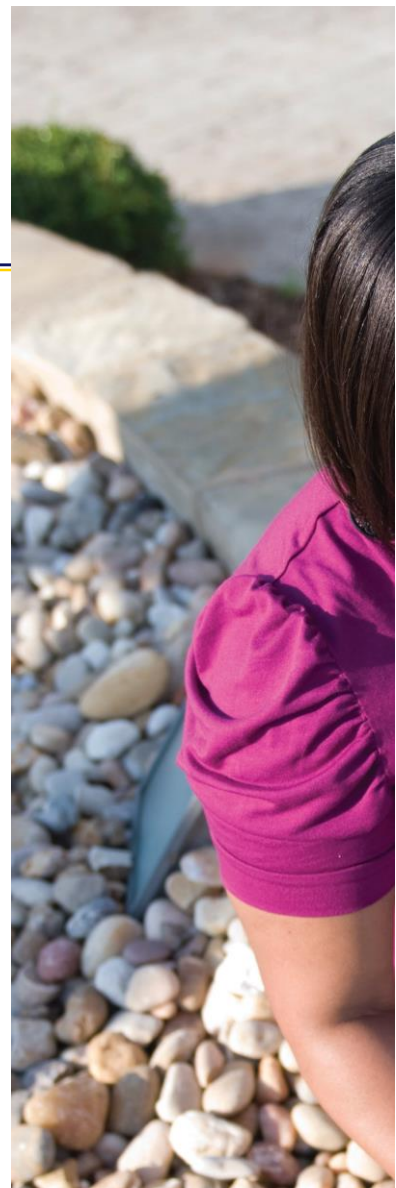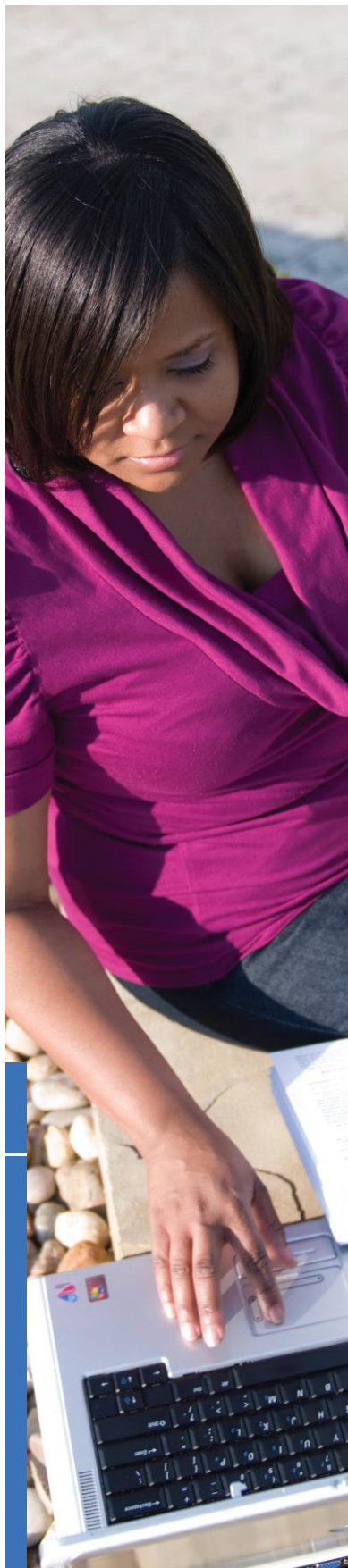
IT 320 3 hours
Web Design & Multimedia

The role of information technology in securing competitive advantage for organizations is introduced in an environment that combines conceptual lessons in Web design and multimedia applications. Students learn Internet and Web design concepts using Microsoft FrontPage, Web editors, and multimedia tools.

IS 415 3 hours
Database Management

This course provides an in-depth discussion of the new tools and technologies that are shaping modern database management. The course offers detailed coverage of client/server and distributed databases, including trends toward architectural downsizing, redefining the role of mainframes, the increased emphasis on LANs, and end-user computing. Case studies are used to illustrate the role of database analysis and design concepts in the total systems development process. Students become proficient in using Oracle and Microsoft-Access database management systems.

IS 450 3 hours
Information Resource Management

This course is the capstone for Information Systems and emphasizes critical issues, analyses, and problem solving faced by today's information technology professional. It consists of an overview and critical analysis of the role and importance of information technology in today's fast-paced organizational environments. Students will use the case approach to investigate emerging technologies, and examine associated behavioral issues. Each student is required to critically analyze a current technology, and prepare an in-depth analysis on its use, benefits, and drawbacks to organizations, academia, and society in general.

IS 330 3 hours
Network Management & Telecommunications

This course introduces the managerial and technical aspects of business networks, including the hardware and software mechanisms that allow access from one computer to files and services provided on other computers. An overview of local area nets (LAN) and Wide Area Nets (WAN) is provided, as also those of software protocols, routers, bridges, and firewalls. On the practical side, the student learns about the network services provided by the operating system (Windows/NT), network analyzers, and the management of security and reliability. The student also learns to install, configure, and test network hardware/software, and use such facilities in practical applications, including e-mail, remote file access, client/server hook-ups, and dial-up design of security technologies are reviewed and case studies presented.

IS 342 3 hours
Advanced Business Networks (Lab)

This course provides an advanced skill level with the concepts and terminology of computer intercommunications and networking. The course relies on a hands-on approach as the primary teaching method for focusing on organizational enterprise networking and for studying specific network protocols.

IS 420 3 hours
Project Management for Information Systems

This course focuses on models used in a software development project, including tools that improve project productivity. Topics include concepts of project management, task scheduling, cost estimation models, risk assessment, and software maturity framework. Students use tools and cases to gain depth in software project management principles and practice.

IS 343 3 hours
Information Security

This course introduces basic concepts of computer and network security with an emphasis on the threats and countermeasures relevant to Internet and web service. Students are prepared to evaluate the security needs of organizations, and to develop strategies to address these needs. The requirements and design of security technologies are reviewed and case studies presented.

IS 405 3 hours
Information Policy

This course introduces students to information policies focusing on issues that involve conflicts among proprietary rights, privacy rights and information access rights. Issues and challenges faced in developing and implementing policies within organizations and companies including the protection and use of intellectual property, first amendment concerns, access to public information, security and the protection of privacy of personally identifiable information are discussed. Policy issues in the areas of information systems, communications, computing, and media are presented.

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