

Department of

Computer Information Technology



Kent Jackson, Department Chair

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Introduction to Computer Information Technology

Take a look at Information Technology (IT). A world of opportunity awaits you.

A career in Information Technology (IT) allows you to create solutions for real problems that trouble real people. As you create this solution with your team, you may be creating something new that

has never been seen before or assembling pre-existing components. You will be making significant contributions in the organizations you work for, and the every day lives of people.

There is high demand for BYU-Idaho Computer Information Technology (CIT) graduates all over the country in all segments of the economy in both small and large companies. Careers in IT pay higher than average salaries. From major financial, accounting, aviation, agriculture, medicine, retailing, software companies to federal research facilities, you and your BYU-Idaho CIT degree are wanted.

Your career in CIT can be very dynamic. Working in a team; you will interact cooperatively with the management of your organization and your potential clients to determine what the solution needs to do, what it needs to look like, and how it should work. One day you may be designing software and the next designing a database. The day after that you may be involved in designing a complex network to allow your organization to communicate more effectively using video, phones, and computers and then the next day maybe you are setting up a clustered set of web servers. CIT is a very interactive career to work in.

In short, Information Technology is the use and study of computers, networks, computer languages, and databases within an organization to solve real problems.

A minimum average GPA of 2.7 (B-) is required in major courses to graduate. Any major course with less than C must be retaken.

<p>CIT 300L Programming Lab II (0:0:1) Prerequisite: CIT 140, CIT 230 Programming Lab for CIT 310. Students will work on programming lab assignments under the direction of the instructor. Instructors will model, demonstrate, and assist students in solving real world programming problems. (Winter, Summer, Fall)</p> <p>CIT 310 Object Oriented Programming II (3:3:1) Prerequisite: CIT 210 This course is a continuation of IS 210 (Object Oriented Programming I) and focuses on the development of computer applications using an object oriented programming language. Students registering for this class must also register for the corresponding lab (CIT 300L) that goes with this course. See the class schedule for the specific section to register for. (Winter, Summer, Fall)</p> <p>CIT 320 Database Design and Development (3:3:0) Prerequisite: CIT 210 or CS 165 The course deals with concepts and principles of database theory, application and management technologies. It focuses on the logical and physical database design and implementation. The course covers the use of UML semantic to describe entity-relationship designs (ERDs) and SQL to implement relationships between entities. SQL will be used to query and transact against a sample database. (Winter, Summer, Fall)</p> <p>CIT 330 Operating Systems (3:3:0) Prerequisite: CIT 240 The purpose of this course is to provide a fundamental understanding of computer operating systems. (Fall, Winter, Summer)</p> <p>CIT 340 Network Design (3:3:0) Prerequisite: CIT 240 Principles of network design standards and architectures. Configuration and use of networking devices including repeaters, hubs, bridges, switches and routers to create enterprise networks. (Winter, Summer, Fall)</p> <p>CIT 350 Managing Information Technology (3:3:0) Prerequisite: CIT 240 This class is not for information systems majors. Introduction to the management of information technology with a focus on current and emerging technologies and their relationship to business organizations. (Winter, Summer, Fall)</p> <p>CIT 370 Systems Security (3:3:0) Prerequisite: CIT 240 The purpose of this course is to provide a fundamental understanding of computer security principles. You will learn about confidentiality, integrity, availability, authentication, and the types of attacks and malicious code that may be used against your network. Remote access, email, and protocols will also be discussed. A variety of security topologies are discussed including secure communications channels, secure internetworking devices, and network medium. You will also learn about intrusion detection system, firewalls, and physical security concepts. In addition, security policies, disaster recovery, and computer forensics are covered. Aside from learning the technologies involved in security, you will get to understand the daily tasks involved with managing and troubleshooting those technologies. You will have a variety of hands-on labs to reinforce the concepts discussed in class. (Winter, Summer, Fall)</p>	<p>CIT 380 Project Management (3:3:0) Prerequisite: Junior Standing This course introduces project management concepts focusing on project management issues, approaches and tools. It introduces how a manager can plan, organize, implement and control non-routine activities to achieve cost, schedule and performance objectives. Topics include project life cycles, scope design and control, work breakdown structures and scheduling systems. Tools include planning and PERT/CPM, Gantt, earned value control methods in the context of PC and enterprise project management tools.</p> <p>CIT 400L Programming Lab III (0:0:1) Prerequisite: Be co-registered in CIT 450, or CIT 460 Programming Lab for CIT 450 and CIT 460. Students must register for the section associated with the specific programming class being taken. See class schedule for the specific section to register for. (Winter, Summer, Fall)</p> <p>CIT 410 Systems Analysis and Design (3:3:0) Prerequisite: CIT 235, CIT 240, CIT 310, CIT 320 This course teaches the concepts of systems analysis and design for those desiring to work in the field of information technology. Initially, an overview of an information system and the software development life cycle (SDLC) process are covered. Each phase of the SDLC process is then examined in depth and real experience gained through an actual project. Computer Aided Software (CASE) tools will be used to design, and document an information system/project. (Winter, Summer, Fall)</p> <p>CIT 420 Database (3:3:0) Prerequisite: CIT 310, CIT 320 This course is a continuation of CIT 320 and focuses on the development of stored functions, libraries, objects, procedures and packages. Students will design and write stored database program units in PL/SQL. Students will use an Integrated Development Environment (IDE) to write and tests programs against a data-base. (Fall, Winter, Summer)</p> <p>CIT 425 Data Warehousing (3:3:0) Prerequisite: CIT 320 This course defines the theory and practice of data analysis. The course will compare and contrast the operational and analytical database models. Students will learn how to define, implement and query a database warehouse by leveraging sample data warehouses built from Enterprise Resource Planning (ERP) and Customer Resource Management (CRM) solutions. (Fall & Winter)</p> <p>CIT 430 Operating Systems II (3:3:0) Prerequisite: CIT 240, CIT 330 The purpose of this course is to provide an advanced understanding of computer operating systems and services. (Fall, Winter)</p> <p>CIT 440 Network Design II (3:3:0) Prerequisite: CIT 340 This course teaches general networking principles to provide an understanding of the basics of switching, WAN technologies, and intermediate routing skills. Students will learn how to install and configure switches and routers in multiprotocol internetworks using LAN and WAN interfaces, improve network performance and security, perform entry-level tasks in the planning, design, installation, operation, and troubleshooting of Ethernet and TCP/IP networks. (Fall, Winter)</p>
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CIT 450 Web Programming I (3:3:0)

Prerequisite: CIT 235, CIT 310, CIT 320
 This course is no longer offered. It has been merged into CIT 460. (Winter, Summer, Fall)

CIT 455 Advanced Programming Languages (3:3:0)

Prerequisite: CIT 460
 This course is a survey course of advanced programming languages. Emphasis is placed on the ability to independently learn a new programming language, be effective in it, comprehend the core strengths and weaknesses of it, and effectively instruct others in the use of the language.
 (Fall, Winter)

CIT 460 (6:5:3)

Prerequisite: CIT 235, CIT 310 and CIT 320
 Covers the design and development of N-tier applications. An overview of the architecture for N-tier applications is covered with a focus on the use of effective design patterns. Different technologies to implement the MVC control pattern will be explored. The J2EE architecture will be covered in depth including Servlets, Java Server Pages, and Enterprise Java Beans. Applications that implement all parts of the MVC pattern will be designed, implemented and deployed. This class includes 5 hours of lecture and a 3 hour programming lab per week.

CIT 470 System Security II (3:3:0)

Prerequisite: CIT 370
 The purpose of this Lab based course is to teach students techniques for securing the entire network architecture both, internal and external. Students will learn how to configure and use fire-walls and intrusion detection and prevention systems. In addition students will learn how to harden operating systems and secure remote access.
 (Winter, Summer, Fall)

CIT 480 Enterprise Integration (3:3:0)

Prerequisite: CIT 310, CIT 320
 The modern enterprise typically consists of many different applications that need to be able to communicate and share data across the enterprise. This course addresses the issues that arise from such integration and investigates different architectures and technologies that facilitate the integration of data, the communication between applications and the sharing of services across the enterprise system.
 (Fall, Winter, Summer)

CIT 485 Enterprise Applications (3:3:0)

Prerequisite: CIT 320, CIT 330
 This course is a capstone class that integrates design, analysis, database concepts and programming. The course will present product integration, configuration management and implementation concepts. Students will learn how to install, maintain and integrate a suite of products to deliver a complete Enterprise Resource Planning (ERP) and Customer Resource Management (CRM) solution.
 (Fall & Winter)

CIT 490 Senior Project (3:0:0)

Prerequisite: Senior standing and permission of the instructor.
 This is a capstone class designed to apply all of the skills gained by the student in the development of an information system. Students will work together in a team to design and implement an information system.
 (Winter, Summer, Fall)

CIT 498 Internship (1-4:0:0)

Prerequisite: Senior standing and permission of the instructor.
 This is designed to be capstone experience where a student applies the skills they have learned in information system in a real world environment. Students will work for a company or organization applying the skills learned in two or more of the following areas: programming, web development, database, systems management, networking, or testing.
 (Winter, Summer, Fall)

CIT 499 Special Topics (3:3:0)

Prerequisite: Permission of the instructor.
 This is a special topics course to address the latest advancements in information technology.
 (Arranged)