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.

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Denise Rydalch, Secretary (208) 496-2048
http://www.byui.edu/CIT/
VII. American Institutions:

Take these courses:
- REL 261
- BIO 202

Take 1 course:
- BIO 221
- SOC 112

1-4

Take 0-1 course:
- BIO 208
- AGRON 270
- CHIN 347

Take 3-6 courses:
- SPAN 202
- REL 471
- PHIL 315
- ENG 335
- ECON 112
- REL 302H
- CHEM 105
- REL 234
- GEOL 111L
- LANG 202
- PHIL 202
- ECON 111
- PH 101
- REL 212
- BIO 265
- CHEM 101
- REL 100
- BIO 150L

Take 4 credits:
- BIO 268
- PH 105L

Take one course:
- REL 250
- FR 202
- GER 202
- GER 203

Basic Skills:

Take these courses:
- MUSIC 101
- MUSIC 100
- HUM 202
- HUM 101
- ART 202
- ART 104

Choose Two courses:
- CIT 230
- CIT 470
- CIT 203
- CIT 420

Choose One course:
- TA 115
- HUM 111
- HUM 112

Total GE Credits=46

Major Requirements

No Double Counting of Major Courses: A minimum Average GPA of 3.0 is required in Major Courses

Take these courses:
- CIT 203
- CIT 430

Choose One course:
- Option A: Introduction to Programming (Admissions)
- Option B: Projecting Analysis

Take these courses:
- CIT 240
- CIT 431

Take one course:
- CIT 370

Total Major Credits=43

This major also requires a minor or 2 courses

No minor is available on the following courses:
- CIT 330

Total GE Credits=46

Major Requirements

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- Option A: Introduction to Programming (Admissions)
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- CIT 240
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Total Major Credits=43

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- CIT 330

Total GE Credits=46
Course Descriptions

CIT 140 Micro-Applications for Business
Credits: 3
Prerequisite: Basic computer literacy including the use of a word processor and file management. Be able to type at least 35 words a minute.
Introduction to the use of microcomputers in business. Emphasis is on learning how to use spreadsheet and database applications to solve business problems.
(Fall, Winter, Summer)

CIT 200L Programming Lab 1
Credits: 0:0:1
Prerequisite: CIT 200L
This course is the programming lab for CIT 210 and CIT 258. Students must register for.

CIT 203 Introduction to Programming
Credits: 3:3:0
Prerequisite: CIT 140 or permission of the instructor
This course teaches general networking principles to provide an understanding of data communication protocols, transmission systems, medium, and software.
(Fall, Winter, Summer)

CIT 210 Object Oriented Programming 1
Credits: 3:3:0
Prerequisite: CIT 203
This is an introductory course in object oriented programming using the Java programming language. Students will develop programs using the base data types, control structures, classes, and objects of Java. Students will use an Interactive Development Environment (IDE) to write and test programs. Students registering for this class must also register for the corresponding laboratory (CIT 200L) that goes with this course. See the class schedule for the specific course to register for.
(Fall, Winter, Summer)

CIT 215 Introduction to Internship
Credits: 3:3:0
Prerequisite: CIT 140, CIT 219, CIT 223, and CIT 240. Must have a minimum grade of C in all CIT classes and permission of the instructor.
The internship experience is an introductory experience for Information Systems majors and is intended to integrate practical work experience with the cumulative knowledge and skills obtained during your education. It is expected that you will develop personal, professional and additional academic competencies during the internship. In order to accomplish this, you will need to go beyond the common experiences of a normal employer-employee internship. Study, reasoning, reflection and theoretical/conceptual exploration will be required for you to develop new skills and knowledge to get the most of the internship experience.
(Fall, Winter, Summer)

Minor in Computer Information Technology

Minor Requirements
No Grade Less Than C- Accepted for Minor Courses

CIT 200L Programming Lab 1 (0:0:1)
Prerequisite: CIT 200L
This is the programming lab for CIT 210 and CIT 258. Students must register for.

CIT 230 Page Layout and Graphics (3:3:0)
Prerequisite: CIT 200L
This course prepares students for web development through a study of basic web design, layout and development through a study of basic web page design, layout and development following Human Computer Interface (HCI) principles. In addition, creation, manipulation and optimization, of web-compliant graphics, Cascading Style Sheets (CSS) language and web-applicable legal issues are studied.
(Fall, Winter, Summer)

CIT 298 Introductory Internship (1-3:0:0)
Prerequisite: Be co-registered in CIT 200L or CIT 258
This course is the introductory course in object oriented programming using the Java programming language. Students will write programs using the base data types, control structures, classes, and objects of Java. Students will use an Interactive Development Environment (IDE) to write and test programs. Students registering for this class must also register for the corresponding laboratory (CIT 200L) that goes with this course. See the class schedule for the specific course to register for.
(Fall, Winter, Summer)

CIT 320 Page Layout and Graphics (3:3:0)
Prerequisite: CIT 140, CIT 219, CIT 223, and CIT 240. Must have a minimum grade of C in all CIT classes and permission of the instructor.
The internship experience is an introductory experience for Information Systems majors and is intended to integrate practical work experience with the cumulative knowledge and skills obtained during your education. It is expected that you will develop personal, professional and additional academic competencies during the internship. In order to accomplish this, you will need to go beyond the common experiences of a normal employer-employee internship. Study, reasoning, reflection and theoretical/conceptual exploration will be required for you to develop new skills and knowledge to get the most of the internship experience.
(Fall, Winter, Summer)
**CIT 300L Programming Lab II** (0:0:1)

Programming Lab for CIT 310. Students will work on program assignment using an object oriented programming language. Students registering for this class must also register for the corresponding lab (CIT 300L).

(Winter, Summer, Fall)

**CIT 310 Object Oriented Programming II** (3:3:1)

This course is a continuation of CIT 210 (Object Oriented Programming I) and focuses on the development of object oriented applications using an object oriented programming language. You will learn about UML and how to use it to model, develop, and implement object oriented programs. You will also learn about design patterns and how to use them.

(Fall, Winter, Summer, Fall)

**CIT 320 Database Design and Development** (3:3:0)

Prerequisite: CIT 210

This class teaches the concepts of database design and implementation. You will learn about the logical and physical design of databases, and how to use SQL to query and transact against a database. You will also learn about database management systems and how to use them.

(Winter, Summer, Fall)

**CIT 400L Programming Lab III** (0:0:1)

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)

**CIT 320 Database Design and Development** (3:3:0)

Prerequisite: CIT 300L Programming Lab II (0:0:1)

This course introduces project management concepts including project management tools and techniques. You will learn about the role of the project manager and how to use them.

(Winter, Summer, Fall)

**CIT 425 DataWarehousing** (3:3:0)

CIT 320

This course teaches the concepts of data warehousing and how to use them. You will learn about data warehouse design, implementation, and query. You will also learn about data warehouse management systems and how to use them.

(Fall, Winter)

**CIT 380 Project Management** (3:3:1)

Prerequisite: CIT 320

This course introduces project management concepts including project management tools and techniques. You will learn about the role of the project manager and how to use them.

(Fall, Winter, Summer)

**CIT 390 Systems Analysis and Design** (3:3:1)

Prerequisite: CIT 235, CIT 240, CIT 310, CIT 320

This course covers the use of UML semantic to describe entity relationship database models. You will learn about UML and how to use it to model, develop, and implement object oriented programs. You will also learn about design patterns and how to use them.

(Winter, Summer, Fall)

**CIT 440 Network Design II** (3:3:0)

Prerequisite: CIT 235, CIT 240, CIT 310, CIT 320

This course teaches the concepts of network analysis and design for designing and analyzing networks. You will learn about network management, planning, and design.

(Fall, Winter, Summer)

**CIT 350 Managing Information Technology** (3:3:0)

Prerequisite: CIT 240

This course introduces the concepts of managing information technology with a focus on current and emerging technologies and their relationship to business organizations.

(Winter, Summer, Fall)

**CIT 370 Systems Security** (3:3:0)

Prerequisite: CIT 240

This course is a continuation of CIT 320 and focuses on the development 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 system. You will also learn about intrusion detection systems, firewalls, and antivirus systems.

(Fall, Winter, Summer)

**CIT 385 Computer Information Technology** (3:3:0)

Prerequisite: CIT 300L Programming Lab II (0:0:1)

This course introduces project management concepts including project management tools and techniques. You will learn about the role of the project manager and how to use them.

(Winter, Summer, Fall)

**CIT 450 Database Management** (3:3:0)

Prerequisite: CIT 320

This course teaches the concepts of database management and how to use them. You will learn about database management systems and how to use them.

(Fall, Winter, Summer)

**CIT 340 Network Design** (3:3:0)

Prerequisite: CIT 240

This course teaches the concepts of network analysis and design for designing and analyzing networks. You will learn about network management, planning, and design.

(Fall, Winter, Summer)

**CIT 425 Data Warehousing** (3:3:0)

Prerequisite: CIT 320

This course teaches the concepts of data warehousing and how to use them. You will learn about data warehouse design, implementation, and query. You will also learn about data warehouse management systems and how to use them.

(Fall, Winter)

**CIT 350 Managing Information Technology** (3:3:0)

Prerequisite: CIT 240

This course introduces the concepts of managing information technology with a focus on current and emerging technologies and their relationship to business organizations.

(Winter, Summer, Fall)

**CIT 370 Systems Security** (3:3:0)

Prerequisite: CIT 240

This course is a continuation of CIT 320 and focuses on the development 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 system. You will also learn about intrusion detection systems, firewalls, and antivirus systems.

(Fall, Winter, Summer)

**CIT 385 Computer Information Technology** (3:3:0)

Prerequisite: CIT 300L Programming Lab II (0:0:1)

This course introduces project management concepts including project management tools and techniques. You will learn about the role of the project manager and how to use them.

(Winter, Summer, Fall)
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 400
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 other languages. (Fall, Winter)
CIT 460 (6:5:3)
Prerequisite:CIT 235, CIT 310 and CIT 320
Prerequisite:CIT 370
Prerequisite:CIT 310, CIT 320
Prerequisite:Senior standing and permission of the instructor.
460. (Winter, Summer, Fall)

This course is designed to be capable experience where a student applies the skills they have learned in information systems 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, system management, networking, or testing. (Winter, Summer, Fall)
CIT 469 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)
CIT 470 System Security II (3:3:0)
Prerequisite: CIT 370
The purpose of this Lab based course is to teach students technical skills for securing the entire network architecture both internal and external. Students will learn how to configure and use firewalls and intrusion detection I\posa detection systems. In addition students will learn how to harden operating systems and secure remote access. (Winter, Summer, Fall)
CIT 490 Enterprise Integration (3:3:0)
Prerequisite:CIT 310, CIT 320
The modern enterprise is typically consist 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 495 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 499 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)