

The Bachelor of Science in Information Technology (BSIT) degree program is focused on the acquisition of theory and the application of technical competencies associated with the information technology profession. The courses prepare students with fundamental knowledge in core technologies, such as systems analysis and design; programming; database design; network architecture and administration; web technologies; and application development, implementation, and maintenance.

This undergraduate degree program includes 45 credits in the required course of study and 15 credits in the concentration. Some courses have prerequisites. In addition, students must satisfy general education and elective requirements to meet the 120-credit minimum, including a minimum of 48 upper-division credits required for completion of the degree. At the time of enrollment, students must choose a concentration.

The Information Management concentration is designed to provide coverage of the collection, architecture, modeling, retrieval and management of data for meaningful presentation to the organization. This concentration prepares students to develop, deploy, manage, and integrate data and information systems to support the organization.

Note: The diploma awarded for this program will read: Bachelor of Science in Information Technology and will not reflect the concentration. Concentrations are reflected on the transcript only.

The U.S. Department of Education requires the University to provide the following information about each of our programs that lead to gainful employment in a recognized profession.

Because fewer than 10 students completed this program during the relevant award year, the Department of Education does not permit us to disclose the on-time completion rate.<sup>1</sup>

#### Related occupations<sup>2</sup>

Database Administrators #15-1141.00

#### Program costs<sup>3</sup>

**Tuition and fees** \$33,800 to \$74,575  
Includes cost per credit, application fee, and fees for resources (books/eResources) for students completing the program in normal time.

#### Median graduate debt<sup>4</sup>

<b>Federal</b>	N/A
<b>Private</b>	N/A
<b>Institutional</b>	N/A

## Required Course of Study

### GEN 195 Foundations of University Studies

The essential information, skills, tools, and techniques necessary for academic success and personal effectiveness at University of Phoenix are introduced in this course. The course develops and applies practical knowledge and skills immediately relevant to first-year university students. Course topics include goal setting and working with personal motivation, understanding and using university resources, developing efficient study habits, making the most of personal learning styles, and time management and personal stress reduction. (3 credits)

### CIS 207 Information Systems Fundamentals

This course introduces the fundamentals of computer systems and the role of information processing in today's business environment. An overview is presented of information systems, systems development, operating systems and programming, database management, networking and telecommunications, and the Internet. (3 credits) Prerequisite: HUM 114

### PRG 211 Algorithms and Logic for Computer Programming

This course provides students with a basic understanding of programming development practices. Concepts covered include the application of algorithms and logic to the design and development of computer programs to address the problem-solving requirements associated with business information systems. This course will cover procedural programming concepts including data types, control structures, functional decomposition, arrays, and files. (3 credits) Prerequisite: HUM 114

<sup>1</sup> The on-time completion rate identifies the percentage of students completing this program during the most recent federal award year who completed it within "normal time." The term "normal time" means the length of time it would take a student to complete this program if the student is continuously enrolled, takes one course at a time, and successfully completes each attempted course. Students enrolled in this degree program are typically nontraditional students. Students may exceed "normal time" for a variety of reasons, including, but not limited to, internships, practicums, clinical rotations, student teaching or administrator experiences required for licensure.

<sup>2</sup> Graduates of this program will be educationally qualified to enter the occupations listed. Visit [onetonline.org](http://onetonline.org) for job descriptions.

<sup>3</sup> The range provided represents the sum of tuition and typical fees required to complete the program within normal time, based on the University's 2011/2012 tuition levels. The actual costs that will be incurred by a particular student to complete this program will depend upon factors specific to that student. Tuition rates for this program may vary due to factors such as: (i) geographic location of the student; (ii) modality of coursework; (iii) military service; and (iv) future changes in tuition rates. The number of credits required for a particular student to complete the program will be dependent upon various factors, including: (i) transfer credits available; (ii) repeated coursework; and (iii) completion of additional specializations within this program. Please contact an Enrollment Advisor for additional information.

<sup>4</sup> The figure represents the median amount of debt incurred by students who completed the program during the relevant federal award year. The actual amount of debt a particular student will incur to complete this program is dependent on various factors specific to the student. Please contact an Enrollment Advisor for additional information. Because fewer than 10 students completed this program during the most recent federal award year, we are not permitted to disclose this information.

# Bachelor of Science in Information Technology with a Concentration in Information Management

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## **WEB 240 Web Design Fundamentals**

This course introduces development tools and techniques used to publish web pages on the World Wide Web. Students use basic hypertext markup language, scripting, and presentational technologies to create websites with the aid of a software authoring application. Topics include XHTML, CSS, JavaScript®, server hosting, site publication, site maintenance, and Search engine optimization. (3 credits) Prerequisite: CIS 207

## **POS 355 Introduction to Operating Systems**

This course provides an introduction to operating systems. Topics covered include operating system concepts, program execution, and operating system internals such as memory, processor, device, and file management. A variety of operating systems are compared and contrasted. (3 credits) Prerequisite: CIS 207

## **ENG 221 Technical Writing Fundamentals**

Students explore the components and theories of interpersonal conflict and various conflict resolution models. Formal and informal third party interventions including mediation and negotiation are examined as methods of effective conflict resolution practices. This course is designed to examine conflict issues present in human services work. Students will apply conflict resolution skills related to human service situations. (3 credits) Prerequisite: HUM 114

## **BSA 310 Business Systems**

This course reviews common business systems and their interrelationships. Business systems covered include finance, accounting, sales, marketing, human resources, legal and operations. Emphasis is placed upon the inputs and outputs of information systems, the potential for integration of the systems, and information systems security. (3 credits) Prerequisite: HUM 114

## **BSA 375 Fundamentals of Business Systems Development**

This course introduces the fundamental, logical, and design considerations addressed during system and application software development. It provides a solid background in information systems analysis and design techniques through a combination of theory and application. The Systems Development Life Cycle will be fundamental to the course. (3 credits) Prerequisite: CIS 207

## **CMGT 410 Project Planning & Implementation**

This course provides the foundation for understanding the broad concepts of successful planning, organization, and implementation within the realm of information technology. This course uses real-world examples and identifies common mistakes and pitfalls in project management. Topics covered include project scoping, estimating, budgeting, scheduling, tracking and controlling. (3 credits) Prerequisite: HUM 114

## **DBM 380 Database Concepts**

This course covers database concepts. Topics include data analysis, the principal data models with emphasis on the relational model, entity-relationship diagrams, database design, normalization, and database administration. (3 credits) Prerequisite: PRG 211

## **CMGT 400 Intro to Information Assurance & Security**

This course is an introduction to information assurance and security in computing technology. Topics include risk management; protecting information in the enterprise; business continuity and disaster recovery planning; threats and remediation; legal, ethical, and professional issues; and considerations within systems development processes. (3 credits) Prerequisite: POS 355

## **NTC 362 Fundamentals of Networking**

This course provides a foundation in the basic Networking and Telecommunications technologies fundamental to the industry and to the broad field of telecommunications. Analog, digital, and radio frequency technologies are covered. Also covered in this course is an introduction to the OSI protocol model, network-switching systems, basics of wireless communications and network security. (3 credits) Prerequisite: CIS 207

## **PRG 420 Java™ Programming I**

This course introduces object-oriented programming in the context of business applications development. The basics of the Java™ programming language are covered. (3 credits) Prerequisite: PRG 211

## **MTH 221 Discrete Math for IT**

Discrete (as opposed to continuous) mathematics is of direct importance to the fields of Computer Science and Information Technology. This branch of mathematics includes studying areas such as set theory, logic, relations, graph theory, and analysis of algorithms. This course is intended to provide students with an understanding of these areas and their use in the field of Information Technology. (3 credits) Prerequisites: MTH 220, HUM 114

## **CMGT 445 Applications Implementation**

This course will cover the process and issues associated with the implementation of a computer application information system. Topics will include the processes associated with sponsor and stakeholder approvals, end-user training, technical staff training, conversion from existing application(s) and integration into the information system production environment. This course will also examine the use of development and testing environments and the testing procedures related to the implementation of a computer application information system. (3 credits) Prerequisites: WEB 240, ENG 221, BSA 310, BSA 375, CMGT 410, DBM 380, CMGT 400, NTC 362, PRG 420, MTH 221

# Bachelor of Science in Information Technology with a Concentration in Information Management

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## Information Management Concentration

### **IM 300 Data Organization Architecture**

This course provides an introduction to how data is architected and organized. It discusses the different data models used to store data, outlines several schemas that drive how data is structured, and provides other database concepts relating to the design and architecture of data. (3 credits) Prerequisites: DBM 380, MTH 221, ENG 221

### **IM 305 Data Modeling**

This course provides an in-depth look at several intermediate design and architecture concepts. The course covers the design method used in the creation of a relational database, the required steps to re-engineer a database, and several tools and techniques used through the database design process. (3 credits) Prerequisite: IM 300

### **POS 410 SQL for Business**

This course covers Structured Query Language (SQL) that provides a unified language that lets you query, manipulate, or control data in a business applications environment. (3 credits) Prerequisites: DBM 380, MTH 221, ENG 221

### **DBM 384 Special Purpose Databases**

This course examines the use of database technology in a variety of information technology applications. The use of text, multimedia, temporal, spatial, and mobile databases will be covered in this course. (3 credits) Prerequisite: IM 305

### **DBM 460 Enterprise Database Management Systems**

This course covers distributed computing, middleware and industry standards as relating to the enterprise data repository. Data warehousing, data mining, and data marts are covered from an enterprise perspective. (3 credits) Prerequisite: IM 305