



Faculty:  
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For the student who is interested in a computer-related major, the college offers an Information Technology and Management (ITM) program.

This major consists of 30% course work in information systems, computer networks, and web technology; 20% course work in business administration and management; and 50% course work in core curriculum competencies.

This major is based on input from the ITM Faculty Members, the ITM Alumni, and an ITM Advisory Board, which has a majority of its members from the Association of Information Technology Professionals (AITP). A Student Chapter of AITP is on our campus to help the ITM students become future leaders in the 21st Century of information technology.

Currently, the ITM Alumni are employed 41% as computer programmers, information systems analysts, and database managers; 35% as computer systems engineers and network support personnel; 17% as project managers and business administrators; and 7% as web technology specialists.

Web technology has been identified by the ITM Alumni and the ITM Advisory Board as an area of high growth. In response to this trend, we have been incorporating more of the Internet into the ITM program, such as Web Design, Advanced Programming in Java, and Electronic Commerce with B2B.

In summary, the Bachelors of Science Degree in Information Technology and Management requires 130 credit-hours of course work and 4 credit-hours for the successful completion of an Internship, which involves 960 hours working in information technology.

**Minor in Information Technology**

Students must confer with the ITM Chairperson to create a minor that will best benefit the individual student. Any courses required by the college or the student's major cannot be used in this minor.

<u>Course No</u>	<u>Course Title</u>	<u>Credit Hours</u>
IT 1031	Intermediate Computer Applications	3 (3-0)
Any other five courses with an IT prefix and in a prerequisite sequence		15
		18

**Recommended Course Sequence**

**Freshman Year**

**First Semester**

<u>Course No.</u>	<u>Course Title</u>	<u>Credits</u>	<u>Hours</u>
IT 1011	Information Technology Concepts	1.5	(1.5-0)
IT 1012	Computer Applications	1.5	(1.5-0)
EN 1101	English I	3	(3-0)
or EN 1111	Advanced English I	3	(3-0)
BY 1115	Natural Science I	3	(3-0)
LA 3032	American History and Government Since 1933	3	(3-0)
MP 1203	Elementary Functions	3	(3-0)
		15	

**Second Semester**

<u>Course No.</u>	<u>Course Title</u>	<u>Credits</u>	<u>Hours</u>
IT 1031	Intermediate Computer Applications	3	(3-0)
IT 3117	Data Structures & File Organization	3	(3-0)
EN 1201	English II or	3	(3-0)
EN 1211	Advanced English II	3	(3-0)
MP 4132	Symbolic Logic	4	(3-3)
BY 1216	Natural Science II	3	(3-0)
		16	

**Sophomore Year**

**First Semester**

<u>Course No.</u>	<u>Course Title</u>	<u>Credits</u>	<u>Hours</u>
IT 2216	Introductory Programming	3	(3-0)
BA 1005	Introduction to Business	3	(3-0)
BA 2008	Macroeconomics	3	(3-0)
BA 2123	Principles of Accounting I	3	(3-0)
MP 2114	Business Statistics I	3	(3-0)
*PE 1109	Physical Education I	1	(0-2)
		16	

**Second Semester**

<u>Course No.</u>	<u>Course Title</u>	<u>Credits</u>	<u>Hours</u>
IT 3203	Hardware and Software	3	(3-0)
BA 2210	Microeconomics	3	(3-0)
BA 2224	Principles of Accounting II	3	(3-0)
LA 2005	Speech	3	(3-0)
*PE 1209	Physical Education II	1	(0-2)
	Elective	3	
		16	

**Junior Year**
**First Semester**

<u>Course No.</u>	<u>Course Title</u>	<u>Credits</u>	<u>Hours</u>
IT 2118	Web Design	3	(3-0)
IT 3104	Data Base Management	3	(3-0)
BA 3128	Electronic Commerce/B2B	3	(3-0)
BA 3129	Operations Management	3	(3-0)
EN 2226	Business Communications	3	(3-0)
	Elective	3	
		18	

**Second Semester**

<u>Course No.</u>	<u>Course Title</u>	<u>Credits</u>	<u>Hours</u>
IT 2218	Advanced Programming	3	(3-0)
IT 3103	Information Systems	3	(3-0)
BA 3027	Human Resource Management	3	(3-0)
EN 2028	Introduction to Literature	3	(3-0)
LA 2040	Modern History of Western Societies	3	(3-0)
	Elective	3	
		18	

**Senior Year**
**First Semester**

<u>Course No.</u>	<u>Course Title</u>	<u>Credits</u>	<u>Hours</u>
IT 4109	Data Communications	3	(3-0)
IT 4146	Systems Analysis and Design	3	(3-0)
BA 3127	Finance	3	(3-0)
*LA 1060	Introduction to the Arts	3	(3-0)
	Elective	3	
		15	

**Second Semester**

<u>Course No.</u>	<u>Course Title</u>	<u>Credits</u>	<u>Hours</u>
IT 4208	Senior Projects in IT	3	(3-0)
IT 4235	Computer Networks	3	(3-0)
LA 4037	Non-Western Societies	3	(3-0)
	Philosophy/Psychology/ Sociology Area	3	(3-0)
	Elective	3	
		15	

**Summary**

<u>Course No</u>	<u>Course Title</u>	<u>Credit-Hours</u>
Total Course Requirements		129
* LA 4038	Cultural Enrichment	1
** IT 2370	Internship in IT	4
		134

\* Continuing Education (CE) students are NOT required to take these classes, but must substitute six credits of free elective courses.

\*\* CE students are required to have a letter from their employer on file as to being successfully, gainfully employed for one year or more.

## Course Descriptions

**IT 1011 Information Technology Concepts**

(formerly CM 2114)

This course introduces the fundamentals of information technology. Discussion includes computer hardware concepts and terminology with an overview of operating system and business application software. 1.5 hours Lecture – 1.5 credits. Must take with: IT 1012 Computer Applications.

**IT 1012 Computer Applications** (formerly CM 2114P)

This course introduces the basics of computer applications. Emphasis is placed on a working knowledge of operating system, word processing, spreadsheet, and presentation software at the introductory level. 1.5 hours Lecture – 1.5 credits. Must take with: IT 1011 Information Technology Concepts.

**IT 1031 Intermediate Computer Applications**

(formerly CM 2214)

This course extends computer applications into real-world projects. Emphasis is placed on a working knowledge of word processing, spreadsheet, and database management software at the intermediate level. 3 hours Hands-on – 3 credits. Prerequisites: IT 1011 Information Technology Concepts and IT 1012 Computer Applications

***IT 2118 Web Design*** (formerly CM 2118)

This course introduces the generally accepted design principles that underlie the construction of a Web page and applets.

Students will create a variety of web pages using HTML, JavaScript, and web design applications.

3 hours Lecture and Hands-on – 3 credits.

Prerequisite: IT 1031 Intermediate Computer Applications

***IT 2216 Introductory Programming***

(formerly CM 2216)

This course teaches the process of writing a computer program and the syntax of the C++ programming languages as the means of expressing a computer program. 3 hours Lecture and Hands-on – 3 credits.

Prerequisite: IT 1031 Intermediate Computer Applications

***IT 2218 Advanced Programming***

(formerly CM 2218)

This course is a continuation of the Web Design course.

Advanced features of Web page design are covered with particular emphasis on the Java programming language to develop applets for the Internet. 3 hours Lecture and Hands-on – 3 credits.

Prerequisites: IT 2118 Web Design

***IT 2370 Internship in Information Technology***

***(Employment Program)*** (formerly CM 2370)

Each student in ITM is required to work 960 hours in jobs that are related to the student's major area of information technology. 960 hours of on-the-job training – 3 credits.

Approval: ITM Department Chairperson

***IT 3000/4000 Selected Topics in IT***

(formerly CM 3000/4000)

These courses are designed to permit the timely introduction of new topics of interest in information technology. 1 to 3 hours of student/faculty member instruction per week – 1 to 3 credits.

Prerequisite: As determined by ITM Department Chairperson

***IT 3103 Information Systems*** (formerly CM 3103)

This course studies the characteristics and features of the major types of information systems and their use in management and decision-making.

3 hours Lecture and Discussion – 3 credits.

Prerequisite: IT 1031 Intermediate Computer Applications

***IT 3104 Database Management*** (formerly CM 3104)

This course examines the purposes, advantages, issues, and problems associated with the use of a data base. The process of data base design from information modeling to physical design is also discussed. 3 hours Lecture and Hands-on – 3 credits.

Prerequisites: IT 1031 Intermediate Computer Applications and IT 3117 Data Structures and File Organization

***IT 3117 Data Structures and File Organization***

(formerly CM 3117)

This course introduces the student to common data structures and various areas of information technology. The use of data structures as well as how particular structures are implemented.

3 hours Lecture & Discussion – 3 credits.

Prerequisites: IT 1011 Information Technology Concepts and IT 1012 Computer Applications

***IT 3119 Internet Security*** (formerly CM 3119)

This course discusses the principles, techniques, and tools that are used to provide security for a Web site. Students will be able to recognize security risks, choose techniques that will minimize those risks, and use tools that will implement these techniques.

3 hours Lecture and Hands-on – 3 credits.

Prerequisite: IT 1031 Intermediate Computer Applications

***IT 3202 Office Automation*** (formerly CM 3202)

This course studies the impact of current technology on productivity in the modern office. Elements of office automation are reviewed with specific emphasis on document processing.

Students will apply this emphasis to Educational Business applications. 3 hours Lecture and Hands-on – 3 credits.

Prerequisites: IT 1011 Information Technology Concepts and IT 1012 Computer Applications

***IT 3203 Hardware and Software***

(formerly CM 3203)

This course presents a detailed view of computer hardware structure and function, and discusses the principles governing operating systems. It provides some hands-on experience in building and maintaining a PC computer system.

3 hours Lecture and Hands-on – 3 credits.

Prerequisites: IT 1031 Intermediate Computer Applications and MP 4132 Symbolic Logic

***IT 3205 Geographic Information Systems***

(formerly CM 3205)

This course introduces the principles of a geographic information system, such as ArcView, in the analysis of land use, population studies, and demographic distributions. Students will apply this software to Environmental Science applications.

3 hours Lecture and Hands-on – 3 credits.

Prerequisites: IT 1011 Information Technology Concepts and IT 1012 Computer Applications

***IT 3220 Computer-Aided Design*** (formerly CM 3220)

This course introduces the basic concepts and terminology of computer aided design and imaging process. Students will apply this software to Ornamental Horticulture applications.

3 hours Lecture and Hands-on – 3 credits.

Prerequisites: IT 1011 Information Technology Concepts and IT 1012 Computer Applications

***IT 3222 Database Design*** (formerly CM 3222)

This course covers the design, development, and utilization of data base tables, with emphasis on the support of a Web site. Students will learn how to build queries, reports, and formats to manipulate the data in the data base.

3 hours Lecture and Hands-on – 3 credits.

Prerequisite: IT 1031 Intermediate Computer Applications

***IT 4028 Visual Basic Programming***

(formerly CM 4028)

This course teaches the use of Visual Basic to create programs in the Windows operating system. Students learn how to produce graphical user interfaces in the object-oriented programming paradigm. 3 hours Lecture and Hands-on – 3 credits.

Prerequisite: IT 1031 Intermediate Computer Applications

***IT 4041 Senior Research in IT*** (formerly CM 4041)

Selected seniors are engaged in supervised investigations of information technology. 3 hours of student/faculty member instruction per week – 1 to 3 credits.

Permission: ITM Department Chairperson

***IT 4042 Unix Operating System***

(formerly CM 4042)

This course reveals Unix commands and shell programming tools for effective completion of system related tasks, and customization of a local environment or a whole system.

3 hours Lecture and Hands-on – 3 credits.

Prerequisites: IT 1031 Intermediate Computer Applications and IT 2216 Introductory Programming

***IT 4109 Data Communications*** (formerly CM 4109)

This course studies contemporary telecommunication strategies and techniques with an emphasis on distributed information systems and networks. 3 hours Lecture and Hands-on – 3 credits.

Prerequisite: IT 3203 Hardware and Software

***IT 4110 Computer Graphics*** (formerly CM 4110)

This course presents fundamental concepts in computer graphics. Emphasis is on current methods and techniques, such as presentation graphics, photo editors, and animators, to create graphical displays for print and the Web.

3 hours Lecture and Hands-on – 3 credits.

Prerequisite: IT 1031 Intermediate Computer Applications

***IT 4131 Auto CAD***

(formerly CM 4131)

This course teaches how to use Auto CAD, a computer aided design tool. Students will apply this tool to landscaping and drafting designs. Students will apply this emphasis to Environmental Science applications. 3 hours Lecture and Hands-on – 3 credits.

Prerequisites: IT 1011 Information Technology Concepts and IT 1012 Computer Applications

***IT 4146 Systems Analysis and Design***

(formerly CM 4146)

This course introduces the systems life cycle approach to problem-solving. Students gain a working knowledge of use-case, entity-relationship, data flow, and object modeling in the development of information systems. 3 hours Lecture and Hands-on – 3 credits.

Prerequisite: IT 1031 Intermediate Computer Applications

***IT 4208 Senior Projects in IT***

(formerly CM 4208)

This course provides a broad overview of information technology. Students explore contemporary topics of interest that result in a research paper and project involving an application in information technology. 3 hours Lecture and Hands-on – 3 credits.

Prerequisite: Senior standing or permission of ITM Department Chairperson

***IT 4235 Computer Networks***

(formerly CM 4235)

This course explores network configuration and application.

Students gain a working knowledge of the analysis, design, installation, operation, and maintenance of a local area network by using a network operating system.

3 hours Lecture and Hands-on – 3 credits.

Prerequisites: IT 4109 Data Communications