Department of Computer Information Systems

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Business and Aerospace Building N333C

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The mission of the Department of Computer Information Systems is to provide programs to prepare students to solve business problems through the use of computer information systems, computer tools, and techniques; to prepare students in the management of computer information systems; to provide foundation courses to students in other fields; to encourage intellectual contributions that advance the state of knowledge in the application of information technology and quantitative methods to the solution of business problems; and to promote the involvement of department members in service activities.

The Computer Information Systems program prepares the student to assume information systems/technology responsibilities in any organization. Exposure to a broad range of business functions coupled with learned information systems concepts and skills will serve the student well in positions such as computer programmer, database designer/administrator, data communications manager/specialist, systems analyst, computer marketing specialist, or information center specialist.

At least 12 semester hours must be taken in residence at MTSU for a major in Information Systems and 6 hours for a minor. All Information Systems majors have a built-in minor in Business Administration.

In all curricular listings, (Area __) refers to the General Studies requirements as outlined on pages 59-61.

Major in Information Systems

In addition to meeting the business requirements (see page 158), an Information Systems major consists of 30 hours of information systems courses. Majors must earn an overall minimum GPA of 2.00 in their required information systems courses.

The following 18 hours are required of all Information Systems majors:

INFS	2720	COBOL Applications
INFS	3700	Introduction to System Analysis and Design
INFS	4760	Advanced Programming
INFS	4790	Database Techniques
INFS	4900	Seminar in Data Communications
INFS	4980	Management Information Systems (MIS) Project

In addition, 12 hours of electives must be chosen from the following courses:

INFS	2200	Introduction to Microcomputing
INFS	3200	Business Applications of Microcomputers
INFS	3500	Decision Support Systems
INFS	3990/4990	Independent Study in Information Systems
INFS	4200	Microcomputer Database Applications
INFS	4420	Information Systems Internship
INFS	4500	New Technologies in Information Systems
INFS	4740	Information Resource Management
INFS	4830	Database Design and Application Development

The following is the required course outline for the Information Systems major with a minor in Business Administration.

Required Program

FRESHMAN		SOPHOMORE	
ENGL 1010, 1020 (Area I-A)	6	ENGL 2030, 2--- (Area II-A)	6
Science (Area IV-A)	8	HIST 2010, 2020 (Area III-A)	6
UNIV 1010	3	PHED (Area V)	2
PHED (Area V)	2	ACTG 2110, 2120	6
Gen. Studies (Area I-B)	3	INFS 2720	3
ECON 2410 (Area III-B), 2420	6	Gen. Studies (Area II-B)	3
MATH 1610 (Area IV-B)	3	Q M 2610	3
MATH 2020 or 1810		Non-business elective	3
(Area IV-B)	3		**32**
	34		

JUNIOR		SENIOR	
INFS 3100, 3700, 4760	9	INFS 4790, 4900, 4980	9
Q M 3620	3	ECON 3210	3
MGMT 3610, 3620	6	Q M 4010	3
BMOM 3510, FIN 3010	6	INFS courses	9
ACTG 3020 or 3310	3	Non-business elective	3
INFS course	3	B AD 4980	3
BLAW 3400	3		**30**
MKT 3820	3		
	36		

Minor in Information Systems

A minor in Information Systems consists of 18 semester hours of coursework in information systems, 6 hours of which must be taken at MTSU. INFS 2200, 3100, and 3700 are required. One of the following must be taken: INFS 3200 or 4830. In addition, six hours of approved INFS electives are required. Recommended background courses for this minor are ACTG 3000, MATH 1610, Q M 2610, or the equivalent of these.

Combined Minor in Accounting/Information Systems

A student may obtain a combined Accounting/Information Systems minor consisting of 18 semester hours which include ACTG 3000 (or 2110 and 2120), INFS 2200, 3100, and 3700, plus 6 hours of upper-division ACTG electives, not to include both ACTG 3310 and 3020. This is an excellent minor for students pursuing majors outside the Jennings A. Jones College of Business.

Courses in Information Systems [INFS]

1000   (100) Introduction to Computers and Related Topics. Three credits. An overview of the workings of a computer including hardware, software, and applications. Provides hands-on experience with various software packages. (Not open to business majors.)

2200   (220) Introduction to Microcomputing. Three credits. Microcomputer applications and the microcomputer environment.

2720   (272) COBOL Applications. Three credits. Prerequisite: INFS 2200. Systems of commercial computer programming using Common Business Oriented Language in solving business problems.

3100   (310) Principles of Management Information Systems. Three credits. Prerequisite: Junior standing. The role of information technology in organizations.

3200   (320) Business Applications of Microcomputers. Three credits. Prerequisites: INFS 2200; junior standing. An applications-oriented course including extensive laboratory work and development of projects.

3500   (350) Decision Support Systems. Three credits. Prerequisite: Junior standing. Focus on three subsystems of computer-based information systems: decision support systems (DSS), expert systems (ES), and executive information systems (EIS).

3700   (370) Introduction to System Analysis and Design. Three credits. Prerequisites: 6 hours of information systems; junior standing. Applied system analysis and design (concepts and techniques) including problem definition, feasibility analysis, various modeling methods, hardware and software selection, documentation, physical design, and auditing procedures. Appropriate automated technologies used throughout the course.

3990   (399) Independent Study in Information Systems. One to three credits. Prerequisites: Junior standing and consent of department chair. Assigned research or projects in contemporary problem areas in the information systems discipline under direct faculty supervision. Aggregate credits allowable toward a degree may not exceed 3 hours under 3990 courses.

4200   (420) Microcomputer Database Applications. Three credits. Prerequisites: 6 hours of information systems; junior standing. Focus on database system design, deploying, maintaining, and querying a database using appropriate hardware and software. E-commerce applications in a microcomputer environment.

4420   (442) Information Systems Internship. Three credits. Prerequisites: Junior standing, consent of advisor, and a plan of activities with the associated firm prior to registration. Active employment with a governmental agency or business firm for information systems/accounting fieldwork; credit given for experience and research upon completion of acceptable work and formal report. Aggregate credits allowable toward a degree in information systems may not exceed 3 hours under 4420 courses.

4500   (450) New Technologies in Information Systems. Three credits. Prerequisites: 12 hours of information systems credit; senior standing. Future technological advances including automating the creation and maintenance of systems with CASE tools, systems engineering packages, and integrated CASE technologies.

4740   (474) Information Resource Management. Three credits. Prerequisites: 6 hours of information systems; junior standing. Information technologies utilizing computers as a competitive tool in a global environment.

4760   (476) Advanced Programming. Three credits. Prerequisites: INFS 2720; junior standing. Functional programming experience in structured programming techniques; top-down design; advanced file handling and maintenance techniques to include sequential, indexed sequential, direct, and relative file organi-

zation; interactive, menu-driven applications; and uploading/downloading programs to a central site. Requires extensive laboratory work.

4790 (479) Database Techniques. Three credits. Prerequisites: 6 hours of information systems, including INFS 3700; junior standing. Fundamental concepts: conventional data systems, integrated management information systems, database structure systems, data integration, complex file structure, online access systems. Emphasis on total integrated information systems database and database management languages.

4830 (483) Database Design and Application Development. Three credits. Prerequisites: INFS 2200, 3700, and junior standing. Operational database design and implementation. Includes the development of the interfaces that enable end users to query the database contents and transform data into information. Requires each student to participate fully in a group project.

4900 (490) Seminar in Data Communications. Three credits. Prerequisites: 6 hours of information systems; junior standing. Practical explanation of data communications technologies and basic applications for business. Includes projects to develop a prototype network in a lab environment for hands-on experience.

4980 (498) Management Information Systems (MIS) Project. Three credits. Prerequisites: Senior standing and 12 hours of information systems credit including INFS 3700. Systems Development Life Cycle (SDLC) design and implementation. Appropriate automated technologies will be used throughout the course.

4990 (499) Independent Study in Information Systems. One to three credits. Prerequisites: Senior standing and consent of department chair. Assigned research or projects in contemporary problem areas in the information systems discipline under direct faculty supervision. Aggregate credits allowable toward a degree may not exceed 3 hours under 4990 courses.

Courses in Quantitative Methods [Q M]

2610 (261) Statistical Methods I. Three credits. Prerequisite: MATH 1610. Identification, interpretation, and use of statistical data. Topics include measures of central tendency, variation, probability theory, point and interval estimation, and hypothesis testing. Computer applications emphasized.

3620 (362) Statistical Methods II. Three credits. Prerequisites: Q M 2610; junior standing. More advanced methods of statistical analysis including simple and multivariate tests of hypotheses, non-parametric methods, correlation, regression, and time-series analysis. Computer applications emphasized.

3640 (364) Introduction to Operations Research. Three credits. Prerequisites: Q M 3620; junior standing. Optimization techniques used in business decision making.

4010 (401) Decision Science Techniques. Three credits. Prerequisites: Q M 2610 and MGMT 3620; junior standing. Current topics of quantitative management decision analysis and modeling. Computer application emphasized.

Graduate Study
Requirements for the Master of Science in Accounting/Information Systems and for the Master of Business Administration degrees and a list of the courses offered for graduate credit are published in the Graduate Catalog.