

# Business Information Systems

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**Degrees offered:** Associate of Applied Science (AAS) in Office Systems Support (two-year degree); Bachelor of Science (BS), Bachelor of Arts (BA), and Master of Science (MS) in Business Information Systems; BS and BA in Business Information Technology and Education; BS and BA in Marketing Education; Master of Education (MEd) in Secondary Education with specialization in Business Education; participates in the Interdepartmental Doctor of Philosophy (PhD) in Education and Doctor of Education (EdD) with a specialization in Business Information Systems

**Undergraduate emphases:** *Business Information Systems BS, BA*—Management Information Systems, Electronic Commerce, Office Systems Management; *Business Information Technology and Education BS, BA*—Business Teacher License, Training and Development; *Marketing Education BS, BA*—Marketing Teacher License, Training and Development

**Graduate specializations:** *Business Information Systems MS*—Business Education, Business Information Systems, Electronic Commerce, Management Information Systems, Marketing Education, and Training and Development

**Distance Learning:** The Bachelor of Science (BS) and Bachelor of Arts (BA) in Business Information Systems are offered throughout the State of Utah through the USU satellite Distance Learning Program. The MS in Business Information Systems is also offered through Distance Learning. For more information, contact the nearest USU Extension Center.

## Undergraduate Programs

### Objectives

The Department of Business Information Systems offers two major educational thrusts in undergraduate as well as graduate programs. The Business Information Systems major is designed to prepare individuals for positions as managers in business information systems, including information managers, information supervisors, network managers, worldwide web designers, electronic commerce developers, systems analysts, applications programmers, systems trainers, and office systems managers by pursuing a bachelor's degree program in Business Information Systems.

The second major thrust is designed to prepare individuals as teachers and supervisors of business and marketing subjects at the secondary and postsecondary grade levels in the educational system or as teacher-trainers in private industry. Students may earn a bachelor's degree in Business Information Technology and Education or Marketing Education.

A comprehensive two-year Associate of Applied Science Degree in office systems support subjects is also available. In addition, the department provides service courses for many other groups of students.

The department has a modern microcomputer laboratory in seven separate rooms with more than 200 microcomputers. Students take microcomputer classes as part of their College of Business requirements, Computer and Information Literacy (CIL) examination preparation, and elective programs.

### Requirements

**College of Business Requirements.** All bachelor's degree students majoring in Business Information Systems programs must satisfy the College of Business entrance requirements provided on pages 101-102. Academic advising about these requirements is provided by the College of Business Career and Education Opportunities Center, Business 310A. Business Information Systems majors must also follow College of Business prebusiness course requirements for admission to a major, detailed on page 102.

**Teacher Licensure.** Persons planning to teach must also be admitted to the teacher licensure program in the College of Education and Human Services. A cumulative college grade point average of 2.75 is required to be admitted to the College of Education and Human Services, to student teach, and to graduate in Business Information Technology and Education or Marketing Education with a teaching license. Detailed information may be obtained from the Department of Secondary Education and/or the College of Education and Human Services.

**Two-year Associate of Applied Science Degree.** Students indicating an interest in the Office Systems Support Associate of Applied Science Degree can be accepted directly into the program upon admission to the University. Students who desire to transfer to a four-year program offered by the College of Business must meet the requirements specified for bachelor's degree programs.

**Competency-based Placement Program.** Students who have acquired knowledge and skills that are not represented on their collegiate transcripts of credit are allowed to demonstrate competency by challenging related courses. Placement in a skills-oriented sequence can be accomplished by discussion with an advisor. Challenge of courses is done by successfully completing an examination similar to a final course test.

Students with potential for demonstrating competence have two options, one of which must be chosen prior to examination. One option is to challenge for credit (*P/D+*, *D*, *F* option) according to University established procedures; results of the test are recorded on the student's transcript. A second option is to waive without credit required classes, if competence at the *B* level is demonstrated. Students will be assessed a fee for choosing one of these options.

## Program Requirements

**Bachelor's Degree in Business Information Systems.** The Information Systems program at Utah State University offers a common core of courses through two departmental majors: **Business Information Systems** and **Computer Science**. The curricula of the individual departments differ *substantially* in emphasis.

The **Business Information Systems major, Management Information Systems (MIS) emphasis**, is offered in the Business Information Systems Department, College of Business. The Bachelor of Science or Bachelor of Arts program is designed for students interested in business careers as information specialists, systems analysts, network managers, applications programmers, and information systems managers in business and industry. BIS majors take required courses in analysis and design, Internet management, telecommunications, decision support systems, spreadsheet and database applications, and information systems projects. All graduates are required to complete a common core of business subjects. The College of Business is accredited by the American Assembly of Collegiate Schools of Business. The department also offers a Master of Science in Business Information Systems with an area of emphasis in Management Information Systems.

The **Computer Science major with an Information Systems emphasis** is located in the College of Science and is designed for students interested in a career as a Computer Scientist with a background in Information Sciences and Systems. Majors in this emphasis are trained in all phases of the analysis, design, and implementation of Information Systems. As part of this emphasis, students also receive training in the theory and application of information. Students select an application area such as Business, Accounting, or Economics. Other application areas can be developed by working closely with an advisor. This program of study leads to a Bachelor of Science, Bachelor of Arts, or Master of Science degree in Computer Science. See page 175 for additional details.

**General requirements for all Business Information Systems majors are:** ACCT 2010, 2020; BA 3400, 3500, 3700; BIS 1400 (or Computer and Information Literacy Examination), 2450, 2550; BUS 3250, 4250; ECON 1500, 2010, 3400; MHR 2990, 3110; MHR 4880 (or 4890); Math 1050, 1100; STAT 2300; PSY 1010 (or SOC 1010); and University Studies requirements.

Students must choose a management information systems emphasis, an electronic commerce emphasis, or an office systems management emphasis.

The **management information systems** emphasis provides knowledge and skills for business systems analysts, applications programmers, information managers, web masters, and other business information systems positions.

Required classes for the management information systems emphasis are: BIS 2300 (or 3100), 3330, 3500, 4330, 5100, 5110, 5300, 5400, 5800; BIS 5050 (or 5650 or 5700); CS 1700, 1710, 1720 (or 3410); plus 6 credits outside the College of Business related to the major. It is strongly recommended that students take BIS 5050, 5450, and 5650. See advisor for current checklist of requirements.

The **electronic commerce** emphasis provides knowledge and skills for students who wish to work in the electronic economy using high-speed Internet networks and applications, while providing competitive tools for all Internet-driven electronic commerce. This expertise includes business-to-business electronic commerce, as well as business-to-consumer electronic commerce. Students

gain expertise in establishing and designing websites from the technical point of view, as well as expertise in electronic commerce from a strategic business point of view.

Required classes for the electronic commerce emphasis are: BIS 3330, 3500, 4330, 5050, 5100, 5110, 5300, 5450, 5650, 5700, 5800; CS 1700, 1710, 1720 (or 3410).

The **office systems management** emphasis provides knowledge and skills for office managers, administrative assistants, and other practitioners who assist with analysis, design, and use of computerized information from a user's perspective.

Required classes for the office systems management emphasis are: BIS 1420, 2300, 2400, 2520, 2600, 3100, 3450 (or 3500), 5450, and 5700, plus 13 credits of approved upper-division classes outside the College of Business related to the major. BIS 3330, 4350, 5300, and 5400 are strongly recommended. See advisor for current checklist of requirements.

**Bachelor's Degree in Business Information Technology and Education.** A composite major in Business Information Technology and Education is designed for students desiring to qualify for a license to teach business subjects in grades 7-12 or to teach in business and industry. Required courses include: ACCT 2010, 2020; BA 3500; BIS 1400 (or Computer and Information Literacy Examination); BIS 2300 (or 3100), 2400, 2450, 2520, 2550, 3140, 4550, 5400; BIS 5300 (or 5450 or 5700); BUS 2250; ECON 1500; ECON 2010 (or MHR 2990); MHR 3110; PSY 1010; MATH 1100; STAT 2300; and other University Studies courses required by the University. Required English classes are ENGL 1010 and 2010. Students must also complete at least one of the following emphases:

**1. Business Teacher License Emphasis:** BIS 3000, 3300, 3400, 4300, 4400, 5500, 5630; SCED 3100, 3210, 4200, 4210; and SPED 4000.

**2. Training and Development Emphasis:** BIS 3450, 4350, 5450; BUS 4250; and 15 additional credits chosen from the following: MHR 3710 4630, INST 5210, 5230, 5240, 5250, 5260, 5300, 5400, 5900.

Those who do not wish to receive a license to teach in the public schools may select an emphasis in Training and Development for business and industry.

**Bachelor's Degree in Marketing Education.** A composite major in marketing education is designed for students desiring to qualify for a license to teach marketing and distributive education subjects in the public secondary schools or in business and industry. Required courses for students wishing to receive a license to teach include: ACCT 2010, 2020; BA 3500, 4510; BA 4540 (or 4550); BIS 1400 (or Computer and Information Literacy Examination), 1420, 2300, 2400, 2450, 2550, 3140, 4550; BUS 2250; ECON 1500; ECON 2010 (or MHR 2990); MHR 3710; PSY 1010; MATH 1100; STAT 2300. Students must also complete at least one of the following emphases:

**1. Marketing Teacher License Emphasis:** BIS 3000, 3300, 3400, 4300, 4400, 5500, 5630; SCED 3100, 3210, 4200, 4210; and SPED 4000.

**2. Training and Development Emphasis:** BIS 3450, 4350, 5450; BUS 4250; and 15 additional credits chosen from the following: MHR 3710, 4630, INST 5210, 5230, 5240, 5250, 5260, 5300, 5400, 5900.

Those who do not wish to receive a license to teach in the public schools may select an emphasis in Training and Development for business and industry.

Students must also complete ENGL 1010 and 2010, as well as ECON 1500 and BIS 3140, which may be counted toward their University Studies requirements.

**Graduation Requirements.** To be recommended by the department for graduation with a bachelor's degree, BIS majors must have a minimum GPA of 2.67 in courses required for their major. Business Information Systems majors must have an overall GPA of 2.5. Business Information Technology and Education and Marketing Education majors must have an overall GPA of 2.75. This includes transfer credit. At least 50 percent of the business credits required for a business degree must be taken on the Utah State University campus or at a designated residence center.

Communications Literacy requirements are ENGL 1010 and 2010 plus two Communications Intensive courses.

**Office Systems Support Associate of Applied Science Degree.** This program is designed for students desiring two years (a minimum of 65 semester credits) of college to prepare for positions as office supervisors and other office and information systems support personnel. Emphasis is placed on job skills. Requirements are: ACCT 2010; BIS 1400, 1420, 1550, 2300, 2400, 2450, 2520, 2550, 2600; BUS 2250. In addition, students are required to complete a minimum of 9 credits in business-related areas as approved by their advisor.

A minimum of 18 credits of University Studies must be taken. Required University Studies classes are: 6 credits of communications literacy (ENGL 1010 and 2010), 3 credits of quantitative literacy (MATH 1050 or 1100), and 9 credits of breadth requirements.

Students who initially enroll for the two-year Associate of Applied Science degree may readily change to a four-year bachelor's degree program and complete the requirements for the business information systems major, business information technology and education major, or another major in the College of Business.

**Minors.** The Department of Business Information Systems is authorized to award teaching minors in Business Information Technology and Education, Marketing Education, and Business Computer and Information Systems. A minor in Business Information Systems and a minor in Electronic Commerce are also authorized.

Requirements for the *Business Information Technology and Education teaching minor* are ACCT 2010; BIS 1400 (or Computer and Information Literacy Examination), 1420, 2300, 2450, 3000, 3300 (or 4300), 3400, 4400, 5400; BIS 5300 (or 5450 or 5700); and ECON 1500.

A *teaching minor in Marketing Education* consists of the following courses: ACCT 2010; BA 3500; BIS 1400 (or Computer and Information Literacy Examination), 1420, 2300, 3000, 3300 (or 4300), 3400, 2400 (or 3550), 4400; ECON 1500; BA 4510 (or 4550).

Requirements for the *Business Computer and Information Systems teaching minor* are: BIS 1400 (or Computer and Information Literacy Examination), 1420, 2300, 2400, 2450, 3000, 3100, 3300 (or 4300), 3400, 3450 (or 3500), 5300, 5400.

The minors listed above are **teaching minors** and are available only to those working toward a teaching license.

Students wishing to *minor in Business Information Systems* must complete the following courses: BIS 2300, 2450, 3100, 3330, 3450 (or 3500); CS 1700 (or 3410 or 3510). In addition, they must choose one course from the following: ACCT 4500; BIS 4330, 5100/5110 (take both), 5150, 5300, 5400, 5700; CS 1700 (or 3410, if not taken in *required* section). The following courses are also required for nonbusiness majors: ACCT 2010, 2020; BIS 1400.

Requirements for the *Electronic Commerce minor* are: BIS 2400, 3330, 3450 (or 3500), 5100, 5110, 5300, 5700. Students whose majors are *not* in the College of Business must take the following courses, in addition to those listed above, in order to complete an Electronic Commerce minor: ACCT 2010, BIS 2450, and BA 3500.

### **Student Organizations**

The Department of Business Information Systems sponsors or co-sponsors three student organizations. Each group provides unique experiences that can complement and enrich formal coursework. Leadership development and human relations skills are among the personal attributes enhanced by involvement in the various organization activities.

**Association for Computing Machinery (ACM).** ACM, a professional society for the information systems industry, sponsors a student chapter at USU. The goals of ACM are to: (1) provide leadership experiences for undergraduate and graduate business information systems majors; (2) help student members plan their careers and find employment by introducing them to practicing systems professionals; and (3) foster a professional attitude among business information systems majors so that they will contribute to their field.

**Delta Epsilon Chi (DEX)** is a cocurricular organization designed for marketing education and marketing majors. The major goal of DEX is to help students prepare for careers in marketing or marketing education. DEX provides students with opportunities to compete in marketing events at the state and national levels. Membership is open to all students interested in business and marketing.

**Delta Pi Epsilon (DPE)** is a national honorary fraternity for graduate students. Purposes of the organization include enhancement of research, scholarship, service, and cooperation in the profession. Election to membership requires review by members and faculty of the Department of Business Information Systems.

## **Graduate Programs**

### **Master of Science**

Students applying for admission to the Master of Science program in Business Information Systems must take the GMAT test. A score at the 40th percentile or better on the GMAT is required for admission. Undergraduate GPA should be 3.0 or above. Meeting minimum requirements does not guarantee admission.

The MS requires a minimum of 33 credits. A minimum of 24 credits of academic work must be in classes numbered 6000 and above. Twelve or more credits should be in the area of specialization. Students with bachelor's degrees outside of business may be required to complete additional coursework.

Students in the master's program pursue the *Plan C* option, where a research paper is completed in a special research class. Those who wish to pursue the *Plan A* thesis option must have permission from their committee to do so.

All MS degrees in the BIS Department require the following core: BIS 6150, 6440, 6810.

The specialization in **Management Information Systems (MIS)** is for students who wish to work as systems analysts, application programmers, network managers, information managers, information center managers, and trainers in business information systems.

Students are expected to have a background in business information systems. Required courses are BIS 6120, 6200, 6330, 6400 (or 6700), in addition to the departmental core. Students who choose the Plan A option must complete 6 credits of BIS 6970. Students may take credits in Business Information Systems, Computer Science, Instructional Technology, Business Administration, Accounting, Economics, or other approved electives to complete the 9 credits of electives required.

The specializations in **Business Education, Marketing Education, and Training and Development** are designed for those who are teaching in an area of business or who wish to work in training and development in business and industry. Required courses for the Business Education or Marketing Education specialization are BIS 6350, 6450, 6700, 6720, 6730, and 6770. Students must complete 15 credits of electives chosen from the following list (or select others with committee approval): BIS 6350, 6400, 6600, 6720, 6730, 6770; BUS 6250;

Required courses for the Training and Development specialization are BIS 6350, 6450; and BUS 6250. Students must complete 15 credits of electives chosen from the following list (or select others with committee approval): BIS 6120, 6330, 6410.

For a current checklist of requirements, students should contact their departmental graduate advisor.

The USU MS in Business Information Systems is the **only** master's program in Business Information Systems in the state of Utah. Graduates are placed in the West and throughout the nation.

### ***Master of Education***

Students desiring admission to the MEd program must also meet the requirements of the Secondary Education Department.

The MEd degree in secondary education with specialization in business education has a master's project requirement as part of the program. The program is devised specifically for the practicing secondary school teacher of business or marketing education. Students complete a core area in secondary education, as well as requirements in business education and subject-matter-oriented courses. The program is also designed to prepare people to teach in public secondary schools.

### ***Doctor of Philosophy and Doctor of Education***

Applicants for admission to the College of Education and Human Services PhD or EdD programs with a specialization in Business Information Systems must take the GRE. Scores on the verbal and quantitative test must be at or above the 40th percentile. No minimum score is required on the analytical section (required by the Educational Testing Service).

The Department of Business Information Systems cooperates with other departments in offering the interdepartmental Doctor of Philosophy (PhD) and Doctor of Education (EdD). Within the Business Information Systems specialization, emphases can be pursued in business education, marketing education, business information systems, and business communications. Other subject-matter emphases are also available. The PhD is a research-based degree. The EdD degree is a practitioner's degree. Both degrees require dissertations. Graduates secure positions teaching business subjects or business-teacher education in colleges and universities or in business and industry. Former graduates are currently in various positions in higher education, including higher education administration; in teacher education instruction; and in business and industry.

### ***Additional Information***

Specific details about each of the foregoing degree programs are outlined in policy and procedure documents available through the department. All requirements are subject to change; check with the department for current requirements.

The business and marketing teacher education programs, at the undergraduate and graduate levels, are ranked highly and respected throughout the nation, with faculty who are nationally and internationally recognized.

All students must meet admission requirements as specified by the School of Graduate Studies (see pages 90-91).

### ***Research***

Faculty in the Department of Business Information Systems are active in research and scholarly endeavors. Current and published research topics include business communications; international communications; improvement of instruction in teaching; business information systems as related to business and industry; curriculum for business schools; business reengineering; electronic commerce; group decision support systems; microcomputer applications; use of microcomputers in various subjects, including accounting and business communications; cooperative education; issues in higher education; and other areas related to business information systems, marketing education, and business education.

### ***Financial Assistance and Assistantships***

Funds for scholarships are provided through the School of Graduate Studies and administered in the department. Those interested in scholarships should contact the graduate director or the department head.

Each year several high-quality graduate teaching assistants are needed. These assistants generally teach classes in keyboarding, word processing, business communications, and microcomputer applications. Those who are interested in teaching assistantships must apply through the department head. They must have had teaching experience or be willing to take teaching methods classes, as well as the School of Graduate Studies-sponsored teaching assistant workshop, prior to receiving an assistantship.

### ***Career Opportunities***

Business Information Systems is one of the fastest growing fields in business and industry. Follow-up studies show that information systems positions pay excellent salaries, and the placement rate of students is almost 100 percent. Currently, there is also a great demand for business teachers in public education.

## ***Business Information Systems Faculty***

### **Professors**

*Karen A. Forcht*, business information systems, business communication, data management

*Dennis J. LaBonty*, business information systems

*James Calvert Scott*, business education, business communications

*John F. Vinsonhaler*, business information systems

### **Professors Emeritus**

*Charles M. Lutz*

*H. Robert Stocker*

*William A. Stull*

### **Associate Professors**

*Jeffrey J. Johnson*, business information systems

*David H. Olsen*, business information systems

*David J. Paper*, business information systems

### **Assistant Professors**

*Karen Biers*, clothing and textiles, home-based entrepreneurship, extension

*Karina Hauser*, lean manufacturing, artificial intelligence

*Yong Seog Kim*, data mining

*Robert J. Mills*, business information systems

*Jean A. Pratt*, business information systems

*Zsolt Ugray*, business information systems, electrical commerce and optimization

### **Principal Lecturers**

*Marianna Larsen*, office systems support, business communications

*Craig J. Peterson*, business information systems

*Dana H. Swensen*, business information systems, business communications

### **Senior Lecturers**

*Susan M. Jones*, business information systems, business communications

*Ralph B. "Bernie" Lantz*, computer technology, networks security, business information systems, computer literacy

### **Lecturer**

*Malia L. Young*, marketing education, business communication, information systems

## ***Course Descriptions***

Business Information Systems (BIS), pages 354-357