
Ilocano

See Center for Language Studies.

Indonesian

See Center for Language Studies.

Information Systems

Marshall Romney, Chair
510A TNRB, (801) 422-5704

Marriott School of Management Advisement Center
460 TNRB, (801) 422-4285

Admission to Degree Program

The degree program in the department carries special enrollment limitations. Please see the Marriott School of Management Advisement Center for specific details.

The Discipline

Computer-based information systems have become a critical part of the products, services, operations, and management of all organizations. The effective and efficient use of information and communications technologies is an important element in achieving competitive advantage for business organizations as well as achieving excellence in service for government and non-profit organizations. The twenty-first century has seen the rapid growth of the Internet, eCommerce, and purely electronic enterprises. These organizations would not even exist without the technology provided by computer-based information systems. The importance of information systems to organizations and the need for well-educated professionals in the field is the basis for strong educational programs and the development of a professional community of information systems (IS) practitioners.

Information systems involves two broad areas: (1) the acquisition, deployment, and management of an organization's information systems resources and services and (2) the development of computer-based systems and technology infrastructures for use in organization processes. Information systems professionals provide services ranging from the managerial to the highly technical. Information systems and technology skills are critical to the success of virtually all modern organizations, including small business, corporations, government, and educational institutions.

Career Opportunities

Information systems graduates work in large and small organizations of all types, helping maintain existing technology infrastructure and specifying technology solutions to business needs. They serve as the bridge between an organization's technical personnel and its business side. Well-educated information systems graduates are in high demand in accounting firms, consulting firms, large corporations, mid-sized companies, technical companies, government agencies, and smaller entrepreneurial concerns. Challenging career opportunities embrace a wide range of interests. The variety of employment prospects includes opportunities for everyone from those who are primarily interested in people and organizations to those who enjoy very technical activities such as database and network administration or software development.

Graduation Requirements

To receive a BYU bachelor's degree a student must complete, in addition to all requirements for a specific major, the following university requirements:

- The university core, consisting of requirements in general and religious education (See the University Core section of this catalog for details. For a complete listing of courses that meet university core requirements, see the current class schedule.)
- A minimum of 30 credit hours in residence
- A minimum of 120 credit hours
- A cumulative GPA of at least 2.0

Undergraduate Programs and Degrees

BS Information Systems

For help or information on the undergraduate program, please see the Marriott School of Management Advisement Center or visit <http://isys.byu.edu>.

For information on management degrees, see Management section of this catalog.

Graduate Programs and Degrees

MISM Information Systems Management

For more information see the Information Systems Department Graduate Advisement Center (560 TNRB) or the BYU 2007–2008 Graduate Catalog.

General Information

Application Requirements

1. Complete or pass the competency tests for I Sys 100 and 101.
2. Have a 3.0 minimum average GPA in the four prerequisite courses: I Sys 201, 202, Acc 200, M Com 320. No grade lower than a C+ will be accepted for any of the prerequisite courses.

Note: If a student must leave the program for a mission, internship, or other reason, a leave of absence request form is required. A prompt return to the program is required. Students who have interrupted their education for more than two years or without prior approval will be required to meet the requirements of the program in effect at reacceptance.

Note: Upper-division information systems class credits earned prior to five years before graduation may not be used to meet specific graduation requirements for the BS degree. This policy does not affect the recognition of those hours earned to satisfy total university credit.

BS Information Systems, Concurrent with MISM

The MISM program has a five-year integrated option for BYU students in the undergraduate information systems program, as well as an option for students who have already completed a bachelor's degree. The first year of the undergraduate program, or the junior core, must be completed with a minimum 3.0 GPA to be eligible to apply for continuation into the master of information systems management program.

BS Information Systems (74–75 hours*)

This is a limited-enrollment program requiring departmental acceptance. Please see the college advisement center for information regarding requirements for application to this major.

Major Requirements

1. No more than 12 semester hours of upper-division transfer credit will be accepted toward the major and only 6 hours beyond the Pre-Systems Core.
2. Students are encouraged to enroll in courses outside the Marriott School of Management. Only 50 upper-division Marriott School hours count toward graduation.
3. Pass a computer proficiency requirement for spreadsheet and presentation software skills. Students may demonstrate spreadsheet and presentation skills either by earning a Pass grade in I Sys 100 and 101 or a B grade in equivalent transfer courses, or by presenting Microsoft Office User Specialist (MOUS) certificates validating core-level competency in MS Excel and PowerPoint.
4. Complete the following Pre-Information Systems courses:
 - I Sys 201, 202.
 - Acc 200.
 - M Com 320.

Note: The Pre-Information Systems Core must be completed with at least a 3.0 GPA (no grade lower than a C+), with no more than one repeat for each course. Repeated courses will be discounted 0.3 of a grade during the admissions process.

5. Be accepted into the information systems program.
6. Complete the following Management Core 1 and 2 courses:
 - Acc 210, 241.
 - Bus M 301, 384.
 - Econ 110.
 - Math 119.
 - Stat 221.
7. Complete the following Integrated Management Core courses:
 - Bus M 341, 361, 390.
 - Org B 321.
 - And** complete one course from the following:
 - ManEc 300, 358, 376, 387, 453.
8. Complete the following Information Systems Core 1 courses (taught fall only):
 - I Sys 401, 402, 403, 404.
9. Complete the following Information Systems Core 2 courses (taught winter only):
 - I Sys 411, 413, 414, 415.
10. Complete the following capstone course:
 - BusM 498.
12. Complete Marriott School exit survey online.

*Hours include courses that may fulfill university core requirements.

Information Systems (I Sys)

Undergraduate Courses

100. Computer Spreadsheets Skills. (0.5:0:1)

Basic computer skills, focusing on spreadsheet and database programs. No technical background necessary. Fee.

101. Computer Presentation Skills. (0.5:0:1) F, W, Sp, Su

Basic computer skills focusing on developing presentations. No technical background necessary. Fee.

105. Creating Personal Web Pages. (1:2:0) F, W, Sp

Techniques and tools for developing a personal Web site, including site design and page layout. Techniques for text, pictures, and audio placement.

199R. Academic Internship: Information Systems. (1–3:Arr.:Arr. ea.)

Prerequisite: selection of information systems emphasis in Marriott School of Management.

Approved on-the-job experience. Applying classroom theory and technology to actual problems; exploring career opportunities; learning role of information systems in business environment. P/F grade.

201. Introduction to Management Information Systems. (3:3:1)

Prerequisite: I Sys 100, M Com 100, and declared business major. Using technology to solve business problems. Hands-on use of spreadsheet, database, and Internet software in a business context.

202. Introduction to Computer Programming. (3:3:0) Prerequisite: I Sys 201 or concurrent enrollment (with instructor's consent); information systems major status.

Object-oriented program design and development. Principles of algorithm formulation and implementation.

401. Systems Analysis. (3:3:0) Prerequisite: admission to information systems major; concurrent enrollment in same section of I Sys 402, 403, and 404.

Early phases of systems development life cycle, including project management, planning, investigation, requirements definition, systems specifications, alternative selection. Tools and techniques of object-oriented analysis.

402. Database Systems. (3:3:0) Prerequisite: admission to information systems major; concurrent enrollment in same section of I Sys 401, 403, and 404.

Concepts and techniques of database system development, focusing on object-oriented modeling and its implementation methods.

403. Principles of Business Programming. (3:3:0) Prerequisite: admission to information systems major; concurrent enrollment in same section of I Sys 401, 402, and 404.

Programming business systems. Algorithms, data structures, programming patterns, and interfaces.

404. Data Communications. (3:3:0) Prerequisite: admission to information systems major; concurrent enrollment in same section of I Sys 401, 402, and 403.

Principles of data communications, local- and wide-area networks, hardware, software, media, standards, management, and business applications.

411. Systems Design and Implementation. (3:3:0) Prerequisite: I Sys 401, 402, 403, 404; concurrent enrollment in same section of I Sys 413 and 414.

Later phases of systems development life cycle. System architecture, user interfaces, system interfaces, and application design. Testing and integration. Object-oriented development.

413. Enterprise Application Development. (3:3:0) Prerequisite: I Sys 401, 402, 403, 404; concurrent enrollment in same section of I Sys 411 and 414.

Client- and server-side programming. Internet and Web-based applications. Enterprise systems and architectures.

414. Enterprise Services and Security. (3:3:0) W Prerequisite: I Sys 401, 402, 403, 404; concurrent enrollment in same section of I Sys 411 and 413.

Enterprise-level systems that support basic business processes; information systems control and security issues; systems integration and deployment.

415. Information Systems Capstone Project. (3:3:0) Prerequisite: I Sys 401, 402, 403, 404; concurrent enrollment in I Sys 411, 413, and 414.

Applying concepts, principles, and methods of enterprise-level information systems by designing and developing a full-scale system including hardware, software, and network.

498. Strategic Management of Information Systems. (3:3:0) W Prerequisite: I Sys 411, 412, 413; concurrent enrollment in I Sys 490.

Achieving strategic information systems alignment to create sustainable competitive advantage. Concepts and methods critical for information systems management, such as outsourcing, security, controls, and organizational transformation.

Graduate Courses

For 500- and 600-level courses, see the current Marriott School of Management Information Systems Department Web site at <http://isys.byu.edu> and the BYU 2007–2008 Graduate Catalog.

Information Systems Faculty

Professors

Hansen, James V. (1982) BS, MS, Brigham Young U., 1963, 1966; PhD, U. of Washington, 1973.

McKell, Lynn J. (1974) BS, Brigham Young U., 1968; MSEE, MS, MS, PhD, Purdue U., 1970, 1972, 1973, 1973.

Romney, Marshall B. (1977) BS, MAcc, Brigham Young U., 1971, 1972; PhD, U. of Texas, Austin, 1977.

Associate Professors

Dean, Douglas (1999) BS, U. of Utah, 1987; MAcc, Brigham Young U., 1989; PhD, U. of Arizona, 1995.

Hansen, Gary W. (1983) BS, MS, Brigham Young U., 1967, 1968; PhD, Indiana U., 1974.

Liddle, Stephen W. (1995) BS, PhD, Brigham Young U., 1989, 1995.

Meservy, Rayman D. (1989) BS, MAcc, Brigham Young U., 1977, 1977; PhD, U. of Minnesota, 1985.

Assistant Professors

Albrecht, Conan (2000) BS, MAcc, Brigham Young U., 1997, 1997; PhD, U. of Arizona, 2000.

Allen, Gov (2007) BS, MAcc, Brigham Young U., 1994, 1994; PhD, U. of Minnesota, 2001.

Anderson, Bonnie B. (2001) BS, MAcc, Brigham Young U., 1995, 1995; PhD, Carnegie-Mellon U., 2001.

Ball, Nicholas (2005) BS, MBA, Idaho State U., 1999, 2000; PhD, U. of Minnesota, 2005.

Lowry, Paul B. (2002) BS, MBA, Brigham Young U., 1991, 1997; PhD, U. of Arizona, 2002.

Assistant Teaching Professor

Lindstrom, Craig J. (2002) BS, MS, Utah State U., 1991, 2001.

Emeriti

Boyer, Glen L. (1967) BS, Utah State U., 1963; MS, PhD, U. of North Dakota, 1966, 1972.

Carlson, Gary (1986) BS, MS, PhD, U. of California, Los Angeles, 1956, 1958, 1962.

De Lassen, Jan (1981) BS, Texas A&M U., 1959.

Smith, Harold T. (1963) BA, MA, Colorado State Coll., 1958, 1959; EdD, Brigham Young U., 1967.

Information Technology

See School of Technology.