

# Management Information Systems (MIS)

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**MIS 194. Individual Study. 1-5 Credits.**

**MIS 196. Field Experience. 1-15 Credits.**

**MIS 199. Special Topics. 1-5 Credits.**

**MIS 291. Seminar. 1-3 Credits.**

**MIS 292. Global Practicum: Study Abroad. 1-15 Credits.**

Pre-Arranged study at accredited foreign institutions (study abroad), domestic institutions (National Student Exchange) or on approved study abroad programs. Pre-requisite: Sophomore standing and prior approval by International Student and Study Abroad Services and major department. Graded 'P' or 'F' (Undergraduate), or 'S' or 'U' (Graduate).

**MIS 294. Individual Study. 1-5 Credits.**

**MIS 299. Special Topics. 1-5 Credits.**

**MIS 315. System Analysis and Design. 3 Credits.**

Introduction to the front end of the software development life cycle. Includes various modern concepts, techniques, and tools for analyzing and designing well-structured software systems. Prereq: CSCI 161 or CSCI 228.

**MIS 320. Management Information Systems. 3 Credits.**

Introduction to basic concepts and developments in information technology. Overview of the opportunities and challenges in the development and management of organizational information systems from a socio-technical perspective. Prereq: CSCI 116 or MIS 116. Restricted to College of Business professional major or minor and a 2.50 minimum NDSU grade point average.

**MIS 340. Applied Business Intelligence. 3 Credits.**

A hands-on look at Business Intelligence as applied to managerial decision making by exploring techniques for information creation including business analytics, data visualization, scorecards, dashboards and data mining. Prereq: MIS 320.

**MIS 350. Enterprise Systems. 3 Credits.**

Introduction to the theoretical and practical issues related to the application of enterprise systems within organizations. Prereq: MIS 320 and CSCI 161 or CSCI 228 and students must be College of Business professional major or minor and a 2.50 minimum NDSU grade point average.

**MIS 371. Web Scripting Languages. 3 Credits.**

This course examines Scripting Languages and their applications. Emphasis will be placed on web scripting. A representative set of scripting languages will be covered. Prereq: CSCI 122 or CSCI 160 or CSCI 227 or ECE 173. Cross-listed with CSCI 371. Restricted to College of Business professional major or minor, Jr or Sr classification, and a 2.50 minimum NDSU grade point average.

**MIS 375. Database Design for Business Application. 3 Credits.**

Fundamentals of conceptualizing and implementing databases. Emphasis is on using query languages to obtain information for decision-making. Includes managerial topics related to database administration, security, integrity, optimization, and distributed databases. Prereq: MIS 320, CSCI 228. Restricted to College of Business professional major or minor and a 2.50 minimum NDSU grade point average.

**MIS 376. Data and Telecommunications Administration. 3 Credits.**

Introduction to a wide variety of topics in the voice and data communications field. Prereq: MIS 320, CSCI 228. Restricted to College of Business professional major or minor and a 2.50 minimum NDSU grade point average.

**MIS 391. Seminar. 1-3 Credits.**

Restricted to College of Business professional major or minor and a 2.50 minimum NDSU grade point average.

**MIS 392. Global Practicum: Study Abroad. 1-15 Credits.**

Pre-Arranged study at accredited foreign institutions (study abroad), domestic institutions (National Student Exchange) or on approved study abroad programs. Pre-requisite: Sophomore standing and prior approval by International Student and Study Abroad Services and major department. Graded 'P' or 'F' (Undergraduate), or 'S' or 'U' (Graduate).

**MIS 394. Individual Study. 1-5 Credits.**

Restricted to College of Business professional major or minor and a 2.50 minimum NDSU grade point average.

**MIS 397. Fe/Coop Ed/Internship. 1-4 Credits.**

**MIS 399. Special Topics. 1-5 Credits.**

Restricted to College of Business professional major or minor and a 2.50 minimum NDSU grade point average.

**MIS 413. MIS Service Internship. 3 Credits.**

Supervised professional information technology experience in a non-paid position. Offered on a Pass/Fail basis only.

**MIS 470. Information Systems. 3 Credits.**

Exploration of managerial issues pertaining to administration of the information systems function in organizations. Issues include planning, operations, control, electronic commerce, and other current topics. Prereq: MIS 375, CSCI 315. Coreq: MIS 376. Restricted to College of Business professional major or minor and a 2.50 minimum NDSU grade point average.

**MIS 479. Business Data Mining and Predictive Analytics. 3 Credits.**

Information system support and modeling of the decision-making process via business data analytics techniques such as decision trees, neural networks, and machine learning are the primary focus of this course. The state-of-the-art technologies in business data analytics will be explored. Prereq: MIS 320.

**MIS 491. Seminar. 1-5 Credits.**

Restricted to College of Business professional major or minor and a 2.50 minimum NDSU grade point average.

**MIS 492. Global Practicum: Study Abroad. 1-15 Credits.**

Pre-Arranged study at accredited foreign institutions (study abroad), domestic institutions (National Student Exchange) or on approved study abroad programs. Pre-requisite: Sophomore standing and prior approval by International Student and Study Abroad Services and major department. Graded 'P' or 'F' (Undergraduate), or 'S' or 'U' (Graduate).

**MIS 494. Individual Study. 1-5 Credits.**

Restricted to College of Business professional major or minor and a 2.50 minimum NDSU grade point average.

**MIS 496. Field Experience. 1-15 Credits.**

Restricted to College of Business professional major or minor and a 2.50 minimum NDSU grade point average.

**MIS 499. Special Topics. 1-5 Credits.**

Restricted to College of Business professional major or minor and a 2.50 minimum NDSU grade point average.

**MIS 705. Programming for Business Analytics. 2 Credits.**

The course introduces the basics of programming languages required to perform tasks in the business analytics workflow, such as data cleansing, data transformation, data visualization, and predictive analytics modeling. Prereq: Admission into the MSBA program or permission of the MSBA program director.

**MIS 710. Database Management. 2 Credits.**

This course provides a foundational understanding of the management, conceptualization, development, and implementation of databases. It covers normalization, structured query language (SQL), distributed databases, and conceptual modeling using entity-relationship (ER) diagrams. Case examples of modeling data in an organizational context will be utilized. Prereq: Open to MSBA students or with permission of the instructor.

**MIS 720. Visualization and Reporting. 2 Credits.**

This course provides advanced usage of quantitative analysis using spreadsheets, in-memory database, and development of effective dashboards. Emphasis is on the application of theoretical understanding of the human interaction with the user interface to facilitate communication and storytelling using data. Effectively communicating analysis results to a management and business audience using dashboards and reports to enhance decision-making is examined. Prereq: Open to MSBA students or with permission of instructor.

**MIS 740. Advanced Business Analytics Methods. 2 Credits.**

This course develops an understanding of practical applicability of advanced analytics methods in a variety of business scenarios. The course is designed to provide hands-on opportunities for students to work with data and apply advanced business analytics techniques and machine learning, which include text mining, natural language processing, web analytics, social analytics, and simulation. Prereq: MBA 753 and open to MSBA students or with permission of the instructor.

**MIS 770. Information Resources Management. 3 Credits.**

Role of information resources in supporting organizational functions by providing a managerial perspective on use, design, and evaluation of information systems; use of information technologies for making and communicating decisions, and interacting with business functions. Prereq: Departmental approval.

**MIS 790. Graduate Seminar. 1-5 Credits.**

**MIS 793. Indiv Study/Tutorial. 1-5 Credits.**

**MIS 795. Field Experience. 1-15 Credits.**

**MIS 796. Special Topics. 1-5 Credits.**