

# MIS AREA ELECTIVES<sup>1</sup>

## **MIS 313      Enterprise Data and Knowledge: Organization and Management**

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The course focuses on database theories, conceptual data modeling techniques, database management, and database development practice with emphasis on relational database systems. The importance and use of database systems in business problem solving is specifically emphasized. In this course, Microsoft SQL Server and other database management system software packages are used extensively to implement working database systems to solve practical business needs.

## **MIS 201      System Analysis and Design**

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This course provides an introduction to system analysis and design techniques, and how those fit into the system development lifecycle. The main focus is on different lifecycle models, and the activities, as well as tools and techniques used in those activities. The course includes planning and decision making for IS/IT projects as well as practical experience with several techniques for modeling and analyzing different aspects of organizations.

## **MIS 202      Data Mining**

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This course provides basic knowledge of data mining techniques. These techniques include descriptive ones such as clustering analysis, association analysis and sequence analysis and, predictive ones such as classification and prediction analyses. Theoretical lectures are coupled with applied studies where the necessary skills for using a data mining software package are given. By the end of the course, students identify real life problems where a data mining approach is useful, and apply data mining techniques to solve those problems.

## **MIS 301      Corporate Information Systems**

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This course provides in-depth knowledge of information systems used in corporate level highly integrated systems. Topics covered include Operating System Platforms, Data Management & Storage, Networking/Telecommunications Platforms, Internet Platforms, Enterprise Software Applications and Consulting & System Integration Services. Implementation of a basic corporate information system using Implementation Life Cycle and Project Management principles is also covered. A specific software tool is used as an instruction platform to explain both organizational and technical requirements and aspects of corporate systems as they relate to business environment, functions, processes and organizations.

## **MIS 302      Strategy, Management and Acquisition of Information Systems**

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This course presents a senior management perspective in exploring the acquisition, development and implementation of plans and policies to achieve efficient and effective information systems. For that purpose, it explores the issues and approaches in managing the Information Systems (IS) function in organizations and explains how the IS function can support various types of organizational capabilities,

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underscoring the importance of the IS's strategic alignment with corporate strategies. As tools, the course provides frameworks, roadmaps, methodologies, and best practices about a firm's IS strategies, functions and governance.

### **MIS 303      Introduction to Internet Programming**

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This course provides knowledge of the web development technologies, and develops skills to apply web development technologies in web development. This course emphasizes the application of HTML (Hypertext Markup Language) for web page development, and the implementation of CSS (Cascading Style Sheets) in HTML for formatting the content of web pages. This course also focuses on the development of dynamic and interactive web pages using client-side scripting technologies such as JavaScript and server-side scripting technologies such as ASP or PHP. The database connectivity and XML (Extensible Markup Language) schemas are also provided. Theoretical lectures are coupled with applied studies where the necessary skills for developing a web site are given.

### **MIS 304      Information Security**

This course provides fundamental knowledge of information security. Topics discussed in the course are security threats, such as hackers, information spoofing, sniffing, and distribution of damaging software, the associated security risks, and prevention/detection/response techniques. In addition to the technical concepts of information security, the course also introduces Information Security Management.

### **MIS 308      Information Systems Project Management**

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This course enhances application and integration of project management in the information systems (IS) context. The course focuses on project management tools and techniques for defining and managing the project's goal, scope, schedule, and budget. Other topics include quality management, risk management, and knowledge management as they relate to IS projects. The course underlines both technical and organizational aspects of IS projects.

### **MIS 315 / OPER 315      Data Analysis and Decision Modeling**

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In this course, students are exposed to quantitative modeling and decision making which help them analyze complex decision problems, develop a good understanding of the dynamics involved, and be able to generate good solutions. Topics include decision making under uncertainty, simulation and risk analysis, and optimization modeling all of which, address contexts where decisions need to be made based on rigorous analysis. Students learn to use the underlying tools within a spreadsheet environment by solving problems depicting real-world business issues.

### **MIS 317      Cloud Computing for Business**

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This course provides students with fundamental knowledge of cloud computing. Topics discussed in the course are the application of IT infrastructure and cloud computing in creating and managing

successful, competitive firms in today's digital environment. In addition the course provides a technical background on popular IT infrastructure and cloud computing technologies. Finally, it discusses how to apply cloud computing technology effectively.

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**MIS 411      Programming in Visual Basic**

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This course focuses on the programming of business applications. Developing business applications such as a payroll program involves deep understanding of the problem, decomposing the problem into sub-problems, and selecting the data structures and algorithms. This course covers analyzing the problem, developing a Graphical User Interface (GUI), selecting data structures and algorithms, and implementing objects to properly solve a business problem. This course uses Microsoft's Visual Basic (VB) .NET programming language and Integrated Development Environment (IDE). VB.NET provides tools to make it easier for programmers to create good Graphical User Interfaces (GUI), and to write and modify scripts.

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**OPER 318      Retail Operations**

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Retail is the sale of goods and services to the end consumer. This course addresses new developments in retailing, as well as the techniques and strategies necessary for the successful management of retail operations. Some of the topics covered include consumer behavior, assortment planning, the link between inventory and financial performance, retail pricing, online retailing, sustainability, and retailing in emerging markets.

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**MIS 103      Introduction to Computer Programming**

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Topics include computer organization, hardware and software terminology, programming environments and tools, Java programming syntax, control statements (if-else, loops, break, continue), methods, parameters, classes, and principal software engineering guidelines.

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**MIS 104      Fundamentals of Object Oriented Programming**

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Subjects of the course are classes and objects, inheritance, static and non-static methods, polymorphism, interfaces, abstract classes, exception handling, collection libraries, basic UML concepts, and principles of object oriented design.

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**MIS 403      Independent Study – MIS**

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The course is an independent study on a selected research topic. It takes the form of a research project that is defined by the student in coordination with a specific professor.

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**MIS 306      E-Business**

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The course explores the concepts, technology, and applications of electronic business (E-Business). It covers the technological, social, and business changes that contribute to the evolution of e-Business. The course builds on previous knowledge and experiences of business fundamentals and the application of technology to support business operations in a digital marketplace. The course reviews how to develop business strategies and infrastructures, and build an e-Business presence to seize the opportunities. It also discusses various modes of conducting e-Business such as business-to-consumer (B2C), business-to-business (B2B) and consumer-to-consumer (C2C) markets, on various platforms such as online marketplaces / communities, mobile apps, and social networks / media.

**BUS 414      Cyber Risk Management for Business**

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This course develops an understanding of the cyber risks faced by the business in the age of Digitalization and Industry 4.0. It prepares future business leaders to identify and manage increasingly dangerous cyber risks, while thinking about the strategic use of technology in the development and management of competitive advantages. The course uses case discussions to help students understand how to identify, quantify cyber risks and prepare for cyber threat actors.

**IE 397      Business Process Management**

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