

# Course Syllabus

NEW JERSEY INSTITUTE OF TECHNOLOGY

Martin Tuchman School of Management

Spring MIS 245-002

(Introduction to Management Information Systems) Syllabus

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Office Hours:

Time: 2:00-3:30pm, Every Thursday afternoon

Location: Martin Tuchman School of Management, Office 2004

IBM Module Lecturers:

Mr. Ajim Udin

IBM Module Lab Teaching Support:

Ajim Uddin <[au76@njit.edu](mailto:au76@njit.edu)>

## *Scheduled Lecture Times*

Type	Time	Days	Where	Date Range	Schedule Type	Instructors
Class	11:30 am - 12:50 pm	MR	MALL PC39	January/22-May 07/2019	Lecture	Ajim Udin Dantong Yu

## **Course Description**

This course introduces the foundational concepts of Management Information Systems (MIS) and how they are used in modern business operations. Over last decade, the entire world experiences continuous changes in technology, management, and business changes, which makes MIS the most exciting area of study in Martin Tuchman Schools of Management. In this course, we will provide students with the basic knowledge of the role and significance of information systems in general and of digital firms in particular in today's society. The course discusses the new concepts of information technology innovations, new business models, the expansion of E-commerce, mobile computing, and the big maturing data and cloud computing solutions. We will learn how to leverage these changes to design and develop MIS solutions to business. Through this course, global IT network management, knowledge management with IT, E-Commerce, E-Business, and related security and ethical issues will

also be discussed. Please note that **the emphasis of this course is “business first, technology second,” a perspective that focuses on how MIS/IT can improve the business operation and address business requirements.**

## **Learning Objectives**

### **Upon completion of the course students should:**

1. Grasp the essentials of major components of MIS/IT in term of management, organization, and technology. Understand what is the role of the information system to businesses today? Capable of discussing ethical and social issues raised by the information system.
2. Develop knowledge in the technical foundation of an information system, i.e., IT infrastructure and emerging technologies, databases, internet, and cyber-security. Recommend senior management with regarding to what technologies and procedures are required to attain business operation with high performance, good reliability, and sufficient security.
3. Grasp the concepts of essential business applications, including enterprise systems, supply chain management, custom supply chain management, customer relationship management, E-commerce application, and business-intelligence, and develop knowledge to apply these applications to facilitate decision making and make better uses of business’ knowledge assets.
4. Put learned knowledge into practice and develop the methodology of building new information systems, including core activities in software engineering life cycles, alternative solutions, project management plans, and ensuring their success.

**Course pre-requisite and expectations: Knowledge of Spreadsheet and Word processing applications.**

### **Textbook and its associated material:**

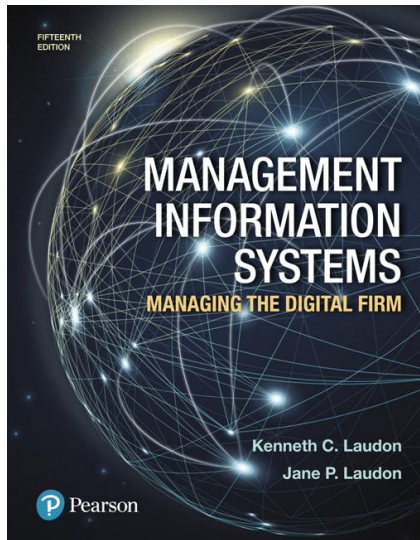
Management Information Systems: Managing the Digital Firm 15th Edition

by **Kenneth C. Laudon** (Author), **Jane P. Laudon** (Author)

ISBN-13: 978-0134639710

ISBN-10: 0134639715

You must have a copy of the textbook. You can BUY or RENT the textbook from Amazon (click [here](#)).



## General Information

As can be deduced from the course description, the emphasis of this course is knowledge acquisition by reading and research. It is, however, a most exciting course, with an excellent textbook. Hopefully, therefore, rather than being just another course that has to be done, doing work on this course will be something to look forward to.

Every student is expected to do the reading assignments; the weekly individual in-class quizzes and project assignment; There are project assignments that you need to take the IBM predictive analytics course during the entire semester and use IBM tool to do data analysis.

## Assignments and Quiz

There will be three categories or types of assignments in this course as described below.

### I. Weekly Reading Assignments

Students will be expected to read the assigned chapters. These coincide with the chronological topics and chapters given below. The weeks when the chapters should be read are therefore shown alongside the chapter titles below. Here are some reasons why you should read the chapters, besides the fact that they are assigned.

- Demonstrated knowledge of concepts, terminology and other material covered would be very advantageous to you in a resume or interview when looking for an internship or full-time job today. It is by far probably the most important reason.
- The group assignments assume and require a demonstration of knowledge from the chapters.
- The midterm and final exams will be drawn from these readings.
- Weekly in-class quizzes require you to do the researching assignments.

I will post the chapter summary notes in the form of power-point slides at the beginning of each week. A suggested sequence for doing your reading assignments might be to first read the opening

paragraph at the beginning of the chapter, to pique your interest. You may then review the class notes to gain an overview of the material covered. This practice would then get you ready for a more detailed reading of the chapter, perhaps followed by another review of the summary notes.

## **II. Individual Quizzes**

Quizzes will consist of selection questions, true-or-false questions, what and how write-up questions that are strictly relevant to each chapter. It gives you an opportunity to explore a question you find interesting and intriguing and may help you clarify your future aspirations. In most cases, the question is from a specific section of the chapter. Be sure to come to class on time! They must be done within the first or last half an hour either on Monday or Wednesday. Once the quizzes period expires, I will not reopen any quiz to be taken as a make-up. I use one-time passwords to protect the quizzes, and you can not take them remotely. If you skip any class, you will not get a score on the quizzes.

## **III. Individual Assignment on Taking IBM Predictive Analytics (SPSS and Modeler)**

The component will consist of one hands-on MIS project. The hands-on application software exercise uses the IBM Predictive Analytics in real-world settings for achieving operational excellence and enhancing decision making. The following is a brief introduction to the goal of this assignment. The content will be delivered in the weekly recitation starting January/29/2017. You are required to attend at least one recitation per week to pass your IBM assignment. At the end of the semester, you will take an online IBM exam which makes 30% of your final score.

"The career track of IBM Predictive Analytics Modeler will teach students to learn the essential analytics models to collect and analyze data efficiently. Students will develop critical skills in predictive analytics models, such as data mining and machine learning, data collection and integration, nodes, and statistical analysis. The Predictive Analytics Modeler will use the tools for market research and data mining to predict problems and improve outcomes. Students who get the mastery badge at the end of the track will maximize their opportunities of securing paid Internship/Co-Op positions at IBM-partner companies and other corporate experiential opportunities that may be credited as Co-Op work experience course MGMT310."

***Lateness penalty:*** If the IBM exam assignment is submitted past the deadline, it will incur a penalty of 30%. And if it is submitted later than three days, or after I have posted the assignment grades – whichever comes first – it will have a grade of 0.

***Penalties:*** Assignments submitted past the deadline will incur a penalty of 30% of the grade. Assignments submitted over three days past the deadline will have 50% taken off. Any assignment submitted over a week past the deadline will have a grade of zero.

## **Exams**

There will be a midterm exam (closed book and closed notes) and a final exam (open book and open notes). The exams will tentatively consist of 50 multiple choice questions, which must be taken online during the period when the exams are made available. Information about taking exams will be posted on the discussion forum. The tentative dates for the exams are as follow:

- A) **Mid Term Exam:** will cover Chapters 1 – 7. Tentatively, it will be given during *the week starting March/05/2019*
- B) **Final Exam:** will mostly cover Chapters 08-14 but could include a few questions from the earlier chapters. Tentatively, it will be given during between **May/07/2019-May/15/2019**.

### **Extra Credit**

The extra credit is a knowledge-intensive course covering a very broad topic – Information Technology. In their daily activities, students may come across various materials (news items, video clips, etc.) in this area that may be of interest to others.

*You may earn up to 5% extra credit* by posting links to video clips or news items that are relevant to the course and discussion thread throughout the semester, as well as participating in-class discussion of the chapter cases and video cases. During the spring semester, you may submit your well-thought write-ups for chapter case or video case to the discussion forum, and you will need to submit up to at least one feedback to others. After posting your write-up, you will be able to view the postings of your classmates. Please read at least one other posting and, as a reply to the posting, give a brief **value-adding rejoinder/critique/comment** in the form of a short paragraph or two that may be 5-10 lines. It should be something that the author and others would find useful and could be a different perspective, agreement with an additional illustration, disagreement with reason. Everyone is recommended to check for the critiques on their posting and comment further if necessary. In other words, don't just submit your weekly posting and then go away for the rest of the week!

All these discussion items should ideally be educational, exciting and entertaining to reviewers. The amount of credit earned here will depend on how active an individual has been on the link *throughout the semester* and will be gauged at the end of the semester.

### **Attendance**

The attendance is required! Any late, absence and early departure from the class will affect the grade of your assignments.

### **Course Grading Scheme**

1. Weekly individual in-class quizzes: 20%
2. Individual Project (IBM Predictive Analytics Training): 30%
3. Mid Term Exam: 25%
4. Final Exam: 25%
5. Extra Credits: 5% (on top of 100%)

Please note that NJIT recommended grading scheme is as follows:

- A Superior performance (i.e., 92-100%)
- B+ Excellent performance (i.e., 85 to 91.99%)
- B Very good performance (i.e., 80 to 86%)

- C+ Above average performance (i.e., 75 to 79%)
- C Average performance (i.e., 70 to 74%)
- D Very minimal performance (i.e., 60 to 69%)
- F 60% or lower (This is a clear possibility if you do not attend to course activities.)

NJIT maintains independent grading standards for undergraduate and graduate courses. Several practices are common to both. There are no “minus” grades and that there is no grade of “D+” or “A+”

### **Tentative Course Outline**

The chronological chapter numbers shown under the four main parts correspond to the weekly reading assignments. You will note that we shall cover 14 chapters in approximately 16 weeks. Thus, please do make sure to follow a regular reading schedule.

### **Chapter 1 Information Systems in Global Business Today [January 22 - January 27]**

#### Student Learning Objectives

- How are information systems transforming business and why are they so essential for running and managing a business today?
- What is an information system? How does it work? What are its management, organization, and technology components and why are complementary assets essential for ensuring that information systems provide real value for organizations?
- What academic disciplines are used to study information systems and how does each contribute to an understanding of information systems?

Chapter 1: Mockup Quiz (The first day of the next week)

### **Chapter 2 Global E-Business and Collaboration [January 28 - February 03]**

#### Student Learning Objectives

- What are business processes? How are they related to information systems?
- How do systems serve the different management groups in a business and how do systems that link the enterprise improve organizational performance?
- Why are systems for collaboration and social business so important and what technologies do they use?
- What is the role of the information systems function in a business?

Chapter2: Quiz

## **Chapter 3 Information Systems, Organizations, and Strategy [February 04 -February 10]**

### Student Learning Objectives

- Which features of organizations do managers need to know about to build and use information systems successfully?
- What is the impact of information systems on organizations?
- How do Porter's competitive forces model, the value chain model, synergies, core competencies, and network economics help companies develop competitive strategies using information systems?
- What are the challenges posed by strategic information systems and how should they be addressed?

### Quiz-Chapter-3

## **Chapter 4 Ethical and Social Issues in Information Systems [February 11 - February 17]**

### Student Learning Objectives

- What are ethical, social, and political issues raised by information systems?
- What can specific principles of conduct be used to guide ethical decisions?
- Why do contemporary information systems technology and the Internet pose challenges to the protection of individual privacy and intellectual property?
- How have information systems affected laws for establishing accountability, liability, and the quality of everyday life?

### Chapter-4-Quiz

## **Chapter 5 IT Infrastructure and Emerging Technologies [February 18 - February 24]**

### Student Learning Objectives

- What is IT infrastructure and what are the stages and drivers of IT infrastructure evolution?
- What are the components of IT infrastructure?
- What are the current trends in computer hardware platforms?
- What are the current trends in computer software platforms?
- What are the challenges of managing IT infrastructure and management solutions?

### Chapter-5-Quiz

## **Chapter 6 Foundations of Business Intelligence: Database and Information Management [February 25 - March 03]**

### Student Learning Objectives

- What are the problems of managing data resources in a traditional file environment?
- What are the major capabilities of database management systems (DBMS) and why is a relational DBMS so powerful?



- What are the principal tools and technologies for accessing information from databases to improve business performance and decision making?
- Why are information policy, data administration, and data quality assurance essential for managing the firm's data resources?

Chapter-6-Quiz

## **Chapter 7 Telecommunications, the Internet, and Wireless Technology [March 04 - March 10]**

### Student Learning Objectives

- What are the principal components of telecommunications networks and critical networking technologies?
- What are the different types of networks?
- How do the Internet and Internet technology work and how do they support communication and e-business?
- What are the principal technologies and standards for wireless networking, communication, and Internet access?

Chapter-7-Quiz

### **Midterm Week (March 11 - March 16)**

Mid-term-Exam (11:30AM-12: 50PM AM, March/11/2019, Close Book and Close Note)

IBM Project Recitation (March 14, 2019)

### **Spring Break (March 18 - March 24]**

No Class

## **Chapter 8 Securing Information Systems [March 25 - March 31]**

### Student Learning Objectives

- Why are information systems vulnerable to destruction, error, and abuse?
- What is the business value of security and control?
- What are the components of an organizational framework for security and control?
- What are the most critical tools and technologies for safeguarding information resources?

## **Chapter 9 Achieving Operational Excellence and Customer Intimacy: Enterprise Applications [April 01 - April 07]**

### Student Learning Objectives

- How do enterprise systems help businesses achieve operational excellence?
- How do supply chain management systems coordinate planning, production, and logistics with suppliers?



- How do customer relationship management systems help firms achieve customer intimacy?
- What are the challenges that enterprise applications pose, and how are enterprise applications taking advantage of new technologies?

#### Chapter 9 Quiz

### **Chapter 10 E-Commerce: Digital Markets, Digital Goods [April 08 - April 14]**

#### Student Learning Objectives

- What are the unique features of e-commerce, digital markets, and digital goods?
- What are the principal e-commerce business and revenue models?
- How has e-commerce transformed marketing?
- How has e-commerce affected business-to-business transactions?
- What is the role of m-commerce in business, and what are the most important m-commerce applications?
- What issues must be addressed when building an e-commerce Web site?

#### Chapter 10 Quiz

### **Chapter 11 Managing Knowledge [April 15 - April 21]**

#### Student Learning Objectives

- What is the role of knowledge management and knowledge management programs in business?
- What types of systems are used for enterprise-wide knowledge management and how do they provide value for businesses?
- What are the major types of knowledge work systems and how do they provide value for firms?
- What are the business benefits of using intelligent techniques for knowledge management?

#### Individual Project 3 Assignment

#### Chapter 11 Quiz

### **Chapter 12 Enhancing Decision Making [April 22 - April 28]**

#### Student Learning Objectives

- What are the different types of decisions and how does the decision-making process work?
- How do information systems support the activities of managers and management decision making?
- How do business intelligence and business analytics support decision making?
- How do different decision-making constituencies in an organization use business intelligence? What is the role of information systems in helping people working in a group make decisions more efficiently?

## Chapter 12 Quiz

### Chapter 13 Building Information Systems [April 28 - May 05]

#### Student Learning Objectives

- How does building new systems produce organizational change?
- What are the core activities in the systems development process?
- What are the principal methodologies for modeling and designing systems?
- What are the alternative methods for building information systems?
- What are new approaches for system building in the digital firm era?

## Chapter 13 Quiz

### IBM Project Demo [May 06-May 09]

#### Student Learning Objectives

- Introduction to IBM predictive analytics tools and software
- Hand-on experience of using IBM information system that is complementary to textbook material.
- Preparations for IBM Exploratory Badge (Strongly recommended, but not required)
- Master Badge (Strongly recommended, but not required)

### FINAL Exams [May 07 or after] - 10:00-1:00PM Open Book and Open Notes

*\*Important Note: The course outline may be modified and the syllabus updated at the discretion of the instructor or in the event of extenuating circumstances. Students will be notified of any change.*

## Part II: Project Description: IBM Predictive Analytics (Modeler and SPSS)

### IBM Predictive Analytics Module

#### Expected Learning Outcomes

In addition to content specific course objectives, the course intends to help students develop a wide range of analytical, communication, interpersonal, and technology skills. Discussion sessions, class projects, and assignments are designed to meet the following levels (Ancillary, Relevant, and Essential) of broader learning objectives.

To develop the ability to effectively communicate your position in a rational & convincing manner

<b>Develop and Understanding of Business Concepts and Problem Solving</b>	<b>A</b>	<b>R</b>	<b>E</b>
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To understand the varied use of technology within the business context			√
To develop the ability to identify and analyze technology needs in business			√
To understand how to apply technology solutions in the business context			√
To understand how IT fits into the broader business context			√
To understand how the organization's structure, strategy, and practices change with technology			√
<b>Develop Effective Communication Skills</b>	<b>A</b>	<b>R</b>	<b>E</b>
To advance skills that enable effective business writing		√	
To develop ability to make effective presentations		√	
	√		
To enhance the ability to communicate your position in a rational & convincing manner effectively			√
<b>Interact Effectively in Teams</b>	<b>A</b>	<b>R</b>	<b>E</b>
To demonstrate mastering of skills to work in teams and achieve common goals			√
To develop management and leadership skills			√
To understand team roles and relationships that foster cooperation toward goals			√
To build capabilities to structure team milestones and deliverables			√
To learn how to manage expectations and deadlines			√
<b>Develop Ethical Reasoning Skills</b>	<b>A</b>	<b>R</b>	<b>E</b>
To develop a schema to think about ethical implications of decision-making			√
To develop a sense of ethical and professional behavior			√
To be aware of ethical issues that emerge in organizations, and appropriate treatment of them			√
To understand the roles, rights, and responsibilities of the business organization		√	
<b>Analytical Technological Skill</b>	<b>A</b>	<b>R</b>	<b>E</b>
To advance critical thinking skills using theory, concepts, and precepts			√
To develop the ability to identify and formulate business problems			√
To develop skills to critically analyze business problems			√
To develop analytical skills to solve business problems			√
To develop the ability to use and find information		√	
To develop familiarity and competence with business software packages		√	
To learn how to transfer knowledge of specific applications across technologies and Platforms		√	
To define technology requirements and the role of emerging technologies			√
To gain experience in systems development strategies and implementation techniques			√
To understand data, information, and systems convergence and deployment		√	
<b>Understand the Global Context of Business</b>	<b>A</b>	<b>R</b>	<b>E</b>
To understand the impact of globalization and the complexity it brings		√	
To evaluate the benefits and concerns associated with globalization		√	
To comprehend the cultural, social, legal and ethical aspects of the globalization of business			√
To understand how management varies across cultures		√	

To assess the needs or standardization versus local adaptation (products, practices, systems)		√	
To recognize the benefits of being a good global corporate citizen	√		

## Academic Integrity

You are expected to be honest in all of your academic work. Students should review and study the honor code at:

<https://www.njit.edu/policies/sites/policies/files/academic-integrity-code.pdf>

New Jersey Institute of Technology is an institution dedicated to the pursuit of knowledge through teaching and research. The university expects that its graduates will assume positions of leadership within their professions and communities. Within this context, the university strives to develop and maintain a high level of ethics and honesty among all members of its community. Imperative to this goal is the commitment to truth and academic integrity. This commitment is confirmed in this NJIT University policy on Academic Integrity. The essential quality of this Policy is that each student shall demonstrate honesty and integrity in the completion of all assignments and in the participation of the learning process. Adherence to the University policy on Academic Integrity promotes the level of integrity required within the university and professional communities and assures students that their work is being judged fairly with the work of others. This Policy defines those behaviors which violate the principles of academic integrity, describes a range of appropriate sanctions for offenses, and identifies a method for promoting the principle of academic integrity on campus.