



Learning Objectives of ITM 2500

After completing the course, students should be able to:

- ✓ Understanding the role of computer technology, information systems and E-business in management practice and business operations.
- ✓ Understand the main steps in solving a decision problem, their challenges, and how different information technology tools can help with these challenges.
- ✓ Carry out the steps involved in modelling (conceptualizing and formalizing) a business decision-making problem, implementing the model in Excel, and using the Excel model to solve the problem.
- ✓ Develop advanced Excel hands-on skills for addressing a variety of decision problems, including: input and manage data; create formulas; build and audit models; create graphs and reports; conduct what-if and scenario analysis; retrieve, filter, manipulate, and summarize data; conduct data-driven business intelligence using PivotTables.
- ✓ Develop competency and confidence in the full range of business software functionality, basic through advanced, necessary to support your future semesters throughout your business courses and in internships. As a decision-support computer tool, Excel is applied universally across business disciplines such as accounting and finance, marketing and sales, operations and supply chain. Use of Excel in other courses will re-enforce and enhance your hands-on work in the MIS 325.
- ✓ Experience big data modelling and the use of RDBMS and other big data models in extracting, analyzing, and presenting large data sets.



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Course Goals

This course integrates with the liberal arts education mission of Saint Louis University by:

- Emphasizing effective communication skills
- Requiring critical and creative thinking
- Helping students improve their problem-solving skills
- Helping the student construct, understand, and interpret quantitative data
- Helping the student to develop the ability to assess information in regards to relevancy and value

Textbook and Other Instructional Material

Readings

All materials for the course are available on the Moodle web site.

Teaching Methodology

Classes will include a mixture of lectures, hands-on skill development, homework, and exercises. All computer work will be done in class using PC-based software (Excel 2010 and Access 2010). While MAC's do have Excel, some of the functionality available in the PC is not available on the MAC. Also, Microsoft Access (the RDBMS used) is only available on the PC. Students who use MACs should expect to switch on an *ad hoc* basis between the two during the semester. The student should expect to use one of these or use the PCs in the computer lab. I assume that you have already developed general PC/MAC skills and will not address these in this course. If you don't feel comfortable with your general knowledge of computing concepts and terminology, see me for suggestions on additional background reading. Students with MACs have experienced an unusual number of computer failures (hard drives, etc.) in the past semesters. Many times this leads to the student being without a personal computer for up to two weeks. (NB: You must backup your work on which ever computer you are using. I recommend having/obtaining a pen drive for backup.)



Policies

Grading

OVERVIEW OF ASSIGNMENTS

	Name of assignment		Due date		Percentage
1.	EXCEL EXERCISES/DATABASE EXERCISES (10) *	<input type="checkbox"/>	Various	<input type="checkbox"/>	50%
2.	FINAL PROJECT (1) *	<input type="checkbox"/>	06-May-2016	<input type="checkbox"/>	20%
3.	BUSINESS INTELLIGENCE/CRMS/ERP*	<input type="checkbox"/>	Various	<input type="checkbox"/>	15%
4.	IN-CLASS EXERCISES*	<input type="checkbox"/>	Various	<input type="checkbox"/>	10%
5.	PARTICIPATION	<input type="checkbox"/>	Semester	<input type="checkbox"/>	5%

A reduction of two percent will be made for each class day any assignment is late. Grades are assigned on the basis of the student earning the percentage of points based on the following strict scale: **NO EXTRA CREDIT ASSIGNMENTS ARE AVAILABLE.**

Percentage	Grade
93 - 100	A
90 - 93	A-
87 - 89	B+
83 - 86	B
80 - 82	B-
77 - 79	C+
73 - 76	C
70 - 72	C-
60 - 69	D
59 or less	F

Examinations

No examinations are scheduled for this class, BUT WE WILL MEET ON THE DESIGNATED FINAL EXAM DAY OF MAY 6th.



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In-class Exercises

In an effort to expose students to a wide variety of Excel uses, in-class exercises will be completed each week in class on most scheduled days.

Computer Exercises

At various times during the semester, computer exercises will be used to bring "real" world materials into the classroom experience. All work on these assignments is to be done individually. If an individual's work is found to be copied from another individual both will be considered incomplete work and receive a 0. During the semester, students will complete fourteen (14) individual exercises. The exercises will have been customized and/or designed for each student; therefore, no two students will have the same exercise.

IMPORTANT NOTE: All computer exercises must be submitted to Moodle by upload. All students registered for this lecture section must complete all of these computer exercises no matter which lab section they are assigned. All submitted work must be the individual's own work.

Accommodation Statement

In recognition that people learn in a variety of ways and that learning is influenced by multiple factors (e.g., prior experience, study skills, learning disability), resources to support student success are available on campus. Students who think they might benefit from these resources can find out more about:

1. Course-level support (e.g., faculty member, departmental resources, etc.) by asking your course instructor.
2. University-level support (e.g., tutoring/writing services, Disability Services) by visiting the Academic Dean's Office (San Ignacio Hall) or by going to http://spain.slu.edu/academics/learning_resources.html.
3. Students who believe that, due to a disability, they could benefit from academic accommodations are encouraged to contact Disability Services at +34 915 54 58 58, ext. 204, send an e-mail to counselingcenter-madrid@slu.edu, or to visit the Counseling Office (San Ignacio Hall). Confidentiality will be observed in all inquiries. Course instructors support student accommodation requests when an approved letter from Disability Services has been received and when students discuss these accommodations with the instructor after receipt of the approved letter.



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**Academic Integrity
and Plagiarism**

The University is a community of learning, whose effectiveness requires an environment of mutual trust and integrity, such as would be expected at a Jesuit, Catholic institution. As members of this community, students, faculty, and staff members share the responsibility to maintain this environment. Academic dishonesty violates it. Although not all forms of academic dishonesty can be listed here, it can be said in general that soliciting, receiving, or providing any unauthorized assistance in the completion of any work submitted toward academic credit is dishonest. It not only violates the mutual trust necessary between faculty and students but also undermines the validity of the University's evaluation of students and takes unfair advantage of fellow students. Further, it is the responsibility of any student who observes such dishonest conduct to call it to the attention of a faculty member or administrator.

Examples of academic dishonesty would be copying from another student, copying from a book or class notes during a closed-book exam, submitting materials authored by or editorially revised by another person but presented as the student's own work, copying a passage or text directly from a published source without appropriately citing or recognizing that source, taking a test or doing an assignment or other academic work for another student, tampering with another student's work, securing or supplying in advance a copy of an examination without the knowledge or consent of the instructor, and colluding with another student or students to engage in an act of academic dishonesty.

Where there is clear indication of such dishonesty, a faculty member or administrator has the responsibility to apply appropriate sanctions. Investigations of violations will be conducted in accord with standards and procedures of the school or college through which the course or research is offered. Recommendations of sanctions to be imposed will be made to the dean of the school or college in which the student is enrolled. Possible sanctions for a violation of academic integrity include, but are not limited to, disciplinary probation, suspension, and dismissal from the



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University. The complete SLU Academic Honesty Policy can be found at the following link:

http://spain.slu.edu/academics/academic_advising/docs/Academic_integrity.pdf

Important Dates

January 26 – Last day to drop a class without a grade of W or to add a class

January 26 – Last day to choose audit (AU) or pass/no pass (P/NP) options

March 11 – Last day to drop a class and receive a grade of W

Friday, May 6th 12:00 – 15:00am Model Presentations

Student Outcome Assessment

Saint Louis University-Madrid Campus is committed to excellent and innovative educational practices. In order to maintain quality academic offerings and to conform to relevant accreditation requirements, we regularly assess our teaching, services, and programs for evidence of student learning outcomes achievement. For this purpose, we keep on file anonymized representative examples of student work from all courses and programs such as: assignments, papers, exams, portfolios, and results from student surveys, focus groups, and reflective exercises. *Thus, copies of your work for this course, including any exams, assignments and/or submitted papers may be kept on file for institutional research, assessment and accreditation purposes.* If you prefer that Saint Louis University-Madrid Campus does not keep your work on file, you will need to communicate your decision in writing to your professor.

Title IX

Saint Louis University and its faculty are committed to supporting our students and seeking an environment that is free of bias, discrimination, and harassment. If you have encountered any form of sexual misconduct (e.g. sexual assault, sexual harassment, stalking, domestic or dating violence), we encourage you to report this to the University. If you speak with a faculty member about an incident of misconduct, that faculty member must notify SLU's Title IX deputy coordinator, Marta Maruri, whose office is located on the ground floor of Padre Rubio Hall, Avenida del Valle, 28 (mmaruri@slu.edu; 915-54-5858 ext. 213) and share the basic fact of your experience with her. The Title IX deputy coordinator will then be available to assist you in understanding all of your options and in connecting you with all possible resources on and off campus.

If you wish to speak with a confidential source, you may contact the counselors at the SLU-Madrid's Counseling Services on the third floor of San Ignacio Hall (counselingcenter-madrid@slu.edu; 915-54-5858 ext. 230) or Sinews Multipletherapy Institute, the off-campus provider of counseling services for SLU-Madrid (www.sinews.es; 91-700-1979) To view SLU-Madrid's sexual misconduct policy and for resources, please visit the following web address: http://spain.slu.edu/student_life/docs/SLUMadridSexualMisconductPolicy.pdf



TENTATIVE WEEKLY SCHEDULE

WEEK 1
JANUARY 14/19/21

TOPIC

Introduction to Graph (Charting) Theory/Trendlines/Sparklines
Overview of spreadsheets and basic functionalities. Formulas, cell addressing (relative vs. absolute), basic functions.

Model building in *Excel* Formulas, cell addressing (relative vs. absolute), basic functions
Worksheet Formatting/*Naming* worksheet ranges/Printing worksheets. Interactive control buttons.

What is business decision-making and business analytics?

Why use IT tools to support business decision making?

Model Development: Problem conceptualization (influence diagrams) and formulation (variable definition tables). Model implementation in Excel. Spreadsheet modeling and design principles.

REQUIRED READINGS (USUALLY READER)

Winston: Chapter 2

ASSIGNMENTS DUE

None

WHAT TO EXPECT IN CLASS

In-class exercises (#1,#2) to get started with Excel and Charting. Introduction to techniques for Exercises 1A, 1B, 1C.

WEEK 2
JANUARY 26/28

TOPIC

Obtaining data from different sources including the Internet. Integration into Excel. Introduction to VBA Macros in Excel.

REQUIRED READINGS (USUALLY READER)

Winston: Chapters 12, 27, 49-51

ASSIGNMENTS DUE

Exercise 1A, 1B, 1C [Formula and Spreadsheet Development]

WHAT TO EXPECT IN CLASS

In-class Exercises (#3, #4). Getting and manipulating data from the internet with Excel and VBA Macros.



WEEK 3

FEBRUARY 2/4

TOPIC

Presentation layer of an Excel model
Conditional formatting of data

REQUIRED READINGS (USUALLY READER)

Winston: Chapters 24, 44

ASSIGNMENTS DUE

Exercise 2 [Collecting and Displaying Financial Data]

WHAT TO EXPECT IN CLASS

In-class Exercises (#5). How to display different data types visually based on values (Conditional Formatting). Introduction to Benford's Law and its use in auditing. Using text functions.

WEEK 4

FEBRUARY 9/11

TOPIC

Using Excel for Distribution Analysis/Descriptive Statistics

REQUIRED READINGS (USUALLY READER)

Winston: Chapters 41, 42, 44

ASSIGNMENTS DUE (USUALLY READER)

Exercise #3 Making Cents Out of Chaos [An Application of Benford's Law]

WHAT TO EXPECT IN CLASS

In-class Exercises (#6). Statistical modelling in Excel. Working with larger data sets statistically. Working with conditional functions.



WEEK 5
FEBRUARY 16/18/23

TOPIC

Financial/Accounting Functions

REQUIRED READINGS (USUALLY READER)

Winston: Chapters 9, 10

ASSIGNMENTS DUE

Exercise 4: EuroMilliones

WHAT TO EXPECT IN CLASS

In-class Exercises (#7, #8) Introduction to the built-in financial and accounting functions. Interest functions, NPV, and IRR functions.

WEEK 6
MARCH 1/3

TOPIC

Models for Management Decisions – Gantt/CPM Models

REQUIRED READINGS

Winston: Chapters 28, 77; Gantt Chart Articles (see Moodle)

ASSIGNMENTS DUE (USUALLY READER)

Exercise 5: Retirement Accumulation Plans

WHAT TO EXPECT IN CLASS

In-class Exercises (#9). Building a Gantt Chart

WEEK 7
MARCH 8/10

TOPIC

Slicing and Dicing Large Data Sets
PivotTables and Pivot Charts

REQUIRED READINGS (USUALLY READER)

Winston: Chapters 25, 43

ASSIGNMENTS DUE

Exercise 6: Tastee Snak A and B



WHAT TO EXPECT IN CLASS

In-class Exercises (#9). Manipulating flatfile databases in Excel using PivotTables and PivotCharts.

WEEK 8
MARCH 15/17**TOPIC**

Introduction to Solver (LP) in Excel

REQUIRED READINGS (USUALLY READER)

Winston

ASSIGNMENTS DUE

Exercise 7: PivotTables/Pivot Charts

WHAT TO EXPECT IN CLASS

In-class Exercise (#10). Understanding the design, programming, and analysis of Linear Programming problems in Excel using Solver.

WEEK 9
MARCH-21-34 (NO CLASSES HOLY WEEK/EASTER)**WEEK 10**
MARCH 29/31**TOPIC**

Introduction to DBMS

REQUIRED READINGS (USUALLY READER)

Access 2013 Brief (online)

ASSIGNMENTS DUE

Exercise 8: Ice Cream Case

WHAT TO EXPECT IN CLASS

Understanding the design, analysis, table construction, forms and reports in a RDBMS.



WEEK 11
APRIL 5/7

TOPIC

Introduction to DBMS (cont.)

REQUIRED READINGS (USUALLY READER)

Access 2013 Brief (online)

ASSIGNMENTS DUE

Exercise 9: Part 1 of RDBMS.

WHAT TO EXPECT IN CLASS

Understanding the reports, query, and SQL in a DBMS. Access QBE.

WEEK 12
APRIL 12/14

TOPIC

Introduction to Modern ITM systems (CRMS and ERP)

REQUIRED READINGS (USUALLY READER)

Videos as linked from Moodle

ASSIGNMENTS DUE

Exercise 10: SQL, QBE, and their relationship to PivotTables and Pivot Charts.

WHAT TO EXPECT IN CLASS

Introduction to CRMS and ERP software with emphasis on the fulfillment and procurement processes.

WEEK 13
APRIL 19/21

TOPIC

Introduction to Business Intelligence/Analytics/Metrics/KPIs

REQUIRED READINGS (USUALLY READER)

Various as student defines.

ASSIGNMENTS DUE

Exercises 11 and 12: Understanding CRMS and ERP

WHAT TO EXPECT IN CLASS

Introduction to Business Intelligence/Analytics/Metrics/KPIs with introduction to MicroStrategy Express.

WEEK 14



APRIL 26/28

TOPIC

Defining Business Analytics/Metrics and using MicroStrategy as a Dashboard

REQUIRED READINGS (USUALLY READER)

Videos as linked from Moodle

ASSIGNMENTS DUE

Exercise 13: Introduction to Business Intelligence

WHAT TO EXPECT IN CLASS

Use of MicroStrategy.

WEEK 15

MAY 3

TOPIC

Defining Business Analytics/Metrics and using MicroStrategy as a Dashboard

REQUIRED READINGS (USUALLY READER)

Videos as linked from Moodle

ASSIGNMENTS DUE

Exercise #14: MicroStrategy Layout Files

WHAT TO EXPECT IN CLASS

Use of MicroStrategy

FINAL MAY 6 12:00-3:00

TAKE HOME SEMESTER PROJECT DUE MAY 6TH

ESCAPE CLAUSE

The above course procedures, assessment and grading schedules, and tentative schedule are subject to change in the event of extenuating circumstances.