DEREE COLLEGE SYLLABUS FOR: ITC 1112 LE TURNING DATA INTO DECISIONS		3/0/3
(Previously ITC 1012) Revised Fall 2017		

PREREQUISITES:	CS 1070 Introduction to Information Systems – **or** – ITC 1070 Fundamentals of Information Technology
CATALOG DESCRIPTION:	Data protection legislation; ethical use of data; the contribution of data analysis to organizational sustainability; visualizing data using graphs, charts and 3D maps; using functions and analytical tools for what -if analysis; using data reporting tools; linking of worksheets and workbooks; importing and manipulating data.
RATIONALE:	This course aims to equip students with techniques to analyze data into information in order to make critical decisions. It offers students from all disciplines the opportunity to master the advanced functionality of spreadsheet software, and to apply those skills to real life applications such as data modelling, reporting, and automation of tasks.
LEARNING OUTCOMES:	Upon completion of this course the students will be able to: 1. Explain relevant data protection legislation and ethical principles pertaining to the collection and recording of data. 2. Explain how the analysis of data contributes to organizational sustainability. 3. Organize data sets from various disciplines utilizing spreadsheet software. 4. Identify commonly used mathematical processes to analyzing and manipulating data and use functions and other analytical tools to implement them. 5. Interpret information and present results in written and oral form, as well as in visual form through the use of charts and maps.
METHOD OF TEACHING AND LEARNING:	In congruence with the teaching and learning strategy of the college, the following tools are used: • Lecture and Laboratory demonstrations • Videos and online material • Office hours • Use of Blackboard CMS

ASSESSMENT:	Summative:

Midterm Examination Multiple choice and/or short answers and/or essay questions on data science related cases.	**30**
Final Project Group problem/case assessment where students will be required to work in groups to collect, import, analyze and present data based on cases related to their discipline.	**70**

Formative:

Various in class exercises and case problems	**0**
Coursework	**0**

The formative assessments aim to prepare students for the midterm and the final project.
The "Midterm Project" tests Learning Outcomes 1,2
The "Final Project" tests Learning Outcomes 3,4,5

The final grade for this module will be determined by averaging all summative assessment grades, based on the predetermined weights for each assessment. Students are not required to resit failed assessments in this module. Failure to pass the module results in module repeat.

INDICATIVE READING:	**REQUIRED READING:** Frye, C. (2015). *Microsoft Excel 2016: Step by step*. Redmond (Washington): Microsoft Press. Instructor Notes. **RECOMMENDED READING:** Walkenbach, J. (2016). *Microsoft Excel 2016 Bible*. Indianapolis, IN: John Wiley & Sons. Jelen, B. (2016). *Excel 2016 in depth*. Indianapolis (Indiana): Que. Harvard Business Review (2014). *From Data to Action. SAS* Harness the Power of Big Data: The IBM Big Data Platform. (n.d.). Retrieved October 7, 2016, from http://www-01.ibm.com/software/de/big-data/pdf/assets/Harness.PDF European Parliament, Council of the European Union (1995). *Directive 95/46/EC of the European Parliament and of the Council of 24 October 1995 on the protection of individuals with regard to the processing of personal data and on the free movement of such data.* http://eur-lex.europa.eu/legal-content/en/ALL/?uri=CELEX:31995L0046 European commission (2015). *Reform of EU data protection rules.* http://ec.europa.eu/justice/data-protection/reform/index_en.htm
INDICATIVE MATERIAL: *(e.g. audiovisual, digital material, etc.)*	**REQUIRED MATERIAL:** **RECOMMENDED MATERIAL:**
COMMUNICATION REQUIREMENTS:	Email, blackboard forums and wikis, presentation graphics software for the oral presentation.
SOFTWARE REQUIREMENTS:	MS OFFICE, web browser
WWW RESOURCES:	Excel videos and tutorials https://support.office.com/en-us/article/Excel-2013-videos-and-tutorials-aaae974d-3f47-41d9-895e-97a71c2e8a4a https://excelexposure.com

INDICATIVE CONTENT:	1. Introduction to basic data science concepts
	   a. Data Protection legislation
	   b. Ethical use of Data
	   c. Big Data
	2. Introduction to basic spreadsheet concepts
	3. Formulas and Functions: Performing Quantitative Analysis
	4. Depicting Data Visually
	5. Datasets and Tables: Managing Large Volumes of Data
	6. Subtotals, PivotTables, and Pivot Charts
	7. What-If Analysis
	8. Specialized Functions
	9. Multiple-Sheet Workbook Management
	10. Imports, Web Queries, and XML
	11. Collaboration and Workbook Distribution
	12. Templates, Styles, and Macros