



Code	INI209	Prerequisites	INI201
Name	Spreadsheets for Engineers	Co-requisites	None

Credits	Contact Hours
02	22
Categorization of credits	
Math and basic science	
Engineering topic	X
Other	

Coordinator's name	Fernando Albaine Karl Corporán
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Text book
Other supplemental materials
Ojeda, F.C. (2016). Manual Avanzado Microsoft Office Excel 2016. Madrid, España: Anaya Multimedia Frye, C (2016). Microsoft Excel 2016 Step by Step: Practice Files Winston, W. (2016). Microsoft Excel Data Analysis and Business Modeling 5th Ed: Microsoft Edwin O. (Productor). (2016). Excel 2016. https://www.youtube.com/playlist?list=PLNXKSKL0wyTL1WgcYIoZ8tYBCQblXsvJZ Indigo Tutoriale. (Productor). (2016). Tutoriales Excel. Retrieved from: https://www.youtube.com/playlist?list=PLxgQzwsFLGL2FJhmBNZ8EW7Zn7-OqBlHI

Description	
The course introduces the student to the most used functions of spreadsheet tools within Engineering. It starts with basic functions such as creating and modifying templates, formatting sheets, searching, filtering and sorting tables, creating charts, and setting desired print properties. Subsequently, the student will develop the ability to handle intermediate level functions in spreadsheets, such as: creation and manipulation of tables, numerical and text logic, data validation, conditional formats, pivot tables, scenario management and data analysis.	
Type of course	☒ Required ☐ Elective

Specific goals for the course	
Outcomes of instruction	EG1. Recognize the importance of being flexible and adapting to different work contexts. EG2. Work in groups, implementing appropriate leadership, management and planning techniques and tools for each context or situation. EG3. Apply analysis, argumentation, critical thinking and problem solving in the development of academic and professional life.
Student outcomes	CG1. Work effectively in teams whose members collectively provide leadership, create a collaborative and inclusive environment, set goals, plan tasks, and meet objectives. CG2. Identify, formulate, and solve complex engineering problems by applying the principles of engineering, science, and mathematics.

Topics
Unit I. Management of spreadsheets Unit II. Spreadsheet format Unit III. Use of formulas Unit IV: Data manipulation Unit V: Protection of information Unit VI: Graphics Unit VII: Printing Unit VIII: Data Validation Unit IX: Pivot Tables Unit X: “what if” analysis