



Code	INI322	Prerequisites	CBM206
Name	Quality Tools	Co-requisites	None

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

Coordinator's name	Henry Alexander Soriano Andujar
--------------------	---------------------------------

Text book
Cantu Delgado, H. (2006). Desarrollando una cultura de calidad (2nd edition). Mexico. Evan J, Lindsay W (2015). Quality Management and Control (9th Edition). Cengage Learning Gryna, FM, Chua, R., & DeFeo, J.A. (2007). Juran Method: Quality Analysis and Planning. Juran, Joseph M. (Prol.); McGraw-Hill/Interamericana Editores, SA De CV (ed.); Blacksmith, M. Jesus (Trad.). 5th ed., Mexico. Gutiérrez Pulido, H. (s/f). Calidad Total y Productividad (3rd Edition). McGraw Hill Hay, J. Edward. (2002) Just in time. Bogota, Editorial Norma Juran, J. (s/f). Juran Method: Analisis y Planeacion de la Calidad (5th Edition). McGraw Hill
Other supplemental materials

Description	
The purpose of the course is to stimulate the development of the intellectual abilities and technical skills necessary to use the quality tools that serve to determine, measure, analyze and propose solutions to the identified problems that interfere with the performance of the organization's processes. helping to improve quality indicators. The content of the subject offers the learning of techniques that help define, analyze, measure and propose solutions to problems or failures that interfere with the proper functioning of production processes. Therefore, they allow greater control of improvements or processes in decision making.	
Type of course	☒ Required ☐ Elective

Specific goals for the course

Outcomes of instruction	1. Identify the causes of engineering problems using the different quality tools. 2. Discriminate and apply tools to improve processes according to the problems identified through analysis. 3. Demonstrate the ability to lead and participate in teams efficiently and effectively. 4. Demonstrate openness towards constructive criticism and the recognition of needs for self-improvement, participating in training and feedback activities inside and outside the classroom. 5. Establish a relationship between strategy and processes based on the planning, nature and limitations of any organization. 6. Prepare standardized documentation, ensuring a unified language of the different elements of a process.
Student outcomes	SO1. Identify, formulate, and solve complex engineering problems by applying the principles of engineering, science, and mathematics. SO2. Apply the engineering design process to produce solutions that meet specific needs, taking into account public health and safety, global, cultural, social, environmental, and economic factors, as well as any other factor as appropriate to the discipline. SO3. Communicate effectively with a variety of audiences. SO5. Function effectively as a member or leader of a team setting goals, planning tasks, meeting deadlines, and creating a collaborative and inclusive environment.

topics
Unit I. Introduction to Quality Tools Unit II. Philosophy and Reference Frames Unit III. Sampling and Inspection Unit IV. Quality Tools