Code	INI382L	Prerequisites	INI339 CBM206
Name	Laboratory of Industrial Statistics	Co-requisites	INI382

Credits	Contact Hours
01	22
Categorization of credits	
Math and basic science	
Engineering topic	X
Other	

Coordinator's name	Demetrio Mota Ingrid Mordán

Text book
Minitab (2018). Introduction to Minitab 18. Minitab Inc.
Other supplemental materials
Devore, J.L. (2010). Probability and statistics for engineering and science. Thompson International
Montgomery, D. (1997). Statistics and Probabilities. Continental Publishing House.
Walpole, R. E., & Myers, R. H. (2012). Probability and statistics for engineering and science. Pearson Education.

Description
This subject aims to provide the student with knowledge of the fundamental principles of inferential statistics applied to Industrial Engineering. During the course, the student receives the tools for solving complex problems from Industrial Engineering, with statistical support for decision making.   The contents are divided into 5 thematic units, addressing the topics of: Introduction to Minitab, Minitab Sampling and Estimation, Minitab Hypothesis Testing, Minitab Regression and Correlation and Analysis of Variance (ANOVA) in Minitab.

Type of course	Required ☒ Elective ☐

Specific goals for the course	
Outcomes of instruction	1. It expresses statistical results of its analyzes responsibly. 2. Applies knowledge of mathematics and statistics in the analysis of industrial engineering problems and the resolution of them.

	3. Analyzes and interprets data from your environment using statistical methods.
	4. Participates in teams for the development and execution of engineering projects and research formulation, contributing to the achievement of established goals.
	5. It uses specialized software for presentation, inferences and statistical data analysis.
Student outcomes	SO1. Identifies, formulates and solves complex Engineering problems through the application of Engineering, Science and Mathematics principles.
	SO4. Recognizes ethical and professional responsibilities in engineering situations and makes informed judgments considering the impact of engineering solutions in global, economic, environmental and social contexts.
	SO5. Function effectively in a team whose members together provide leadership, create a collaborative and inclusive environment, set goals, plan tasks, and meet objectives.
	SO6. Develops and conducts appropriate experimentation, analyzes and interprets data, and uses engineering criteria to draw conclusions.

Topics
Unit I. Introduction to Minitab
Unit II. Sampling and Estimation in Minitab
Unit III. Minitab Hypothesis Test
Unit IV. Analysis of Variance
Unit V. Regression and Correlation