Code	INM355L /INM376L	Prerequisites	INI383 INI383L
Name	Industrial Processes I Laboratory	Co-requisites	INM355

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

Coordinator's name	Manuel Gonzalez

Text book
Other supplemental materials
1. Kalpakjian, S. (2008). Manufacturing Engineering and Technology (5th Ed.). Pearson Prentice Hall. 2. Jeffus, L. (2009). Welding, Principles and Applications (5th ed.). Auditorium. 3. Oerlikon (2020). Welding Handbook (7th Ed.). Sooldexa. 4. https://www.fronius.com/en/welding-technology/innovative-solutions/welding-education/welducation-basic-app

Description	
The purpose of this subject is to provide the student with the necessary knowledge so that they can design, analyze and manufacture machine components using manual tools, as well as perform thermal treatments on them to obtain the required properties from them, thus providing the student with the work tools to solve problems arising in their work environment.	
Type of course	☒ Required ☐Elective _

Specific goals for the course

Outcomes of instruction	EG1. Use different techniques for solving problems that arise in the development of the subject. EG2. Verify the procedures in a logical way, which allow solutions, according to the required need, of the problem posed. EG3. Conduct assigned practical group work, based on collaborative leadership and teamwork. EG4. Perform the selection, configuration and execution of the production process of a metal part.
Student outcomes	CG1. Identify, formulate and solve complex engineering problems by applying the principles of Engineering, Science and Mathematics. CG2. Function effectively as a member or leader of a team setting goals, planning tasks, meeting deadlines, and creating a collaborative and inclusive environment. CG4. Apply the engineering design process to produce solutions that meet specific needs, considering public health and safety, global, cultural, social, environmental, and economic factors, as well as any other factor as appropriate to the discipline.

Topics
Unit I. Measurement and mechanical tracing
Unit II. Bench mechanics
Unit III. SMAW welding
Unit IV. Oxyacetylene welding
Unit V. TIG Welding
Unit VI. Heat treatments
Unit VII. Casting and casting
Unit VIII. Design project of a welding shop