



University of Puerto Rico  
 Mayagüez Campus  
 College of Engineering  
 Department of Industrial Engineering  
 Program of Bachelor of Science



## COURSE SYLLABUS

<b>COURSE TITLE:</b>	Design Project	
<b>ALPHA-NUMERIC CODIFICATION:</b>	ININ 4079	
<b>NUMBER OF CREDITS-CONTACT HOURS:</b>	Three credits. Three contact hours.	
<b>PREREQUISITES, COREQUISITES AND OTHER REQUIREMENTS:</b>	Prerequisites: ININ4015 and ININ4040 and ININ 4999 and DIR	
<b>COURSE DESCRIPTION:</b>		
<b>Spanish:</b> Desarrollo y presentación de un proyecto de diseño de un sistema.		
<b>English:</b> Development and presentation of a system design project.		
<b>COURSE OBJECTIVES:</b>		
<ul style="list-style-type: none"> <li>• Demonstrate technical and professional skills.</li> <li>• Use appropriate interpersonal skills when working as part of an interdisciplinary team.</li> <li>• Apply oral and written communications skills in progress reports, technical reports, and oral presentations at a professional level.</li> <li>• Assess energy, ethical, legal, and/or societal issues relevant to a design project.</li> <li>• Complement the educational process with real-life-problem-solving experience.</li> <li>• Integrate the principles, methods, and techniques of earlier course work into a problem-solving situation.</li> </ul>		
<b>TEXT BOOK:</b> (Seminar course with multiple reference books.)		
<b>Course time frame and thematic outline: (Sample of Distribution)</b>		
	<b>TIME DISTRIBUTION</b>	
<b>Theme</b>	<b>Face-to-Face</b>	
Introduction to seminar and project requirements	3	
Proposal: Development, feedback discussion and defense.	9	
Ethics workshop	3	
Seminar on: Technical presentations	3	
Progress report: Development, feedback discussion and defense.	9	
Seminar on: Ethics evaluation of alternatives and the final design and consideration energy related, ethical, legal, and/or societal issues relevant to a design project.	3	
Poster: Guidelines and presentation	6	
Final report: Development, feedback discussion and defense.	9	
<b>Total contact hours</b>	<b>45 hours</b>	
<b>INSTRUCTIONAL STRATEGIES:</b>		
<b>Face-to-Face</b>		

- ♦ Conferences
- ♦ Lectures
- ♦ Team work
- ♦ Seminars
- ♦ Oral presentations

**MINIMUM OR REQUIRED RESOURCES AVAILABLE:**

RESOURCE	FACE-TO-FACE
Institutional learning management platform account (Ex. Moodle) (Cuenta en la plataforma institucional de gestión de aprendizaje) (Ej. Moodle)	Institution
Institutional email account	Institution
Computer with high-speed internet access or mobile device with data service	Student
Programs or applications: word processor, spreadsheets, presentation editor	Student
Built-in or external speakers	Not applicable
Webcam or mobile with camera and microphone	Not applicable

**EVALUATION STRATEGIES:**

FACE to FACE
Assignments ( 0 - 5 % ) Reports and oral presentations (55-95%) Mentor evaluation (5-40%)

**REASONABLE ACCOMMODATIONS:**

The University of Puerto Rico at Mayagüez (RUM) recognizes that each student has an inherited right to request reasonable accommodation according to Law 51: Law for Integral Educational Services for People with Disabilities. Every student has the right to receive reasonable accommodation if he/she presents the necessary evidence to be evaluated by the Office of Services to Students with Disabilities (OSEI-RUM), and the related information can be found at the following link: <https://www.uprm.edu/cms/index.php/page/85>. If your case is approved by OSEI-RUM, you will receive reasonable accommodation in your courses and evaluation, and you must contact each professor for course registered. For additional information contact OSEI-RUM at Sánchez Hidalgo 410 or via telephone 787-832-4040 extension 3107.

**ACADEMIC INTEGRITY:**

The University of Puerto Rico promotes the highest standards of academic and scientific integrity. Article 6.2 of the UPR Student General Bylaws (Board of Trustees Certification 13, 2009-2010) states that academic dishonesty includes, but is not limited to: fraudulent actions; obtaining grades or academic degrees by false or fraudulent simulations; copying the whole or part of the academic work of another person; plagiarizing totally or partially the work of another person; copying all or part of another person's answers to the questions of an oral or written exam by taking or having someone else take the exam on his/her behalf; as well as enabling and facilitating another person to perform the aforementioned behavior. Any of these behaviors will be subject to disciplinary action in accordance with the disciplinary procedure established by the UPR Student General Bylaws.—

To ensure the integrity and security of user data, all hybrid, distance and online courses must be offered through the institutional learning management platform, which uses secure connection and authentication protocols. The system authenticates the identity of the user (student and professor) using the username and password assigned by the institution. The users are responsible for keeping their password safe, protected, and not to share it with other people.

### **POLICY AGAINST DISCRIMINATION BASED ON SEX, SEXUAL ORIENTATION, AND GENDER IDENTITY:**

«The University of Puerto Rico prohibits discrimination based on sex, sexual orientation, and gender identity in any of its forms, including that of sexual harassment. According to the Institutional Policy Against Sexual Harassment at the University of Puerto Rico, Certification 130 (2014-2015) from the Board of Governors, any student subjected to acts constituting sexual harassment, may turn to the Office of the Student Ombudsperson, the Office of the Dean of Students, or the Coordinator of the Office of Compliance with Title IX for an orientation or formal complaint».

### **GRADING SYSTEM**

Quantifiable (letters, A, B, C, D, F)  Not Quantifiable

### **CONTINGENCY PLAN IN CASE OF AN EMERGENCY**

In case of an emergency or class interruption, the professor can apply Bylaw 19-85 of the UPRM. This bylaw states that up to 25% of a class can be offered online.

### **BIBLIOGRAPHY**

- R1. Nahmias, S. and Lennon, T., 2021, Production and Operations Analysis, Eighth Edition, Waveland Press Inc.
- R2. Jacobs, F., Berry, W., Whybark D. and Vollmann, T., 2011, Manufacturing Planning and Control for Supply Chain Management. McGraw-Hill.\*
- R3. Hopp, W. and Spearman, M., 2011, Factory Physics, Third Edition, Waveland Press Inc.\*
- R4. Winston, W. L., 2004, Operations Research: Applications and Algorithms, 4th Edition, Duxbury Press.\*
- R5. Banks, J., Carson II, J. S., Nelson, B. L., and Nicol, D. M., 2009, Discrete-event System Simulation, 9rd Edition, Prentice-Hall International Series in Industrial and Systems Engineering.\*
- R6. Newman D.G., Eschenbach, T.G., and Lavelle, J.P., 2012, Engineering Economic Analysis, 11th Edition, Oxford University Press, Inc.\*
- R7. Tompkins, J., White, J., Bozer Y., and Tanchoco, 2010, Facilities Planning, J. Wiley, 4th Edition.\*
- R8. Laplante, P.A. 2012. Technical Writing: A Practical Guide for Engineers and Scientists, CRC Press\*
- R9. King, C. 2016. Communication: Mastering The Art Of - Body Language, Communication Skills & Social Skills, eBook\*

R10. Engineering Codes of Ethics, <https://www.iienet2.org/details.aspx?id=299>

R11. APICS Journal, <http://www.apics.org/industry-content-research/publications/p-im-journal>

R12. IIE Transactions Journal, <http://link.springer.com/journal/10756>

\* This book is a classic with no up-to-date editions and remains as the top book in the subject.