



University of Puerto Rico
Mayagüez Campus
College of Engineering
Department of Mechanical Engineering
Bachelor of Science in Mechanical Engineering



Course Syllabus

1. General Information: Alpha-numeric codification: INME 5997 Course Title: Selected Topics in Mechanical Engineering II Number of credits: 1-6 Contact Period: One to six hours of lecture per week
2. Course Description: English: A study of certain selected topics in Mechanical Engineering not covered by the other existing courses. Spanish: Estudio de ciertos temas seleccionados del campo de Ingeniería Mecánica que no hayan sido tratados en otros cursos ya existentes.
3. Pre/Co-requisites and other requirements: Prerequisites: Authorization of the Director of the Department.
4. Course Objectives: After completion of the course the student should: 1. Demonstrate knowledge and understanding of basic Mechanical Engineering concepts and principles. 2. Demonstrate insights into associations and relationships among the Mechanical Engineering topics. 3. Demonstrate comprehension of the concept of Mechanical Engineering principles. 4. Solve problems and reach tenable conclusions that require abstract and analytical reasoning. 5. Demonstrate ability to visualize and analyze graphical and pictorial information. 6. Calculate simple quantities from mathematically formulated principles. 7. Identify and assess quantitative information. 8. Demonstrate comprehension of the development of scientific thought in social context. 9. Demonstrate comprehension of the variables, descriptions, and principles of Mechanical Engineering 10. Demonstrate comprehension of the abstract ideas of Mechanical Engineering. 11. Demonstrate comprehension of various conservation laws and their importance. 12. Demonstrate comprehension of the nature of thermal energy and the dynamic theory of machines. 13. Demonstrate comprehension of the basic laws and properties of machines. 14. Discuss in expository form certain recurring themes in modern Mechanical Engineering. 15. Write logical, clear and parsimonious expositions which demonstrate mastery of the nature of Mechanical Engineering. 16. Collect data, analyze it and submit reports which demonstrate comprehension of the principles and processes involved. 17. Write a research paper on a topic related to these learning outcomes.
5. Instructional Strategies: <input checked="" type="checkbox"/> conference <input type="checkbox"/> discussion <input type="checkbox"/> computation <input type="checkbox"/> laboratory

seminar with formal presentation seminar without formal presentation workshop

art workshop practice trip thesis special problems tutoring

research other, please specify:

6. Minimum or Required Resources Available:

None

7. Course time frame and thematic outline

General Topics	Contact Hours
Introduction	0-15
Theory	5-30
Applications	5-30
Presentations	5-30
Total hours: (equivalent to contact period)	15-90

8. Grading System

Quantifiable (letters) Not Quantifiable

9. Evaluation Strategies

	Quantity	Percent*
<input checked="" type="checkbox"/> Exams	2-3	50-75
<input checked="" type="checkbox"/> Final Exam **	1	0-25
<input checked="" type="checkbox"/> Short Quizzes	0-3	0-10
<input checked="" type="checkbox"/> Oral Reports	0-4	0-25
<input type="checkbox"/> Monographies		
<input type="checkbox"/> Portfolio		
<input checked="" type="checkbox"/> Projects	0-1	0-50
<input type="checkbox"/> Journals		
<input checked="" type="checkbox"/> Other, specify: Homework	0-5	0-25
TOTAL:		100%

* All evaluation strategies will add to 100%

** In design courses a capstone project may replace the final exam.

10. Bibliography:

Textbook:

Depends on the selected topics.

11. Law 51: The Comprehensive Educational Services Act for People with Disabilities:

States that after identifying with the instructor and the institution, the student with disabilities will receive reasonable accommodation in their courses and evaluations. For more information, contact the Department of Counseling and Psychological services at the Office of the Dean of Students (Office DE 21) or call 787-265-3864 or 787-832-4040 x 3772, 2040 and 3864.

12. Academic Integrity

The University of Puerto Rico promotes the highest standards of academic and scientific integrity. Article 6.2 of the UPR Students 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 answers to the questions of an oral or written exam

by taking or getting someone else to 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 laid down in the UPR Students General Bylaws.—

13. Certification 06-43 of the Academic Senate

"The academic guidelines for offering online courses," defines: Traditional face-to-face courses are those that have less than 25% of the course's regular contact hours via the Internet. Therefore, a three-credit course will be considered "face to face" if, of the 45 hours of regular contact, 11 or less are taught via the Internet. According to certification 06-43 of the Academic Senate, a course may include up to 25% of its total contact hours via the Internet. The objective of this is so that all professors have this alternative in the case of any unscheduled eventuality.

14. Sexual Harassment: Certification 130-2014-2015 states:

Sexual harassment in the workplace and in the study environment is an illegal and discriminatory act and is against the best interests of the University of Puerto Rico. All persons who understand they have been subject to acts of sexual harassment at the University of Puerto Rico may file a complaint and request that the institution investigate, where necessary, and assume the corresponding action by the university authorities. If the complainant is a student, he or she must refer his or her complaint to the Office of the Student Ombudsperson or that of the Dean of Students.

Revised: February, 2019