

 FLORIDA ATLANTIC UNIVERSITY	COURSE CHANGE REQUEST Undergraduate Programs	UUPC Approval <u>11/7/2022</u> UFS Approval _____ SCNS Submittal _____ Confirmed _____ Banner Posted _____ Catalog _____
	Department Ocean & Mechanical Engineering College Engineering & Computer Science	
Current Course Prefix and Number EML 3523C	Current Course Title Experimental Methodology	
<i>Syllabus must be attached for ANY changes to current course details. See Template. Please consult and list departments that may be affected by the changes; attach documentation.</i>		
Change title to: Change prefix From: _____ To: _____ Change course number From: _____ To: _____ Change credits* From: _____ To: _____ Change grading From: _____ To: _____ Change WAC/Gordon Rule status** Add <input type="checkbox"/> Remove <input type="checkbox"/> Change General Education Requirements*** Add <input type="checkbox"/> Remove <input type="checkbox"/>	Change description to: Change prerequisites/minimum grades to: Electro-Mechanical Devices – EGM 4045/Min. C Dynamics - EGN 3321 or equivalent/Min. C Fluid Mechanics - EML 3701/Min. C Probability and Statistics for Engrs - STA 4032/Min. C Change corequisites to: Dynamics - EGN 3321 or equivalent Fluid Mechanics - EML 3701 Probability and Statistics for Engrs - STA 4032 Change registration controls to: Please list existing and new pre/corequisites, specify AND or OR and include minimum passing grade (default is D-).	
Effective Term/Year for Changes: Spring 2023	Terminate course? Effective Term/Year for Termination:	
Faculty Contact/Email/Phone Dr. Davood Moslemian/moslemia@fau.edu/561-297-2652		
Approved by Department Chair <u>Pierre Philippe Beaujean</u> College Curriculum Chair <u>Hongbo Su</u> College Dean <u>[Signature]</u> UUPC Chair <u>Phyllis Williams</u> Undergraduate Studies Dean <u>Dan Meeroff</u> UFS President _____ Provost _____	Date 10/26/2022 <u>10/26/2022</u> <u>11/7/2022</u> <u>11/7/2022</u>	

Email this form and syllabus to mjenning@fau.edu seven business days before the UUPC meeting.

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1. Course title/number, number of credit hours	
EML 3523C- Experimental Methodology	3 credit hours
2. Instructional Method	
This class will be conducted in person. It also is recorded so students can have access to the lectures at a later time and date. The labs are in person in EW-Rm. 132.	
3. Course pre-requisites, co-requisites, and where the course fits in the program of study	
<u>List Prerequisites, Co-requisites:</u>	
<p>Prerequisites: EGM 4045 Electromechanical Devices/Minimum C EGN 3321 Dynamics or equivalent/Minimum C EML 3701 Fluid Mechanics/ Minimum C STA 4032 Probability and Statistics for Engrs/Minimum C</p> <p>Co-requisites: EGN 3321 Dynamics or equivalent EML 3701 Fluid Mechanics STA 4032 Probability and Statistics for Engrs</p> <p>If students have not completed the required prerequisites for the course and do not inform their course instructor and advisor, they will be dropped from the course. If this occurs after the first week of the semester, they will be fee liable to the University.</p>	
4. Course logistics	
Term: Spring 2023	
Time & Location:	
Lecture Hours: WF 3:00-3:50 PM, CM-130	
Labs: W or F on one of the assigned times EW-Rm 132.	
5. Instructor contact information	
Dr. Davood Moslemian, Rm. 107, Eng. West Bldg. WF:11:00 AM – 1:00 PM 561 297-2652 E-mail: moslemia@fau.edu	
6. TA contact information	
<i>TA's name</i>	Utpal Kanti Dhar,
<i>Office address</i>	udhar2020@fau.edu

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<i>Office Hours</i> <i>Contact telephone number</i> <i>Email address</i>	
7. Course description	
Study of typical measuring system and solutions to engineering problems by experimental means, to include analysis of experimental data.	
8. Course objectives/student learning outcomes/program outcomes	
<i>Course objectives</i>	<ol style="list-style-type: none"> 1. To provide a fundamental background for the design of measurement systems. 2. To establish the fundamental principles and provide the prevailing engineering practice for the measurement of important physical variables in engineering applications.
<i>Student learning outcomes & relationship to ABET 1-7 objectives</i>	<p>Course Outcomes: (numbers in parentheses indicate correlation of the outcome with the appropriate ABET program outcomes 1-7)</p> <ol style="list-style-type: none"> 1. The student will understand how to select the right technique and instrumentation for a measurement system. (6) 2. The student will be able to select the right way to perform data acquisition and data processing. (6) 3. The student will be familiar with various types of sensors/transducers used in mechanical measurements. (1) 4. The student will be able to describe in writing the methods and procedures followed in obtaining the experimental results and present the final results. (3)
9. Course evaluation method	
<p>Grading: Midterm & Final Exams 50% Lab work & reports - 50%</p> <p>Only the assigned Course Textbook can be used during the exams.</p> <p><i>Note:</i> The minimum O&ME grade requirement in the course is C.</p>	
10. Course grading scale	
<p>Grading Scale:</p> <p>92 and above: "A", 88-92: "A-", 84-88: "B+", 80-84: "B", 76-80 : "B-", 72-76: "C+", 68-72: "C", 64-68: "C-", 60-64: "D+", 56-60: "D", 52-56: "D-", 52 and below: "F."</p>	
11. Policy on makeup tests, late work, and incompletes	
<p><i>Makeup tests</i> are given only if there is solid evidence of a medical or otherwise serious emergency before the tests that prevented the student of participating in the exam. Makeup exams should be administered and proctored by department personnel unless there are other pre-approved arrangements.</p> <p><i>Late work without verifiable justification will NOT be graded.</i></p>	

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Incomplete grades are against the policy of the department. Unless there is solid evidence of medical or otherwise serious emergency situation incomplete grades will not be given.

1. All labs must be completed.
2. Lab reports are due a week after the lab period. **No Late reports.**
3. Reports should be written according to the provided format.
4. Reports should be typed.
5. Full set of lab reports are required to pass the course.

12. Special course requirements

13. Classroom etiquette policy

University policy requires that in order to enhance and maintain a productive atmosphere for education, personal communication devices, such as cellular phones, are to be turned off in class sessions.

14. Policy on the Recording of Lectures

Students enrolled in this course may record video or audio of class lectures for their own personal educational use. A class lecture is defined as a formal or methodical oral presentation as part of a university course intended to present information or teach students about a particular subject. Recording class activities other than class lectures, including but not limited to student presentations (whether individually or as part of a group), class discussion (except when incidental to and incorporated within a class lecture), labs, clinical presentations such as patient history, academic exercises involving student participation, test or examination administrations, field trips, and private conversations between students in the class or between a student and the lecturer, is prohibited. Recordings may not be used as a substitute for class participation or class attendance and may not be published or shared without the written consent of the faculty member. Failure to adhere to these requirements may constitute a violation of the University's Student Code of Conduct and/or the Code of Academic Integrity.

15. Attendance Policy Statement

Students are expected to attend all of their scheduled University classes and to satisfy all academic objectives as outlined by the instructor. The effect of absences upon grades is determined by the instructor, and the University reserves the right to deal at any time with individual cases of non-attendance. Students are responsible for arranging to make up work missed because of legitimate class absence, such as illness, family emergencies, military obligation, court-imposed legal obligations or participation in University approved activities. Examples of University-approved reasons for absences include participating on an athletic or scholastic team, musical and theatrical performances and debate activities. It is the student's responsibility to give the instructor notice prior to any anticipated absences and within a reasonable amount of time after an unanticipated absence, ordinarily by the next scheduled class meeting. Instructors must allow each student who is absent for a University-approved reason the opportunity to make up work missed without any reduction in the student's final course grade as a direct result of such absence.

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16. Disability Policy Statement

In compliance with the Americans with Disabilities Act Amendments Act (ADAAA), students who require reasonable accommodations due to a disability to properly execute coursework must register with Student Accessibility Services (SAS) and follow all SAS procedures. SAS has offices across three of FAU's campuses – Boca Raton, Davie and Jupiter – however disability services are available for students on all campuses. For more information, please visit the SAS website at www.fau.edu/sas/

17. Counseling and Psychological Services Center

Life as a university student can be challenging physically, mentally and emotionally. Students who find stress negatively affecting their ability to achieve academic or personal goals may wish to consider utilizing FAU's Counseling and Psychological Services (CAPS) Center. CAPS provides FAU students a range of services – individual counseling, support meetings, and psychiatric services, to name a few – offered to help improve and maintain emotional well-being. For more information, go to <http://www.fau.edu/counseling/>

18. Code of Academic Integrity Policy Statement

Students at Florida Atlantic University are expected to maintain the highest ethical standards. Academic dishonesty is considered a serious breach of these ethical standards, because it interferes with the university mission to provide a high quality education in which no student enjoys unfair advantage over any other. Academic dishonesty is also destructive of the university community, which is grounded in a system of mutual trust and place high value on personal integrity and individual responsibility. Harsh penalties are associated with academic dishonesty. See University Regulation 4.001 at [www.fau.edu/regulations/chapter4/4.001 Code of Academic Integrity.pdf](http://www.fau.edu/regulations/chapter4/4.001_Code_of_Academic_Integrity.pdf)

Cell phones are not allowed during exams. If cell phones are detected during any exam periods, this will result in a **grade of "zero" on that exam and a note in the student's academic file.**

19. Required texts/reading/Lab kits

Richard S. Figliola & Donald E. Beasley, Theory and Design for Mechanical Measurements, Wiley, 6th edition, ISBN: 9 78-1-118-88127-9

20. Supplementary/recommended readings

J.P. Holman, Experimental Methods for Engineers, McGraw Hill, latest edition.

21. Course topical outline, including dates for exams/quizzes, papers, completion of reading

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Course Topics:

1. Basic Concepts of Measurement Methods (Ch.1)
2. Static and Dynamic Characteristics of Signals (Ch.2)
3. Regression Analysis (Ch. 4)
4. Uncertainty Analysis (Ch.5)
5. Analog Electrical Devices & Measurements (Ch.6)
6. Sampling, Digital Devices & Data acquisition (Ch.7)
7. Temperature Measurements (Ch.8)
8. Pressure & Velocity Measurements (Ch.9)
9. Flow Measurements (Ch.10)

Test Dates:

1. **Mid Term:**, Exact date TBA two weeks in advance.
2. **Final Exam: TBA**

- No cell-phones, i-pads, or other electronic devices are allowed during any of the exams or quizzes.
- No watches capable of taking pictures or communicating with others are allowed during exams.
- If, because of an emergency, there is a need to carry an electronic device to the exam, you must secure permission from the instructor.

Violation of any of the above exam rules will, at a minimum, result in receiving a zero on the exam.