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| **1. Course title/number, number of credit hours** |
| EOC 3130L-Ocean Engineering Lab | 3 credit hours |
| **2. Course prerequisites, corequisites, and where the course fits in the program of study** |
| Prerequisites: CHM 2045, 2045L (General Chemistry I and Lab), PHY 2044, 2049L (Physics for Engineers II and Lab), COP 2220 (Intro to C Programming), all with a grade of C or better.Co-requisites: MAP 3305 (Engineering Math I)  |
| **3. Course logistics** |
| *Term:**Lecture location:**Time and Days:* | Fall 2017EW 162Tuesdays and Thursdays 2:00-3:20pm |
| **4. Instructor contact information** |
| *Instructor’s name:**Office address:**Office Hours:**Email address:* | Edgar AnEW 174WF 10-12pm or walk-inspan@fau.edu |
| **5. TA contact information** |
| *TA’s name:**Office address:**Office Hours:**Email address:* | N/A |
| **6. Course description** |
| The course deals with basic engineering laboratory methods and techniques with experiences in measurements, experiment planning, data recording, and laboratory report preparation. Five major lab experiences, including at sea experiences are included. |
| **7. Course objectives/student learning outcomes/program outcomes** |
| *Course objectives:* | The objective of the course is to provide a basic background in engineering laboratory techniques including: basic measurement theory, experimental purpose and planning, microcontroller data acquisition techniques, introductory level data analysis, and technical memo preparation; an introduction to Matlab for analyzing and presenting experimental data; and prepare students for laboratories associated with subsequent engineering courses in Ocean Engineering. |
| *Student learning outcomes**& relationship to ABET a-k objectives:* | Student Learning Outcomes:  (letters in parentheses indicate correlation of the outcome with the appropriate program assessment outcomes a-k) 1.  An ability to conduct engineering experiments with proper consideration of the type and amount of data to be acquired, the accuracy of the measurements to be made, a plan to reduce and analyze the data, and the quantification of the uncertainty of the outcome. (b)2. An ability to function in teams. (d)3. An ability to present the results of an experiment in a professional manner using modern presentation techniques. (g)4. An ability to use modern engineering tools such as a C compiler and Matlab for common data logging and computational tasks. (k) |
| **8. Course evaluation method** |
| Quiz: 20%Lab: 50% Attendance/tardiness: 5% Individual report: 30% (two major reports) Peer evaluation: 5% In-lab work: 10%Exam 1: 10%Exam 2: 10%Final Exam: 10%Optional Project: 5% (described in Optional Term Project Guideline document)The lowest quiz score will be dropped. If the overall grade by the last day of class is maintained at 70% or above, the final exam can be waived, and the overall grade will be recomputed proportionally.  |
| **9. Course grading scale** |
| Grading Scale:

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| --- | --- |
| > 90 | A |
| 86.7−90 |  A− |
| 83.3−86.7 |  B+ |
| 80−83.3 | B |
| 76.7−80 |  B− |
| 73.3−76.7 |  C+ |
| 70−73.3 | C |
| 66.7−70 |  C− |
| 63.3−66.7 |  D+ |
| 60−63.3 | D |
| 56.7−60 |  D− |
| <56.7 | F |

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| **10. Policy on makeup tests, late work, and incompletes** |
| *Makeup tests* are given only if there is solid evidence of a medical or otherwise serious emergency that prevented the student of participating in the exam. Makeup exam should be administered and proctored by department personnel unless there are other pre-approved arrangements*Late work* is reduced by 10% per day or portion of a day late. Late work must be time stamped at the front office and put in the instructor’s mailbox.*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. |
| **11. Special course requirements** |
| N/A |
| **12. 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 and laptops, are to be disabled in class sessions. |
| **13. 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)—in Boca Raton, SU 133 (561-297-3880); in Davie, LA 203 (954-236-1222); or in Jupiter, SR 110 (561-799-8585) —and follow all SAS procedures. |
| **14. Honor code policy** |
| 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) |
| **15. Required texts/reading** |
| None**Useful References:**Matlab online tutorial: <http://www.engin.umich.edu/group/ctm/basic/basic.html> |
| **16. Supplementary/recommended readings** |
| *Title:**Authors:**Publisher:**Year and Edition:**ISBN:* | Experimental Methods for Engineers, 8th Edition (online version available)J.P. HolmanMcGraw-Hill2012978-0-07-352930-1 |
| **17. Course topical outline, including dates for exams/quizzes, papers, completion of reading** |
| Tentative Course Topics: 1. Basic measurement theory1. Basic analog to digital conversion
2. Basic microcontroller tutorial
3. Experiment Planning
4. Uncertainty Analysis
5. Data fitting
6. Oceanographic measurements
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