

 FLORIDA ATLANTIC UNIVERSITY	COURSE CHANGE REQUEST Undergraduate Programs		UUPC Approval _____ UFS Approval _____ SCNS Submittal _____ Confirmed _____ Banner Posted _____ Catalog _____
	Department CEGE College CoE&CS		
Current Course Prefix and Number ENV4112L		Current Course Title Air Pollution and Control Systems Lab	
<i>Syllabus must be attached for ANY changes to current course details. See Checklist. 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"/> <small>*Review Provost Memorandum</small> <small>**WAC/Gordon Rule criteria must be indicated in syllabus and approval attached to this form. See WAC Guidelines.</small> <small>***General Education criteria must be indicated in syllabus and approval attached to this form. See GE Guidelines.</small>		Change description to: Change prerequisites/minimum grades to: Add CWR3201C with minimum grade of "C" to current list Change corequisites to: No change 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 2021		Terminate course? Effective Term/Year for Termination:	
Faculty Contact/Email/Phone Masoud Lashaki/mjahandarlashaki@fau.edu/954-924-7223			
Approved by Department Chair <u>DM for Yan Yong</u> College Curriculum Chair <u>Daniel E. Meeroff</u> College Dean <u>Fred Bloetscher (via email confirmation)</u> UUPC Chair <u>Jerry Haky (via email confirmation)</u> Undergraduate Studies Dean <u>Edward Pratt (via email confirmation)</u> UFS President _____ Provost _____		Date <u>3-25-20</u> <u>3-27-20</u> <u>3-27-20</u> <u>3-30-20</u> <u>3-31-20</u> _____ _____	

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

**Department of Civil, Environmental & Geomatics Engineering
Florida Atlantic University
Course Syllabus**

1. Course title/number, number of credit hours		
Air Pollution Lab (ENV 4112L)	1 credit hour	
2. Course prerequisites, corequisites, and where the course fits in the program of study		
<i>Prerequisite:</i> ENV 3001C and CWR3201C with minimum grade of "C"; permission of department <i>Corequisite:</i> ENV 4112 Required senior level course for BSEV majors		
3. Course logistics		
<i>Term:</i> Spring 2020 This is a lab session <i>Class location and time:</i> SeaTech (Dania Beach), ST 263 & ST 233, Monday 9:00 am – 12:00 pm		
4. Instructor contact information		
<i>Instructor's name</i>	Dr. Masoud Jahandar Lashaki, Assistant Professor	
<i>Office address</i>	Boca Raton Campus, EG 216; SeaTech Campus, ST 202	
<i>Office Hours</i>	Wednesday 2:00 – 4:00 pm, EG 216	
<i>Contact telephone number</i>	954-924-7223	
<i>Email address</i>	mjahandarlashaki@fau.edu	
5. TA contact information		
N/A		
6. Course description		
Practical laboratory work in air sampling and analysis, source testing, instrumentation, criteria air pollutants and dispersion modeling. The class meets for one 3-h lab session every other week. Lab reports are due two weeks after each session, unless otherwise communicated.		
7. Course objectives/student learning outcomes/program outcomes		
<i>Course objectives</i>	I. Expose students to air sampling basics. II. Expose students to air quality assessment devices. III. Expose students to fundamentals of dispersion modeling.	
<i>Student learning outcomes & relationship to ABET 1-7 objectives</i>	A. Students will be able to analyze and interpret experimental data pertinent to gas-phase and particulate pollutants (3,5,6) B. Students will be able to combine meteorology and dispersion modeling to assess air quality in a basic scenario (3,5,6)	
<i>Relationship to program educational objectives</i>	Objective A. Practice environmental engineering within the general area of water and wastewater, air quality, solid and hazardous waste, groundwater and soil remediation, and sustainability and pollution prevention in the organizations that employ them	M

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	Objective B: Advance their knowledge of environmental engineering, both formally and informally, by engaging in lifelong learning experiences including attainment of professional licensure and/or graduate studies	H
	Objective C: Serve as effective professionals, based on strong interpersonal and teamwork skills, an understanding of professional and ethical responsibility, and a willingness to take the initiative and seek progressive responsibilities	M
	Objective D: Participate as leaders in activities that support service to, and/or economic development of, the region, the state and the nation	H

8. Course evaluation method (percentages subject to change)

Lab Reports	72% (18% for each report)	<i>Note:</i> The minimum grade required to pass the course is “C”
Lab Notebook	8% (2% for each session)	
Attendance and Participation	8% (2% for each session)	
Peer Evaluation	12% (3% for each report)	

Attendance to lab sessions is required. You must attend each lab in person to receive credit. **If you do not attend, you will receive a grade of “0” in all associated assessments.**

Lab safety is of paramount importance! This will be discussed in details during our first lab session.

A laboratory notebook is required. The instructor will sign the notebook at the end of each session. The notebooks will be collected and graded at the end of the semester.

You are expected to participate in all sessions and keep up with the material. Participation in university-approved activities or religious observances, with prior notice, will not be penalized. You are not expected to be a distraction in the class. Final grades will be reduced by one letter for class disruption or lack of participation (as determined by the instructor).

Students must form **groups of three or four**, depending on the final number of students in class, to work on experiments and lab reports throughout the semester. All groups must be formed by 7 pm on Wednesday, January 29, 2019.

Each group should assign a member to take care of all communications with the instructor. All group members must be CC’ed on all communications.

Once your group is formed, please send an email to the instructor to provide the names of the group members and your preference to be in Batch 1 or Batch 2 (see Section 19 below). Batch assignment is first come, first served. Once assigned to a Batch, the Group must follow the schedule in Section 19.

One lab report should be electronically submitted by each group for each experiment. Lab reports are due at 9 am on the date specified in Section 19 (see below). All late submissions are subject to 20% penalty per day. Lab report guidelines will be posted on Canvas.

A peer evaluation form should be completed and sent for each lab session. This is due 48 hours after the corresponding lab report is graded by the instructor. The peer evaluation form will be posted on Canvas.

All questions must be sent publicly through Canvas, so other students also benefit from the answers. Only personal or confidential matters should be sent via email to the professor, all others will be ignored.

Keep copies of all lab reports for ABET purposes.

9. Course grading scale

There are no fixed criteria for the grading scale. The overall performance as related to course objectives and outcomes is evaluated and considered during grading.

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10. Policy on makeup tests, late work, and incompletes

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

Note: Incomplete grades are only reserved for those students who were passing but could not complete the required work due to exceptional circumstances.

11. Special course requirements

The goal of integrating writing in this course is to improve students' ability to produce professional reports. Contact the University Center for Excellence in Writing at 561-297-3498 or www.fau.edu/UCEW for assistance. Report all technical problems in Canvas to helpdesk (<http://www.fau.edu/helpdesk>)

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, are to be disabled in face-to-face class sessions. Please review the university Netiquette policy guidelines at

<https://www.fau.edu/oit/student/netiquette.php>. Remember you are an adult—your communication with the professor and your classmates should be appropriate. You are responsible for reading all announcements posted by the instructor. Check the announcements each time you login to be sure you have read all of them since your last login session.

13. 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 nonattendance. 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 absence 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.

14. 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/.

15. Counseling and Psychological Services (CAPS) 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/>

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16. 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 http://www.fau.edu/regulations/chapter4/4.001_Code_of_Academic_Integrity.pdf

17. Required texts/reading

Files posted by the instructor on Canvas; Hard copies will not be provided

18. Supplementary/recommended readings

D. Meeroff (2017), *Environmental Science and Engineering Laboratory Manual*; Kendall Hunt.

19. Lab section tentative outline (subject to change)

Lab Number	Tentative Date	Participants	Report Due
Overview	February 3	All Students	Not Applicable
1	February 10	Batch 1	February 24
	February 17	Batch 2	March 2
2	February 24	Batch 1	March 9
	March 2	Batch 2	March 16
3	March 23	All Students	April 6
4	April 6	Batch 1	April 20
	April 13	Batch 2	April 27

Students will be divided into two batches, each consisted of multiple groups, to attend the lab in alternate weeks. Tentatively, the lab section consists of four experiments, as follows:

- 1) Air Quality Assessment with Respect to Gaseous Pollutants
- 2) Evaluating the Concentration of Particulate Matter
- 3) Atmospheric Dispersion Modeling
- 4) Monitoring the Breakthrough Curve for Packed Bed Adsorption of Volatile Organic Compounds (VOCs) on Activated Carbon