

Core 1: Introduction to Environmental Systems

ENV 3001 Section COR1(30454)

Class Periods: Tuesday/Thursday Periods 3 and 4 (9:35 - 11:00 AM)

Location: CAR 0100

Academic Term: Spring 2022

Instructors:

David Kaplan

dkaplan@ufl.edu

352-392-8439

Timothy G Townsend

ttown@ufl.edu

352 392 0846

Andreia Fonseca de Faria

andreia.faria@essie.ufl.edu

352-392-9537

Chang-Yu Wu

cywu@ufl.edu

352-392-0845

Contact:

Class website (UF e-Learning): <https://lss.at.ufl.edu>

Course e-mail: use e-Learning for ALL correspondence

Office Hours: TBD and by appointment

Teaching Assistants:

- Alyssa Antoinette (a.antoinette@ufl.edu) [ECO]
- Delaney Harnish (delaney.harnish@ufl.edu) []
- Xyz
- Xyz

Course Description:

4 credits. Introduction to environmental systems, including water, air, materials, and ecological resources with motivating case studies across topics and fundamental definitions, laws, and theories in environmental engineering sciences. Throughout the course, students will build knowledge base and relevant skills in topics that bridge disciplines, including statistics, thermodynamics, microbiology, and organic chemistry.

Course Prerequisites/Corequisites: PHY2048 and CHM2046 and MAC2312

Course Objectives

At the end of this course students will be able to:

1. Describe laws and regulations affecting environmental processes.
2. Describe the components of environmental systems and how they interact.

Materials and Supply Fees

None

Professional Component (ABET): This course provides 4 credits of engineering topics.

Relation to Program Outcomes (ABET):

Outcome	Coverage*
1. Solve problems	High
2. Engineering design	
3. Communication	

4. Ethics and informed judgments	Medium
5. Teamwork	
6. Experimentation	
7. Acquire and apply knowledge	Low

*Coverage is given as high, medium, or low. An empty box indicates that this outcome is not assessed as part of the course.

Required Textbooks and Software:

- **AIR:** Air Quality: T Godish, W. T. Davis and J S. Fu, 2014, 5th ed., 978-1-4665-8444-0
- **WATER:** Water and Wastewater Treatment. Joanne E. Drinan, Frank L. Davis, Taylor and Francis, 2nd ed., 2012, 978-1-4398-5400-6
- **ECO:** Readings from the literature and management agencies will be provided as PDFs.
- **SMM:** Notes will be provided as PDFs; Toms River: A Story of Science and Salvation 1st Edition. By Dan Fagin. Available on Amazon and other resellers; Compendium of Regulatory Thresholds. Target Copy.

Course Schedule:

<i>Week</i>	<i>Topic</i>
1	Introduction to global ecological systems
2	Systems concept; ecosystems concept
3	Ecosystem services
4	Intro to microbiology (EXAM 1)
5	Water demand and water usage
6	Bio and chemical characteristics of water resources
7	Water quality and intro to law and regulations
8	Advanced treatment; water treatment plant overview (EXAM 2)
9	Air pollution history; Atmospheric structure & composition
10	Fundamental laws of gases and particles; Unit conversion
11	Gaseous & particulate pollutants
12	Atmospheric effects (EXAM 3)
13	Materials and modern society; Case study of hazardous waste
14	Environmental laws and regulations; Regulatory agencies
15	Characterizing chemicals
16	Chemicals and risk (EXAM 4)

Attendance Policy, Class Expectations, and Make-Up Policy:

Although attendance will not be taken, attendance in class is expected, as class time may include discussion or group work. Late and homework and make up exams will only be allowed with prior approval of the instructor in the case of non-emergencies. For emergencies or illness prior approval is not needed, but appropriate documentation is required. Excused absences must be consistent with university policies in the undergraduate catalog (<https://catalog.ufl.edu/ugrad/current/regulations/info/attendance.aspx>) and require appropriate documentation.

Evaluation of Grades

Assignment	Total Points	Percentage of Final Grade
Pre-course assessments (n=20, 5 pts each)	100	25%
Quizzes (n=8, 10 pts each)	80	25%
Homework Sets (n=8, 100 pts each)	800	25%
Exams (n=4, 100 pts each)	400	25%
		100%

Grading Policy

Percent	Grade	Grade Points
93.4 - 100	A	4.00
90.0 - 93.3	A-	3.67
86.7 - 89.9	B+	3.33
83.4 - 86.6	B	3.00
80.0 - 83.3	B-	2.67
76.7 - 79.9	C+	2.33
73.4 - 76.6	C	2.00
70.0 - 73.3	C-	1.67
66.7 - 69.9	D+	1.33
63.4 - 66.6	D	1.00
60.0 - 63.3	D-	0.67
0 - 59.9	E	0.00

More information on UF grading policy may be found at:

<https://catalog.ufl.edu/ugrad/current/regulations/info/grades.aspx>

Students Requiring Accommodations

Students with disabilities who experience learning barriers and would like to request academic accommodations should connect with the disability Resource Center by visiting <https://disability.ufl.edu/students/get-started/>. It is important for students to share their accommodation letter with their instructor and discuss their access needs, as early as possible in the semester.

Course Evaluation

Students are expected to provide professional and respectful feedback on the quality of instruction in this course by completing course evaluations online via GatorEvals. Guidance on how to give feedback in a professional and respectful manner is available at <https://gatorevals.ua.ufl.edu/students/>. Students will be notified when the evaluation period opens, and can complete evaluations through the email they receive from GatorEvals, in their Canvas course menu under GatorEvals, or via <https://ufl.bluera.com/ufl/>. Summaries of course evaluation results are available to students at <https://gatorevals.ua.ufl.edu/public-results/>.

In-Class Recording

Students are allowed to record video or audio of class lectures. However, the purposes for which these recordings may be used are strictly controlled. The only allowable purposes are (1) for personal educational use, (2) in connection with a complaint to the university, or (3) as evidence in, or in preparation for, a criminal or civil proceeding. All other purposes are prohibited. Specifically, students may not publish recorded lectures without the written consent of the instructor.

A “class lecture” is an educational presentation intended to inform or teach enrolled students about a particular subject, including any instructor-led discussions that form part of the presentation, and delivered by any instructor hired or appointed by the University, or by a guest instructor, as part of a University of Florida course. A class lecture does not include lab sessions, student presentations, clinical presentations such as patient history, academic exercises involving solely student participation, assessments (quizzes, tests, exams), field trips, private conversations between students in the class or between a student and the faculty or lecturer during a class session.

Publication without permission of the instructor is prohibited. To “publish” means to share, transmit, circulate, distribute, or provide access to a recording, regardless of format or medium, to another person (or persons), including but not limited to another student within the same class section. Additionally, a recording, or transcript of a recording, is considered published if it is posted on or uploaded to, in whole or in part, any media platform, including but not limited to social media, book, magazine, newspaper, leaflet, or third party note/tutoring services. A student who publishes a recording without written consent may be subject to a civil cause of action instituted by a person injured by the publication and/or discipline under UF Regulation 4.040 Student Honor Code and Student Conduct Code.

University Honesty Policy

UF students are bound by The Honor Pledge which states, “We, the members of the University of Florida community, pledge to hold ourselves and our peers to the highest standards of honor and integrity by abiding by the Honor Code. On all work submitted for credit by students at the University of Florida, the following pledge is either required or implied: “On my honor, I have neither given nor received unauthorized aid in doing this assignment.” The Conduct Code (<https://sccr.dso.ufl.edu/process/student-conduct-code/>) specifies a number of behaviors that are in violation of this code and the possible sanctions. If you have any questions or concerns, please consult with the instructor or TAs in this class.

Commitment to a Safe and Inclusive Learning Environment

The Herbert Wertheim College of Engineering values broad diversity within our community and is committed to individual and group empowerment, inclusion, and the elimination of discrimination. It is expected that every person in this class will treat one another with dignity and respect regardless of gender, sexuality, disability, age, socioeconomic status, ethnicity, race, and culture.

If you feel like your performance in class is being impacted by discrimination or harassment of any kind, please contact your instructor or any of the following:

- Your academic advisor or Graduate Program Coordinator
- Jennifer Nappo, Director of Human Resources, 352-392-0904, jpennacc@ufl.edu
- Curtis Taylor, Associate Dean of Student Affairs, 352-392-2177, taylor@eng.ufl.edu
- Toshikazu Nishida, Associate Dean of Academic Affairs, 352-392-0943, nishida@eng.ufl.edu

Software Use

All faculty, staff, and students of the University are required and expected to obey the laws and legal agreements governing software use. Failure to do so can lead to monetary damages and/or criminal penalties for the individual violator. Because such violations are also against University policies and rules, disciplinary action will be taken as appropriate. We, the members of the University of Florida community, pledge to uphold ourselves and our peers to the highest standards of honesty and integrity.

Student Privacy

There are federal laws protecting your privacy with regards to grades earned in courses and on individual assignments. For more information, please see: <https://registrar.ufl.edu/ferpa.html>

Campus Resources:

Health and Wellness

U Matter, We Care:

Your well-being is important to the University of Florida. The U Matter, We Care initiative is committed to creating a culture of care on our campus by encouraging members of our community to look out for one another and to reach out for help if a member of our community is in need. If you or a friend is in distress, please contact umatter@ufl.edu so that the U Matter, We Care Team can reach out to the student in distress. A nighttime and weekend crisis counselor is available by phone at 352-392-1575. The U Matter, We Care Team can help connect students to the many other helping resources available including, but not limited to, Victim Advocates, Housing staff, and the Counseling and Wellness Center. Please remember that asking for help is a sign of strength. In case of emergency, call 9-1-1.

Counseling and Wellness Center: <https://counseling.ufl.edu>, and 392-1575; and the University Police Department: 392-1111 or 9-1-1 for emergencies.

Sexual Discrimination, Harassment, Assault, or Violence

If you or a friend has been subjected to sexual discrimination, sexual harassment, sexual assault, or violence contact the **Office of Title IX Compliance**, located at Yon Hall Room 427, 1908 Stadium Road, (352) 273-1094, title-ix@ufl.edu

Sexual Assault Recovery Services (SARS)

Student Health Care Center, 392-1161.

University Police Department at 392-1111 (or 9-1-1 for emergencies), or <http://www.police.ufl.edu/>.

COVID-19

- You are expected to wear approved face coverings at all times during class and within buildings even if you are vaccinated.
- If you are sick, stay home and self-quarantine. Please visit the UF Health Screen, Test & Protect website about next steps, retake the questionnaire and schedule your test for no sooner than 24 hours after your symptoms began. Please call your primary care provider if you are ill and need immediate care or the UF Student Health Care Center at 352-392-1161 (or email covid@shcc.ufl.edu) to be evaluated for testing and to receive further instructions about returning to campus.

- If you are withheld from campus by the Department of Health through Screen, Test & Protect, you are not permitted to use any on campus facilities. Students attempting to attend campus activities when withheld from campus will be referred to the Dean of Students Office.
- UF Health Screen, Test & Protect offers guidance when you are sick, have been exposed to someone who has tested positive or have tested positive yourself. Visit the [UF Health Screen, Test & Protect website](#) for more information.
- Please continue to follow healthy habits, including best practices like frequent hand washing. Following these practices is our responsibility as Gators.

Academic Resources

E-learning technical support, 352-392-4357 (select option 2) or e-mail to Learning-support@ufl.edu.
<https://lss.at.ufl.edu/help.shtml>.

Career Resource Center, Reitz Union, 392-1601. Career assistance and counseling; <https://career.ufl.edu>.

Library Support, <http://cms.uflib.ufl.edu/ask>. Various ways to receive assistance with respect to using the libraries or finding resources.

Teaching Center, Broward Hall, 392-2010 or 392-6420. General study skills and tutoring.
<https://teachingcenter.ufl.edu/>.

Writing Studio, 302 Tigert Hall, 846-1138. Help brainstorming, formatting, and writing papers.
<https://writing.ufl.edu/writing-studio/>.

Student Complaints Campus: <https://sccr.dso.ufl.edu/policies/student-honor-code-student-conduct-code/>; <https://care.dso.ufl.edu>.

On-Line Students Complaints: <http://www.distance.ufl.edu/student-complaint-process>.