

# ENV 6126 ADV AIR POLLUTION CTRL DESIGN

CLASS NUMBER 13091/22916

CREDIT HOURS: 3, ENGINEERING DESIGN

SEMESTER: FALL 2021

CLASS LOCATION – ZOOM OR CSE-E222 (TUE) & LAR-310 (THU)

CLASS MEETING TIME – TUESDAY PERIODS 8-9 & THURSDAY PERIOD 9; SYNCHRONOUS/IN-PERSON FOR ON-CAMPUS SESSION; FOR ONLINE SESSION, ASYNCHRONOUS IS THE DEFAULT BUT YOU ARE ENCOURAGED TO PARTICIPATE IN THE SYNCHRONOUS SESSION IF YOU CAN

**INSTRUCTOR:** CHANG-YU WU, Office: 406 AP Black Hall, [cywu@ufl.edu](mailto:cywu@ufl.edu), 352-392-0845

**STUDENT HOURS:** Tue & Wed noon-1 pm, or by appointment, through [Zoom](#)

**COURSE TEACHING SCHOLAR (TS):** FARAH ARYAN, Student Hours through Zoom TBD by Doodle in week 1 of class. Please contact through CANVAS

**COURSE WEBSITE:** <http://e-Learning.ufl.edu>

**COURSE COMMUNICATIONS:** During class time, ask question as you would in a physical classroom. If Dr. Wu happened not to notice you have a question, make a sound if in person or use Chat if on Zoom to get attention. Of course, feel free to ask a question through Chat, if you feel more comfortable in that way. After class, please post your question in Discussion board, since others may have the same question and answers will help them too. If you have a private question, send email through CANVAS. Dr. Wu usually responds back within 24 hours.

**REQUIRED TEXTBOOKS:** Air Pollution Control: A Design Approach, C. David Cooper and F. C. Alley, 4<sup>th</sup> Edition, 2011, ISBN 1-57766-678-X. Course notes are developed by the instructor and TS; they are available in CANVAS.

**MATERIALS AND SUPPLIES FEES:** Textbook cost: rent used \$54.38, rent digital \$67.98, buy used \$102.00, buy new \$135.95 or by digital \$101.96 at UF bookstore

**ADDITIONAL RESOURCES:** None.

**COURSE DESCRIPTION:** Principles of particulate and gaseous emission control; design and operation of particulate and gas control equipment for stationary and mobile sources to meet federal emission standards.

**PREREQUISITE KNOWLEDGE AND SKILLS:** ENV 5105 Foundations of Air Pollution

**COURSE GOALS AND/OR OBJECTIVES:** *By the end of this course, students will be able to:*

1. To *explain* and *calculate* the statistics of a given **aerosol size distribution** and properties of gas (pressure, solubility and ideal gas law).
2. To *determine* the movement of aerosols by a given **transport mechanism** (inertial movement, diffusion and electrical migration) and *decide* the dominant collection mechanisms in a given aerosol system
3. To *determine* the major **collection mechanism** for a given gas compound (absorption, adsorption, chemical reaction, combustion, catalytic reaction)
4. To *explain* the **strategies** for NO<sub>x</sub>, SO<sub>2</sub> and CO<sub>2</sub> removal and the **mechanisms** employed

5. To *calculate* the **collection efficiency** of a given pollution control system and *evaluate* various parameters that affect the collection efficiency and cost
6. To *select* and *design* the **most appropriate** air pollution control system for a given particulate or gaseous emission scenario
7. To *explain* and *compare* different methods for controlling emissions from **mobile sources**
8. To *explain* air pollution control techniques to the **professional society** and **general public**

**HOW THIS COURSE RELATES TO THE STUDENT LEARNING OUTCOMES IN THE ENVIRONMENTAL ENGINEERING PROGRAM:**

Outcome	Coverage*
1. An ability to identify, formulate, and solve complex engineering problems by applying principles of engineering, science, and mathematics	High
2. An ability to apply engineering design to produce solutions that meet specified needs with consideration of public health, safety, and welfare, as well as global, cultural, social, environmental, and economic factors	High
3. An ability to communicate effectively with a range of audiences	Medium
4. An ability to recognize ethical and professional responsibilities in engineering situations and make informed judgments, which must consider the impact of engineering solutions in global, economic, environmental, and societal contexts	Medium
5. An ability to function effectively on a team whose members together provide leadership, create a collaborative and inclusive environment, establish goals, plan tasks, and meet objectives	High
6. An ability to develop and conduct appropriate experimentation, analyze and interpret data, and use engineering judgment to draw conclusions	
7. An ability to acquire and apply new knowledge as needed, using appropriate learning strategies	Medium

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

**INSTRUCTIONAL METHODS:** This course will be conducted in flipped format. Before coming to class, you need to review recorded lectures. There is no lecture during class time, and you will participate in team activities for design and discussions through Zoom’s breakout room or in person with your team members, if you can attend the synchronous session. Questions and step-by-step instructions will be provided, and you should be able to solve the problem by following the instruction. The team activities will be recorded, if you cannot attend the synchronous session. A submitted solution sheet gets checked for the given credit counted toward the grade. You are allowed to submit the solution sheet up to 6 days after the date of in-class design of that question. After class, there will be homework questions for your practice. There will also be a project that you will write a final report and give an online presentation at the end of the semester.

**COURSE POLICIES:**

**ATTENDANCE POLICY:** *Attendance is monitored through in-class assignment submission. Importantly, absence in in-class activities may jeopardize your active learning opportunities.*

Requirements for class attendance and make-up exams, assignments, and other work in this course are consistent with university policies that can be found at:

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

**QUIZ/EXAM DATES/POLICIES:** There will be two types of quizzes for each class, a short pre-class quiz and a longer post-class quiz. You should be able to answer the questions without complicated calculations. You need to review the lecture videos before every module and finish a 3-min pre-class quiz (1 multiple choice question) by noon on the day of class (see class schedule). Only content from the video will be tested. NO make-up pre-class quiz will be allowed, but two pre-class quizzes with the lowest grades (for any reason including sickness, family reunion, just feeling lazy or others) for each student will be dropped when calculating the final grade.

Following each module, there is a **20-minute post-class quiz** (8 multiple-choice questions). Contents covered in **video lectures, in-class discussion as well as textbook**, will be included. You should be able to answer the questions without complicated calculations. The quiz is available on CANVAS after each class for that module. You decide when you are ready to take it, but you need to finish it before 11:59 pm 6 days later. You have **two trials** for each quiz.

There is no final exam. We only have **take-home** midterm exams that need to be conducted in a pre-set **48-hr time block**. Each exam consists of two parts. The first part is designed to test your **conceptual understanding** of the subject, and you can expect to answer the questions without using a calculator. It is close book, no notes, no internet search and no discussion with anyone else. This is done through CANVAS/HonorLock and you have **30 minutes** to complete this part once you start. The second part is to test your **quantitative skills** in designing a control device/process; you need a calculator for this part. It is open book, open note and open web, but no discussion with anyone else. You need to download the questions and work on them within **120 minutes** to complete this part once you start. By the end of the 120 minutes, you should show your answers in front of the camera as a proof of your finished work. You have an additional 15 minutes for scanning your answers and for submission, but not for working on the problems. See schedule for topics to be included in each exam.

Post-Quiz and exam are proctored by Honorlock. You need to download the Honorlock Extension before taking them. Check out the [Honorlock Student page](#) for additional support. If you have questions about the initial grading of quiz or exam, check with the TS first. If you still disagree with their judgement, make an appointment with Dr. Wu to present your case.

**MAKE-UP POLICY:** There is **NO make-up** post-class quiz since you will have two trials. Besides, two post-class quizzes with the lowest grades (for any reason including sickness, family reunion, technology failure or just feeling lazy) will be dropped when calculating the final grade.

A make-up for the midterm will be allowed only with a **certified medical reason** or a **family emergency** that is discussed with Dr. Wu prior to the exam. Only one make-up exam is administered, which is comprehensive and is offered near the end of the semester. Since you have a 48-hour time block to do the exam, failures due to technology are not a justifiable reason for requesting a make-up. You are recommended to start your exam early in the time block rather than the last minute of the block.

**ASSIGNMENT POLICY:** Assignments (homework and project proposal/reports) should be submitted **by the beginning of class time on specified dates**. 20% will be deducted for any late assignment (homework, project report) submitted on the same day after class, 40% for that submitted on the 2nd day. Any assignment submitted late for more than 2 days will **NOT** be accepted unless with a certified medical reason or if it is agreed by Dr. Wu prior to the due time with reasonable explanation.

**Homework:** For each homework assignment, **there will be 2 versions submitted**. Questions are posted on CANVAS 1 week before the first deadline unless otherwise specified. The first version of the homework is to be completed to the best of your ability and scanned/submitted to CANVAS. After the first deadline, the solutions will be posted. You are then **responsible for grading your own assignment** and making all necessary corrections. Then the self-graded and corrected version of the homework will be scanned/submitted by the **second deadline 5 days later**, which will be verified by the TS. Both versions have the same weighting of the grade.

Note that at least 40% of the midterm problems will be similar to homework questions. Discussion among students is allowed, but copying from other student's work is unacceptable (e.g., same mistakes) and both students will be reported to the University.

If your procedure is correct but there are errors in calculation, you get partial credit. It's important to **SHOW YOUR PROCEDURE CLEARLY**. You won't get any credit if your procedure is wrong or unclear, even if the numbers are mysteriously correct. If you use any number from any table or graph, you need to CITE the source (e.g. Table 1.1). There will be no credit for magic numbers that appear in the solution.

For questions that involve calculation, the following steps should be followed:

- i. List all given conditions and parameters, e.g.  $T = 298 \text{ K}$ ,  $P = 1 \text{ atm}$ ,  $R = 8.314 \text{ J/mole}\cdot\text{K}$  and their sources, e.g. Textbook Appendix B; Fig. 14-1 in textbook.
- ii. For each step, the equation used for calculation should be listed, followed by the specific numbers replacing the parameters. Units should also be included in the calculation.
- iii. The most important thing is to show the flow of your thought in solving the problem. Both handwriting and typing are acceptable, but they need to be clear, neat and organized.

An example of homework preparation is given below. Be sure to follow the format before you submit your homework. It also helps you to get more scores in your exams.

Q1 The secondary NAAQS for  $\text{SO}_2$  is 0.5 ppm (for a 3-hr avg). Calculate the equivalent conc. in  $\mu\text{g}/\text{m}^3$  at standard temperature and pressure (STP:  $T = 25 \text{ }^\circ\text{C}$ ,  $P = 1 \text{ atm}$ )

Given:

$$C_{\text{ppm}} = 0.5 \text{ ppm}$$

Solution:

Since it is at STP, use Equation 1.9

$$MW_p = 64 \text{ g/gmol}$$

$$C_{\text{mass}} = 1000 \times C_{\text{ppm}} \times MW_p / 24.45 \text{ L/gmol} = 1000 \times 0.5 \text{ ppm} \times 64 \text{ g/gmol} / 24.45 \text{ L/gmol} \\ = \mathbf{1309 \mu\text{g}/\text{m}^3}$$

TS is here to help you. If you have questions regarding your homework, **TS is your first aid**.

**Project:** Select an industry (that may have various air pollutants) or an air pollutant (that may be present in various industries). Identify the major air pollution problems generated by that industry (if you choose an industry), the regulations (Federal/State/Local, EPA/OSHA) and control techniques that can be applied to handle those pollution problems. If you choose a pollutant, identify the industries that may generate that pollutant, the regulation (Federal/State/Local, EPA/OSHA) and control techniques that can be applied to handle that pollutant. Also, discuss the health effects and environmental impact resulting from the pollution. A (virtual) tour to a real facility and/or an interview with an employee at a facility is recommended. You are encouraged to present your project in the annual EES Student Poster Competition to be held in spring. Below are examples of the industries/pollutants (though not limited to):

- Food (coffee, meat smokehouse, bread baking, beer, wine); Health care facility, Hospital; Agriculture (sugarcane, citrus, saw mill); Sewage sludge treatment; Cremation; Petroleum, natural gas, home furnace, waste-to-energy, integrated gasification combined cycle (IGCC); Evaporation loss (dry cleaning, surface coating, asphalt, textile printing); Chemical process (carbon black, explosives, paint, soap & detergent, pharmaceutical, pulp & paper); Metallurgical (iron & steel mill, metal smelting, battery, welding); Mineral products (phosphate fertilizer, brick, gypsum, cement, glass)
- Mercury; dioxin; soot; Cr<sup>6+</sup>; CO, CO<sub>2</sub>; Airborne Allergens; Environmental tobacco smoke, secondhand smoke, thirdhand smoke, e-cigarettes; flame retardants, PFAS; 3D-printer emission; COVID-19; seasonal flu

A **2-Page Proposal** (1.5 line spacing, 12 Times New Romans, 1-inch margin on each side, letter size paper, no handwriting) should be submitted through CANVAS. Discuss with Dr. Wu to settle on the topic, since each topic is allowed for one group only. A **2-Page Midterm Progress Report**, a **12-page Final Project Report**, and a **Final Project Presentation** are required, and their due dates are listed at CANVAS.

The final report should be **reviewed** by one other student before submission. It is your responsibility to arrange the review done before submission, and the reviewer should sign on the draft (which should be submitted, too). 3% of your project's final grade is based on the inclusion of the review, and 2% of your project final grade is based on your review of other's report. The purpose of this review is to get comments/suggestions from your classmates (regarding content, format, flow, etc.), and you certainly should incorporate the comments/suggestions in the final version to be submitted. The weighting of the grade: proposal 15%, midterm progress report 15%, final presentation 35% and final report 30%.

**Guidelines for the proposal/reports/presentation are available at CANVAS.**

You can also opt to create a **video** for your project that can get a **bonus** up to **25% of the project grade**. If a video is in your plan, you need to include relevant information in the midterm progress report. As a rule of thumb, such a video should be no more than 10 minutes in length. You can pre-record your formal presentation in the conventional fashion, but that's not as exciting. Instead, you are encouraged to use your creativity to make an informative and attractive video in a novel way. The video should be up and running by 11:59 pm on Thanksgiving Sunday, regardless of your presentation day.

**COURSE TECHNOLOGY:** Zoom, Word, Excel, PowerPoint, PDF Reader, and internet browser. Information about course technology can also be inquired at *the UF Help Desk*.

- <http://helpdesk.ufl.edu>
- (352) 392-HELP - select option 2

**ONLINE 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.aa.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.aa.ufl.edu/public-results/>.

## GRADING POLICIES:

### METHODS BY WHICH STUDENTS WILL BE EVALUATED AND THEIR GRADE DETERMINED:

Assignment	Total Points	Percentage of Final Grade
In-Class Activities	0.5 each	8%
Homework Sets (3)	80-120 each	18%
Pre-Class Quizzes (15)	1 each	5%
Post-Class Quizzes (16)	8 each	18%
Midterm Exams (3)	100	27%
Project	100	24%
		100%

Consult with Dr. Wu if you'd elect to use the **UG grading scheme** so that you can work in group. You still get G credits by choosing the UG grading scheme.

### INFORMATION ON CURRENT UF GRADING POLICIES FOR ASSIGNING GRADE POINTS:

Grade point is assigned per UF policy at <https://catalog.ufl.edu/ugrad/current/regulations/info/grades.aspx>

### GRADING SCALE:

Percent	Grade	Grade Points
95.0 - 100	A	4.00
90.0 – 94.9	A-	3.67
85.0 - 89.9	B+	3.33
80.0 - 84.9	B	3.00
75.0 - 79.9	B-	2.67
70.0 - 74.9	C+	2.33
65.0 - 69.9	C	2.00
60.0 - 64.9	C-	1.67
55.0 - 59.9	D+	1.33
50.0 - 54.9	D	1.00
45.0 – 49.9	D-	0.67
0 - 44.9	E	0.00

## COURSE SCHEDULE:

**CRITICAL DATES:** Midterm: 09/24, 10/22, 11/19; Project proposal: 10/01; Project midterm report: 10/29; Project final report: 12/10; Homework: 09/24, 10/22, 11/17.

**A WEEKLY SCHEDULE OF TOPICS AND ASSIGNMENTS:** See Sched-APCD.docx for details as well as Assignments in CANVAS.

## UF POLICIES:

**UNIVERSITY POLICY ON ACCOMMODATING STUDENTS WITH DISABILITIES:** 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/>. Once registered, students will receive an accommodation letter which must be presented to the instructor when requesting accommodation. 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.

**UNIVERSITY POLICY ON ACADEMIC CONDUCT:** 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 honesty 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 Honor Code (<http://www.dso.ufl.edu/sccr/process/student-conduct-honor-code/>) specifies a number of behaviors that are in violation of this code and the possible sanctions. Furthermore, you are obligated to report any condition that facilitates academic misconduct to appropriate personnel. If you have any questions or concerns, please consult with Dr. Wu or TS in this class.

**CLASS DEMEANOR OR NETIQUETTE:** All members of the class are expected to follow rules of common courtesy in all email messages, threaded discussions and chats.

**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:

<http://registrar.ufl.edu/catalog0910/policies/regulationferpa.html>

Our class sessions may be audio visually recorded for students in the class to refer back and for enrolled students who are unable to attend live. Students who participate with their camera engaged or utilize a profile image are agreeing to have their video or image recorded. If you are unwilling to consent to have your profile or video image recorded, be sure to keep your camera off and do not use a profile image. Likewise, students who un-mute during class and

participate orally are agreeing to have their voices recorded. If you are not willing to consent to have your voice recorded during class, you will need to keep your mute button activated and communicate exclusively using the "chat" feature, which allows students to type questions and comments live. The chat will not be recorded or shared. As in all courses, unauthorized recording and unauthorized sharing of recorded materials is prohibited.

### **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.

### **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](mailto: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.

## **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](mailto: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:** <http://www.counseling.ufl.edu/cwc>, 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](mailto: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/>.

### Academic Resources

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

**Career Resource Center**, Reitz Union, 392-1601. Career assistance and counseling. <https://www.crc.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://www.dso.ufl.edu/documents/UF\\_Complaints\\_policy.pdf](https://www.dso.ufl.edu/documents/UF_Complaints_policy.pdf).

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

**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 and systemic racism. 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](mailto:jpennacc@ufl.edu)
- Curtis Taylor, Associate Dean of Student Affairs, 352-392-2177, [taylor@eng.ufl.edu](mailto:taylor@eng.ufl.edu)
- Toshikazu Nishida, Associate Dean of Academic Affairs, 352-392-0943, [nishida@ufl.edu](mailto:nishida@ufl.edu)

**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](mailto:title-ix@ufl.edu)

## GETTING HELP:

For issues with technical difficulties for Canvas, please contact the UF Help Desk at:

- <http://helpdesk.ufl.edu>
- (352) 392-HELP (4357)
- Walk-in: HUB 132

Any requests for make-ups due to technical issues **MUST** be accompanied by the ticket number received from the Help Desk when the problem was reported to them. The ticket number will document the time and date of the problem. You **MUST** e-mail your instructor within 24 hours of the technical difficulty if you wish to request a make-up.

Other resources are available at <http://www.distance.ufl.edu/getting-help> for:

- Counseling and Wellness resources
- Disability resources
- Resources for handling student concerns and complaints
- Library Help Desk support

Should you have any complaints with your experience in this course, please visit <http://www.distance.ufl.edu/student-complaints> to submit a complaint.

**Disclaimer:** This syllabus represents current plans and objectives. As we go through the semester, those plans may need to change to enhance the class learning opportunity. Such changes, communicated clearly, are not unusual and should be expected.