Fluid and Energy Transfer Operations Laboratory
(Unit Operations Lab 1)
ECH 4224L
Sections 055G (Mondays), 2449 (Wednesdays), 3535 (Thursdays), and 6342 (Fridays)

Class Periods: 2 - 5 (8:30 am – 12:35 pm)
Location: Unit Operations Lab (CHE 100, 200, 300)
Academic Term: Spring 2020

Instructor:

Dr. Fernando Mérida
You can call me Prof./Dr. Mérida, or “Fernando” if you feel comfortable by doing it so. Remember that calling your instructors by their names must encompass the same level of professionalism and respect than using professional titles.

e-mail: fmerida@ufl.edu
Office: ChE Building, room # 217, Tel. 352-294-7504
Office Hours: Mondays and Wednesdays, 4:05 pm – 4:55 pm (period 9)
*** Edits to some dates and/or times may be posted on Canvas

Contacting Dr. Mérida:

• E-mail is the preferred communication platform. Please make sure the subject line of your e-mail has the label “ECH 4224L – Question”. Please expect a response within 36 hours (M-F) and within 48 hours (weekend).

• I have an open-door policy during office hours, so feel free to come in. However, priority will be given to meetings with students during office hour when planned in advanced via e-mail. While it will be challenging for me to remember the name of every students from all the different sections, please say your name, section, and group number when you come in (e.g. Good afternoon, I am Daenerys Targaryen from Wednesday section, group 3). Meeting outside office hours can be made only when strictly necessary and these meetings will be scheduled by appointment via e-mail only.

• Announcements will be periodically posted on Canvas.

Peer-Tutors:

• Please use “peer-tutor” or simply “tutor” for the people that will guide you during experiments in the lab. Avoid the use of “TA” since this title refers to a student in a completely different role.

• Please contact peer-tutors through the Canvas website or via e-mail. Modifications in the list below may be necessary and will be communicated through Canvas if necessary.

<table>
<thead>
<tr>
<th>Name</th>
<th>e-mail</th>
<th>Sections and Modules*</th>
</tr>
</thead>
<tbody>
<tr>
<td>Melanie Richardson</td>
<td><a href="mailto:marichardson@ufl.edu">marichardson@ufl.edu</a></td>
<td>Mon TFE</td>
</tr>
<tr>
<td>Douglas Jarrard</td>
<td><a href="mailto:dcj@ufl.edu">dcj@ufl.edu</a></td>
<td>Wed FLU</td>
</tr>
<tr>
<td>Justin Lane</td>
<td><a href="mailto:jlane1@ufl.edu">jlane1@ufl.edu</a></td>
<td>Thu FIL</td>
</tr>
<tr>
<td>Jamie Hendren</td>
<td><a href="mailto:jhendren@ufl.edu">jhendren@ufl.edu</a></td>
<td>Fri H&amp;B</td>
</tr>
<tr>
<td>Maria Lozada</td>
<td><a href="mailto:mlozada@ufl.edu">mlozada@ufl.edu</a></td>
<td></td>
</tr>
<tr>
<td>William Watson</td>
<td><a href="mailto:willwat@ufl.edu">willwat@ufl.edu</a></td>
<td></td>
</tr>
<tr>
<td>Whitney Schramm</td>
<td><a href="mailto:whitney001@ufl.edu">whitney001@ufl.edu</a></td>
<td></td>
</tr>
<tr>
<td>Zachary Miller</td>
<td><a href="mailto:zacharymiler@ufl.edu">zacharymiler@ufl.edu</a></td>
<td></td>
</tr>
<tr>
<td>Chengbo Liang</td>
<td><a href="mailto:itsjohnman1000@ufl.edu">itsjohnman1000@ufl.edu</a></td>
<td></td>
</tr>
<tr>
<td>Daniela Tovar</td>
<td><a href="mailto:dany1038@ufl.edu">dany1038@ufl.edu</a></td>
<td></td>
</tr>
<tr>
<td>Danielle Woodcock</td>
<td><a href="mailto:daniwood21@ufl.edu">daniwood21@ufl.edu</a></td>
<td></td>
</tr>
<tr>
<td>Holden Young</td>
<td><a href="mailto:holden.young@ufl.edu">holden.young@ufl.edu</a></td>
<td></td>
</tr>
<tr>
<td>Ibrahim Kothawala</td>
<td><a href="mailto:ikothawala@ufl.edu">ikothawala@ufl.edu</a></td>
<td></td>
</tr>
<tr>
<td>Luis Perez-Gonzalez</td>
<td><a href="mailto:lperezgonzalez@ufl.edu">lperezgonzalez@ufl.edu</a></td>
<td></td>
</tr>
<tr>
<td>Dominic Wildsmith</td>
<td><a href="mailto:dwildsmith@ufl.edu">dwildsmith@ufl.edu</a></td>
<td></td>
</tr>
</tbody>
</table>

Unit Operations Lab 1, ECH 4224L
Dr. Fernando Mérida, Spring 2020
* Description of acronyms for experimental modules is given in the Module Description section.

**Additional point persons in the lab:**
- Safety Supervisor: Whitney Schramm (whitney001@ufl.edu)
- Lab Engineer: Mr. Preston Towns (Room # 118)

**Course Description**
(2 credits) Laboratory work in unit operations involving heat and momentum transfer.

**Course Pre-Requisites**
ECH 3101 (Process Thermodynamics), ECH 3203 (Fluid and Solid Operations), ECH 3223 (Energy Transfer Operations), ENC 3246 (Professional Communication for Engineers)

**Course Co-Requisites**
ECH 4714L (Safety and Experimental Evaluation)

**Materials and Supply Fees:** $100.24

**Course Objectives**
1. Reinforce classroom theory by the collection and use of data in practical experiments with all their inherent problems and limitations.
2. Gain proficiency in writing technical reports and oral presentations.
3. Gain experience in working in teams.
4. Create a sense of professional responsibility for the quality and integrity of engineering work.
5. Learn the importance of working under Safety guidelines thus promoting a safe environment for others.
6. Learn equipment, instrumentation, and procedures not covered in lectures.
7. Learn and use concepts of statistical analysis and Design of Experiments, whenever is possible.

**Professional Component (ABET):**
This course is focused on experimental studies of thermodynamics and heat and momentum transfer in the context of unit operations. Theoretical concepts learned in other courses are illustrated by experiments. Technical communications are emphasized.

**Relation to Program Outcomes (ABET):**

<table>
<thead>
<tr>
<th>Outcome</th>
<th>Coverage</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. An ability to identify, formulate, and solve engineering problems by applying principles of engineering, science, and mathematics</td>
<td></td>
</tr>
<tr>
<td>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</td>
<td></td>
</tr>
<tr>
<td>3. An ability to communicate effectively with a range of audiences</td>
<td>✓</td>
</tr>
<tr>
<td>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</td>
<td></td>
</tr>
<tr>
<td>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</td>
<td>✓</td>
</tr>
</tbody>
</table>
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

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**Canvas website:** [http://elearning.ufl.edu/](http://elearning.ufl.edu/)

This website will be used as the main source of resources for preparation and submission of assignments (pre-lab and post-lab homework, lab reports, special assignments, peer-tutor and class mid-term evaluations, etc. as well as posting of grades, announcements, and general information for the class.

- **Experiments:** Most of the documents required for experiments are uploaded in various folders in Canvas. These documents include basic theory, system configuration, standard operation procedures (SOPs), report guidelines, technical information for some experiments, etc.
- **Assignments:** Guidelines for pre-lab and post-lab homework, guidelines and special information for preparation of laboratory reports, special assignments, posting of grades, and announcements.

**Unit Operations Lab website:** [http://ww2.che.ufl.edu/unit-ops-lab//ech4224L.htm](http://ww2.che.ufl.edu/unit-ops-lab//ech4224L.htm)

This website will be used for supporting information. Please note that the course website will be under construction throughout the present semester.

**Recommended Literature:**
The following titles are recommended to support fundamentals and theoretical background, physical constants, empirical correlations, and other concepts:


There is no required textbook for this class.

**Course overview**
- The course consists of four experimental modules and each module may have one or more experiments.
- Each module lasts for three weeks and this three-week period will be called “Rotation”.
- Each course section is divided into groups of four or less students and the groups rotate through all four modules. A few groups may have a fifth member depending on enrollment at the beginning of the semester.
- Pre-lab reports will be required at the beginning of each module.
- During and after completion of experiments the groups are required to submit progress and final reports, and/or post-lab homework (see the “Homework” section).
- A complete schedule of modules throughout the semester will be uploaded and periodically updated via Canvas website. This schedule will be in the Canvas’ Home Page so each student must check it periodically to keep track of due dates for all the assignments.
- **Regardless of individual contributions, each team member is responsible for understanding all elements of each experiment in the different modules.**
Module description
The four modules are subdivided into one or more experiments during the three weeks that each module lasts (rotation). Groups will complete four rotations across the four modules throughout the semester. Names and nomenclature are provided below.

- **Module 1**: Thin Film Evaporator (TFE)
  - Single experiment: TFE
    [weeks 1, 2, 3]

- **Module 2**: Fluids (FLU)
  - Experiment 1: Fluid flow in pipes (FF)
    [weeks 1 and 2]
  - Experiment 2: Small fluid experiments (SFE)
    [week 3]

- **Module 3**: Filtration (FIL)
  - Experiment 1: Batch filtration (BF)
    [week 1]
  - Experiment 2: Continuous filtration (CF)
    [weeks 2 and 3]

- **Module 4**: Heat Exchanger and Fluidized Bed (H&B)
  - Experiment 1: Heat Exchanger (HX)
    [weeks 1 and 2]
  - Experiment 2: Fluidized Bed (FB)
    [weeks 2 and 3]

Course schedule
The table below depicts an example of the typical workflow throughout the semester for the four groups in any given section. Modifications to this course schedule may be necessary due to holidays as indicated in the academic calendar, class cancellation due to other reasons (e.g. hurricane/storm warning), or other reasons not listed in this document. Announcements will be posted on Canvas regarding the modification of the course schedule.
### Attendance Policy, Class Expectations, and Make-Up Policy

- Class attendance is mandatory for all lab sessions, no exceptions.
- In case of missed classes due to justifiable reasons that can be planned in advance (i.e. job interview, medical appointments, etc.) the student must notify the course instructor with copy to the peer-tutor as soon as the students knows. In case of situations which cannot be planned in advance or emergencies, the student still must notify the course instructor and peer-tutor no later than 10:00 am the day of the corresponding lab.
- All missed labs due to justifiable reasons must be made up. To make up a lab, the students will be required to perform the missed experiment with another group in another day-section. Students not making up a missed will receive a failure grade in the class.
- The Unit Ops Lab has an explosion proof requirement for all electronics. In addition, there is a Personal Protective Equipment (PPE) policy that is mandatory for all students (see Safety section) thus the use of cell phones, tablets and/or laptops is strictly prohibited (rooms 100, 200, and 300). They can be used in rooms 200A and 300A whenever is necessary and it doesn’t involve an interruption in the work of others.
- The Unit Ops Lab has a Personal Protective Equipment (PPE) policy that includes the use closed-toe shoes, long sleeve pants, hard hats, and safety glasses at all times. Additional PPE and Safety instructions will be given during the orientation meeting which will take place the first day of classes.
- 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**

<table>
<thead>
<tr>
<th>Assignment</th>
<th>% Final Grade</th>
</tr>
</thead>
<tbody>
<tr>
<td>Final Reports (4)</td>
<td>40%</td>
</tr>
<tr>
<td>Pre-lab Reports (4)</td>
<td>20%</td>
</tr>
<tr>
<td>Progress Reports (4)</td>
<td>10%</td>
</tr>
<tr>
<td>Post-lab homework (2)</td>
<td>10%</td>
</tr>
<tr>
<td>Quizzes</td>
<td>10%</td>
</tr>
<tr>
<td>Peer-Evaluations*</td>
<td>5%</td>
</tr>
<tr>
<td>Lab participation**</td>
<td>5%</td>
</tr>
<tr>
<td><strong>Final Grade</strong></td>
<td><strong>100%</strong></td>
</tr>
</tbody>
</table>

* Peer-evaluation grade will be based on evaluations provided by the group members along with self-evaluation, specifically related to involvement in preparation of group assignments.

** The class participation grade will be based on the peer-tutor feedback and course instructor’s observations.

A failing grade for participation will result in a failing course grade.

**Grading Policy**

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

More information on UF grading policy may be found at: [https://catalog.ufl.edu/ugrad/current/regulations/info/grades.aspx](https://catalog.ufl.edu/ugrad/current/regulations/info/grades.aspx)

**Safety**

Students are expected to know and follow safe operating procedures of the equipment as well as proper handling of hazardous materials. The students are required to attend a safety orientation session at the beginning of the semester. This orientation/safety meeting is strictly mandatory. Failure to follow safe operating procedures will result in a significant grade reduction. Examples of safety violations are listed below (this list is not exhaustive):

- Explosion proof requirement for all electronics used in the Unit Ops Lab: the use of cell phones, tablets and/or laptops, and similar electronics is strictly prohibited (rooms 100, 200, and 300). They can be used in rooms 200A and 300A whenever is necessary and it doesn’t involve an interruption in the work of others.
- The Unit Ops Lab has a Personal Protective Equipment (PPE) policy that includes the use closed-toe shoes, long sleeve pants, long socks (e.g. no ankles exposed), hard hats, and safety glasses at all times. The use of ripped jeans, leggings, tank tops, “spaghetti”- type blouses/shirts is not allowed. Additional PPE and Safety
instructions will be given during the first meeting (first week of the semester) and it will be assessed via Safety assignment.

<table>
<thead>
<tr>
<th>Safety violation</th>
<th>Penalty</th>
</tr>
</thead>
<tbody>
<tr>
<td>Leaving the lab without shutting down an experimental system</td>
<td>Failing grade</td>
</tr>
<tr>
<td>Not wearing PPE required by an experiment</td>
<td>Letter grade reduction</td>
</tr>
<tr>
<td>Not disposing of hazardous waste properly</td>
<td>Letter grade reduction</td>
</tr>
<tr>
<td>Not handling a chemical spill properly</td>
<td>Letter grade reduction</td>
</tr>
<tr>
<td>Causing a spill due to negligence (e.g., by opening wrong valves).</td>
<td>Letter grade reduction</td>
</tr>
<tr>
<td>Bringing food or drink into the lab</td>
<td>Letter grade reduction</td>
</tr>
</tbody>
</table>

**Homework, due dates, format, and policies:**

Instructions to prepare all assignments are available in the Canvas website. Due dates are specified below though groups must check the Course Schedule available in the Canvas Home Page for specific dates during throughout the semester. Additional instructions will be given via announcements in Canvas or via e-mail.

**Group assignments:**

- **Pre-Lab Report:** Format: mini-presentation (PowerPoint) and pre-lab report (Word). You must deliver a short presentation (~ 20 minutes) along with a pre-lab report with the overview of the experiment. Specific sections and guidelines are available in Canvas. Presentations will take place in the Unit Ops Lab or the course instructor’s office, and will be evaluated by peer-tutors and the course instructor. The pre-lab report will be evaluated by the course instructor. Absences in presentations or pre-lab report late submissions will not be allowed unless it is due to an acceptable reason (see the attendance policy). This assignment is due the week 1 of each Rotation at the beginning of the experiment.

- **Progress Report:** Format: printed document, typed only (Word). You must work on calculations required to process the results of experiments. These can be sample calculations and/or mathematical predictions using results collected during week 1 of each rotation. The document must also include a Graphical Data Analysis. Specific details and guidelines are available in the Canvas website. This assignment will be collected and discussed with peer-tutors and/or course instructor, and it is due the week 2 of each Rotation. Have in mind that discussion of progress reports may involve reviewing your electronic calculations so the group must have the file handy (e.g. flashdrive). No late submissions will be allowed.

- **Final Reports:** Format: submitted via Canvas (Word along with Excel spreadsheet). All experiments (except SFE and FB) require submitting a final report via Canvas website one week after each experiment is completed (until 11:59 pm). Specific details and guidelines for reports are available in the Canvas website. Report submission in Canvas includes the Word file along with the Excel spreadsheet with all calculations. Late Report submissions will be penalized by a 20% grade reduction for each day the report is overdue, with a maximum deduction of 60% (e.g. no late submissions will be allowed three days after the original deadline). Details on report preparation are provided in Canvas and discussed with more detail here: [http://www2.che.ufl.edu/unit-ops-lab//pdf-files/report_guidelines_rev3.1.pdf](http://www2.che.ufl.edu/unit-ops-lab//pdf-files/report_guidelines_rev3.1.pdf)

- **Post-Lab Homework:** Format: submitted via Canvas (Word along with Excel spreadsheet). Small Fluid Experiments (SFE) and Fluidized Bed (FB) require submitting a post-lab homework via Canvas website one week after experiments are completed (until 11:59 pm). Specific details and guidelines for post-lab homework are available in the Canvas website. Post-Lab submission in Canvas includes the Word file along with the Excel spreadsheet with all calculations. Late Post-Lab homework submission will be penalized by a 20% grade reduction for each day the report is overdue, with a maximum deduction of 60% (e.g. no late submissions will be allowed three days after the original deadline).

**Individual assignments:**

- **Quizzes:** Format: paper, handwritten. Quizzes will be administered and proctored by peer-tutors in the Unit Ops lab before starting the experimental work of each week in all rotations. Quizzes will contain simple
questions on either of these aspects: theoretical background, equipment operation, safety, and must be answered in an organized, legible, and clear fashion. Quizzes will be rescheduled only for those students who missed them due to an acceptable reason (see the attendance policy). Students must notify the course instructor and peer-tutor about the situation before the quiz. Students arriving late without prior notice qualifying for an excused absence will not be able to retake the quiz. The use of notes, manuals, or any other material during quizzes is not allowed. A failing grade will be assigned to students whose cumulative quiz grade is less than 50%.

- **Safety and Statistical Analysis homework**: Format: *Canvas submission, PDF*. You must submit your homework the day before your very first day of experiments, until 11:59 pm (January 12 – 16), depending on your day-section. Details for the preparation of this assignment are available in Canvas.

- **Report writing**: Format: *Canvas submission, PDF*. You must submit your homework the day before week 3 of Rotation 1 until 11:59pm (Feb 2 – 6, depending on your day-section). Details for the preparation of this assignment are available in Canvas.

### Additional details on schedule for each experiment

**a) Before the experiment:**

- Review theory, safety manual, and operating instructions posted on Canvas and the Lab website.
- If necessary, meet with the instructor or the peer-tutor to discuss the upcoming experiment.
- Answer pre-lab questions posted on the Lab website. Written/typed answers to the pre-lab questions should be submitted to your peer-tutors at the beginning of the lab session.

**b) During the experiment:**

- Get acquainted with equipment.
- Learn proper start-up and shutdown procedures.
- Learn how to perform measurements.
- Learn about limits of the system.
- Experiment with the system under various conditions.
- Perform basic checks of your data (e.g., mass and energy balances) during the experiment. Avoid a situation in which you collect data just to discover that it does not satisfy the mass or energy balance after you are out of the lab and writing your report. It is necessary to perform the basic checks during the lab and repeat an experiment, if necessary.
- Your preliminary analysis will be reviewed by the Peer Tutors and will contribute to your lab participation grade.

**c) After the experiment:**

- All reports / post-lab homework are group assignments thus you must coordinate with your team to analyze data and write or prepare these documents.
- See the Homework section for specific details.

### Guidelines for the Lab Reports

1. Detailed guidelines and grading rubrics are posted in Canvas under “Files”. Reports will be graded on both technical content and communication effectiveness.

2. Reports should be written using complete sentences, with correct spelling and grammar. All symbols should be defined on their first use. Clarity and brevity will be rewarded; sloppy thinking and writing will be penalized.
3. Do not copy theoretical derivations from a textbook or a website. Instead, clearly state assumptions behind a derivation, provide relevant derivation results, and cite your sources.

4. Pre-lab (PL) and final reports (FR) must be submitted via Canvas in their corresponding format. Progress reports (PR) will be submitted in hard copies.

5. In addition to a report file, your submission should contain all supporting information, such as spreadsheet files with your data and files with your computer codes. However, your reports should be self-contained, i.e. one should be able to understand your work by reading your report without referring to supporting materials.

**Guidelines for Experiments and Data Analysis**

1. Check energy and material balances.
2. Investigate effects of all control parameters on the experimental results.
3. Almost all experiments should be performed at a steady state. Exceptions are the batch filtration and the 3-tank experiments.
4. Clearly identify and justify all assumptions in your theoretical calculations.
5. Compare the measured data with your theoretical calculation.
6. Check reproducibility of your data. Whenever possible, **perform at least three runs for each experimental condition** and obtain error estimates by computing standard deviations based on these runs. Report the average values and error estimates in the main text of the report and provide an appendix containing data for all experimental runs.
7. Report any anomalous results and discuss their possible sources.
8. Use spreadsheets (e.g., Excel) to store your data. Use Python (or another equivalent programming language) for data analysis and theoretical calculations. Use of spreadsheets for complex calculations is discouraged due to difficulty of their debugging.
9. Make sure that your objectives can be met with your operating conditions. It is easy to choose conditions that are outside of the performance limits of the apparatus or produce results with no measurable difference. Carefully study the limitations of the existing experimental apparatus as a part of the planning process rather than finding out in the laboratory that the experimental values obtained are useless.

**Students Requiring Accommodations**

Students with disabilities requesting accommodations should first register with the Disability Resource Center (352-392-8565, [https://www.dso.ufl.edu/drc](https://www.dso.ufl.edu/drc)) by providing appropriate documentation. Once registered, students will receive an accommodation letter which must be presented to the instructor when requesting accommodation. Students with disabilities should follow this procedure 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.aa.ufl.edu/students/](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.bluer.com/ufl/](https://ufl.bluer.com/ufl/). Summaries of course evaluation results are available to students at [https://gatorevals.aa.ufl.edu/public-results/](https://gatorevals.aa.ufl.edu/public-results/).

**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 Honor Code ([https://sccr.dso.ufl.edu/policies/student-honor-code-student-conduct-code/](https://sccr.dso.ufl.edu/policies/student-honor-code-student-conduct-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 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
• Robin Bielling, Director of Human Resources, 352-392-0903, rbielling@eng.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: 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

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

Unit Operations Lab I, ECH 4224L
Dr. Fernando Mérida, Spring 2020
**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](https://lss.at.ufl.edu/help.shtml).

**Career Resource Center**, Reitz Union, 392-1601. Career assistance and counseling. [https://www.crc.ufl.edu/](https://www.crc.ufl.edu/).

**Library Support**, [http://cms.uflib.ufl.edu/ask](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/](https://teachingcenter.ufl.edu/).

**Writing Studio, 302 Tigert Hall**, 846-1138. Help brainstorming, formatting, and writing papers. [https://writing.ufl.edu/writing-studio/](https://writing.ufl.edu/writing-studio/).
