

Professional Development of Chemical Engineers

ECH 2934

Class Periods: Tuesdays, Period 6 (12:50 pm - 1:40 pm)

Location: CSE E222

Academic Term: Spring 2024

Instructor: Prof. Dmitry Kopelevich

- Email: dkopelevich@che.ufl.edu
- Phone: (352)-392-4422
- Office: CHE 315
- Office Hours:
 - Tuesdays, 2-4 pm
 - Book appointments outside this time via email

Contacting Me:

- E-mail is the preferred communication platform. Please expect a response within 24 hours (M-F) and within 48 hours (weekend).
- Announcements will be periodically posted on Canvas. Therefore, be sure to have your notifications turned on.

Course Description:

(1 credit) Introduces the Chemical Engineering profession and a wide range of careers, including chemical, energy, pharmaceutical, semiconductor, and food industries, as well as graduate and professional school pathways. Provides resources to build successful professional careers, including best practices for interviewing, oral presentations, and teamwork. Also discusses professional codes of conduct and ethical decision-making.

Course Pre-Requisites/Co-Requisites

None

Required Textbooks and Software

No required textbook. Additional materials and literature will be provided.

Materials and Supply Fees

None

Course Objectives

This course aims to provide undergraduate Chemical Engineering students with strategies and resources to explore the vast world of opportunities to build a solid professional career. In this course, the students will

1. Identify main career pathways for undergraduate students of Chemical Engineering.
2. Identify industries with high prospective career opportunities for Chemical Engineers highlighting those with potential for internships, co-ops, and full-time opportunities.
3. Identify Graduate School programs (Master and Doctorate) and other post-graduate professional opportunities. Learn basic elements of application process, school selection, and specialization areas.
4. Plan a successful attendance of the UF Career showcase by identifying and using the available resources of the UF Career Connections Center.
5. Improve relevant communication skills in the professional environment:
 - 5.1 Prepare professional documents such as Resume, Curriculum Vitae, Cover Letters, and LinkedIn profile.
 - 5.2 Practice interviews, elevator pitches, and oral presentations.
6. Identify other resources for successful career paths, such as student and professional associations.
7. Identify strategies to overcome challenges in various career pathways.

8. Identify the process of ethical decision-making based on professional ethical codes.
9. Prepare oral presentations based on a contemporary issue in Chemical Engineering.

Relation to Program Outcomes (ABET):

Outcome	Coverage*
1. An ability to identify, formulate, and solve complex engineering problems by applying principles of engineering, science, and mathematics	
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	
3. An ability to communicate effectively with a range of audiences	High
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	Medium
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	Low

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

Course Schedule

Preliminary course schedule is shown in the table below. Adjustments to the schedule may be required and, if that is the case, students will be informed via Canvas announcements. Furthermore, an up-to-date schedule will be posted on Canvas.

Week	Date	Topic
1	Jan. 9	Introduction. What is Chemical Engineering?
2	Jan. 16	Guest Lecture by Sudhir Chapnerkar, retired VP of Xerox
3	Jan. 23	Guest Lecture: Preparing for Career Fairs (Jessica Hendrick, UF Career Connections Center)
4	Jan. 30	Guest Lecture (TBA)
	Jan. 31	Career Showcase: Attendance is mandatory!
5	Feb. 6	Career Pathways: Industry
6	Feb. 13	Career Pathways: Graduate and Professional Schools
7	Feb. 20	Professionalism and Teamwork
8	Feb. 27	Elements of Oral Presentations
9	Mar. 5	Guest Lecture: Career Pathways in Semiconductor Industry (Prof. Sumant Patankar, UF)
10	Mar. 19	Guest Lecture: Career Pathways in Food Industry (Rachel Madden, PepsiCo)

11	Mar. 26	Guest Lecture: Career Pathways in Biotech Industry (Prof. Whitney Stoppel, UF)
12	Apr. 2	Recognizing and Avoiding Plagiarism Engineering Ethics
13	Apr. 9	Engineering Ethics (cont'd)
14	Apr. 16	Chemical Engineers in Various Industries
15	Apr. 23	Final Presentations

Attendance Policy, Class Expectations, and Make-Up Policy

- Class attendance is mandatory.
 - Students are given one “free” unexcused absence with no grade penalty.
 - A second unexcused absence will result in a 5% deduction of the final grade.
 - Each additional unexcused absence will result in an additional 10% deduction of the final grade.
- 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	% Final grade
Homework (Individual Assignments)	50%
Presentation Project (Group Assignments)	30%
Career Events and Seminars* (Individual Assignment)	20%
Total	100%

*Throughout the semester you are required to attend 3 different career development events or seminars of your choosing (additional details are provided below). **Failure to complete this assignment will result in a failing grade for this course.**

Grading Policy

Percent	Grade	Grade Points
94.0 – 100.0	A	4.00
90.0 – 93.9	A-	3.67
87.0 – 89.9	B+	3.33
84.0 – 86.9	B	3.00
80.0 – 83.9	B-	2.67
77.0 – 79.9	C+	2.33
74.0 – 76.9	C	2.00
70.0 – 73.9	C-	1.67
67.0 – 69.9	D+	1.33
64.0 – 66.9	D	1.00
60.0 – 63.9	D-	0.67
0.0 – 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>

Homework Assignments

- Details for each assignment will be provided in Canvas and discussed in class.
- All assignments must be submitted via Canvas by the deadline stated in Canvas for full credit. Late submissions will receive a 10% grade deduction per day, unless the submission is late due to an excused absence consistent with the University policy.
- All students are responsible for ensuring that Canvas submission was successful. You can confirm this by clicking “refresh” after any submission.
- All assignments will be checked for plagiarism by Turnitin. Plagiarism is an Honor Code violation and will result in a substantial grade reduction.

Presentation Project

- You will work in groups of 4-5 students on a presentation project.
- You will choose the topic of your presentation from a list to be provided by the instructor (other topics can also be chosen with instructor approval).
- Groups will be assigned via CATME.
- Late submissions will incur a penalty of 10% per day unless there is a justifiable reason consistent with the University policy.
- The individual team members' grade for group assignments will be adjusted according to peer evaluations as follows:
 - Individual grade = (team grade) × (individual ratio)
 - Individual ratio = (average of student's evaluation excluding self-eval)/(team average)
 - Peer evaluations will be collected using CATME

Assignment on Career Development Events and Seminars

- Throughout the semester, you are required to attend at least 3 different career development events (e.g., those organized by the Career Connections Center) and/or seminars (e.g., research seminars in various departments). Attendance of these activities must be **outside of class time** and they can be online.
- These events must be professionally-related. Good examples are the weekly ChemE and MSE research seminars, AIChE or similar clubs' GBMs (only 1!), GRACE symposium, etc. Bad examples are sports events, self-help seminars, fraternity/sorority events, etc. If you aren't sure, ask the instructor in advance!
- Attendance to the Career Showcase will NOT count toward this assignment.
- Some of the potential activities will be announced in class and via Canvas, but every student is responsible for identifying them based on their interests.
- You are highly encouraged to sign up for the CHE Advising page on Canvas for additional announcements of events.
- For each event/seminar you will prepare a summary of the content of the talk and benefits to your professional development.
- You will submit a summary of all 3 events at the end of the semester.
- **This assignment is mandatory. Failure to complete this assignment will result in a failing grade for this course.**

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.aa.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 Honor 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. 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
- 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/>.

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 Connections 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: <https://distance.ufl.edu/state-authorization-status/#student-complaint>.