Professional Development of Chemical Engineers

ECH 2934, Section 16913
Class Periods: Tuesdays, Period 8 (3:00 pm - 3:50 pm)
Location: NPB 1002
Academic Term: Fall 2025

Instructor: Prof. Dmitry Kopelevich

- Email: dkopelevich@che.ufl.edu
- Phone: (352)-392-4422
- Office: CHE Admin Building 110
- Office Hours:
  - Mondays, 10 am – 12 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 resumes.
   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	High
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	Medium

*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	Aug. 26	Introduction. What is Chemical Engineering?
2	Sep. 2	Guest Lecture: Resumes, Cover Letters, and Navigating the Career Fair (Crystal Burton, UF Career Connections Center)
3	Sep. 9	Guest Lecture: Energy Transition (Chris Birdsall, ExxonMobil)
4	Sep. 16	Guest Lecture by Sudhir Chapnerkar, Retired VP of Xerox
5	Sep. 23	Career Pathways: Graduate and Professional Schools
6	Sep. 30	Guest Lecture: Career Pathways in Food Industry (Ashley Taylor and Ben Soucy, PepsiCo)
	Oct. 1	Career Showcase: Attendance is mandatory!
7	Oct. 7	Elements of Oral Presentations
8	Oct. 14	Professionalism and Teamwork
9	Oct. 21	Guest Lecture: Career Pathways in Consulting (Yanni Polematidis and Alyssa Massais, CDM Smith)
10	Oct. 28	Engineering Ethics

11	Nov. 4	Guest Lecture: Chemical Engineers in Health Professions (Dr. David Langford, DDS, MDS, BSChE)
	Nov. 11	No class (Veteran Day)
12	Nov. 18	Guest Lecture: Career Pathways in Semiconductor Industry (Prof. Sumant Patankar)
	Nov. 25	No class (Thanksgiving break)
13	Dec. 2	Guest Lecture: Chemical Engineers in Biotech Industry (Dr. Dale Gyure)

Important Dates:

- Tuesday, Dec. 2: Video recording of your presentation is due.
- Wednesday, Dec. 3: Career Events and Seminars assignment is due.

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.
- Requirements for class attendance and make-up exams, assignments, and other work in this course are consistent with university policies. Click here to read the university attendance policies: https://catalog.ufl.edu/UGRD/academic-regulations/attendance-policies/
- 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. **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 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)
        - The individual ratio is capped at a maximum of value of 1.05. Also, values above 0.95 are rounded up to 1.00.
    - 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., company info sessions or research seminars). 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 one GBM!), 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.**

Commitment to a Positive Learning Environment

The Herbert Wertheim College of Engineering values varied perspectives and lived experiences within our community and is committed to supporting the University's core values.

If you feel like your performance in class is being impacted, please contact your instructor or any of the following:
- Your academic advisor or Undergraduate Coordinator
- HWCOE Human Resources, 352-392-0904, student-support-hr@eng.ufl.edu
- Pam Dickrell, Associate Dean of Student Affairs, 352-392-2177, pld@ufl.edu

Academic Policies & Resources

More information on UF academic policies and campus resources is available at https://go.ufl.edu/syllabuspolicies