ChEE 443
Syllabus
Spring 20xx

Class Time: Days / Time / Location TBD

Instructor: Adrianna Brush, Harshbarger 134B (inside 134 suite)
(adriannabrush@email.arizona.edu)

Office Hours:
TBD, and by appointment. Best to email a few times your WHOLE team is available to meet and we will schedule a time.

Course Requirements:
1) Attendance is **required** for the lecture, and will be taken using TurningPoint clickers. We will start the semester by reviewing design criteria and constraints. We will meet often at the beginning of the semester, but less so as the semester progresses. We will also discuss ethics, safety, professional development, and a variety of other topics that are required for accreditation in chemical engineering. We may have some guest lecturers on modern topics like water, energy, etc.
2) The oral presentations are scheduled for Dead Day, (Day, Date TBD). Please make arrangements now to take the day off of work or whatever is required because attendance is **mandatory**, not just for your presentation but for half of them (morning or afternoon). If you do not attend then you will receive **0%** for your oral presentation grade (Item 7 below).
3) Poster presentations of your projects may be prepared for COE Design Day as part of a college wide design day **(Date TBD)**.

Grading Breakdown:

Lecture Participation	3%
Lab Safety Audit	10%
Homework	10%
Project update presentations (3% each)	9%
Weekly Meeting Minutes	5%
Calculations	8%
Design Day	5%
Final Oral Presentation	10%
Written Project Report	30%
Peer Evaluations	10%
Total	100%

Grading Scale and Policies

Letter grades on reports or assignments will not be determined; a final letter grade will be given at the end of the semester instead. This course will be graded on a straight scale as follows:

Total Percentage of Points Earned	Grade
90 – 100%	A
80 – 89.99%	B
70-79.99%	C
60-69.99%	D
< 60%	E

I will not be curving individual assignments, including the report. However, I may curve the final grades at my discretion. The straight scale above is the most stringent metric I will use (i.e. if I curve, it will only result in higher letter grades). Do not assume I will curve grades.

University policy regarding grades and grading systems is available at http://catalog.arizona.edu/policy/grades-and-grading-system

Dispute of Grade Policy: If you have questions how a problem was graded on your report, please write a note describing the issue, attach the note to your report, and give the report and note to me. Resubmissions must be done within one week after a report is returned.

Requests for incomplete (I) or withdrawal (W) must be made in accordance with University policies, which are available at http://catalog.arizona.edu/policy/grades-and-grading-system#incomplete and http://catalog.arizona.edu/policy/grades-and-grading-system#Withdrawal respectively.

Course Communications

Online communication will occur via Piazza, which can be found here: https://piazza.com/arizona/spring2020/chee443/home Make sure you have joined the class site, and check Piazza regularly for information and to post any questions.

Required Materials

Turning Technologies clickers (or ResponseWare) will be used in this course on a regular basis. Be sure to bring your clicker to each class. The clickers will be used to track attendance and participation. Please see the D2L Announcements for instruction on how to register your clicker.

You will need access to a laptop for in-class working days (can be borrowed from the U of A library: http://new.library.arizona.edu/tech/borrow/pc-laptop)

Submission of Work

All work for this course will be submitted or completed online via the University of Arizona's (D2L) system. D2L is the only method by which assignments will be accepted. Your submissions will be checked with D2L's plagiarism tool. You are responsible for keeping up to date on the requirements of the course. All schedules, documents, lecture slides, assignments, and other materials relating to the course will be maintained on the D2L website. Check D2L for information related to assignments.

Absence and Class Participation Policy

Participating in the course and attending lectures are vital to the learning process. As such, attendance is required at all lectures. Class attendance will be verified with a clicker question that appears at some point randomly in the day's activities and will be auto-recorded through that device. If you do not have a clicker, please get one as quickly as possible from the UA Bookstore or purchase a license for TurningPoint ResponseWare. Clickers will also be used to gauge

understanding of reading material, support class discussions, facilitate understanding of new concepts and review previously taught material. If you forget your clicker, please see me after class, then email me regarding your attendance. If you miss class, you can watch the recording in Panopto in UA Tools on D2L and then email me to earn 75% of the attendance points.

To request a disability-related accommodation to this attendance policy, please contact the Disability Resource Center at (520) 621-3268 or drc-info@email.arizona.edu. If you are experiencing unexpected barriers to your success in your courses, the Dean of Students Office is a central support resource for all students and may be helpful. The Dean of Students Office is located in the Robert L. Nugent Building, room 100, or call 520-621-7057.

Please examine the course syllabus for potential conflicts at the start of the semester and promptly notify me via email of any anticipated accommodation needs, providing as much notice as possible.

Absences due to job interviews and graduate school visits are considered valid reasons and full credit will be given once the Panopto of the missed lecture is watched.

The UA's policy concerning Class Attendance, Participation, and Administrative Drops is available at: http://catalog.arizona.edu/policy/class-attendance-participation-and-administrative-drop

The UA policy regarding absences for any sincerely held religious belief, observance or practice will be accommodated where reasonable, http://policy.arizona.edu/human-resources/religious-accommodation-policy.

Absences pre-approved by the UA Dean of Students (or Dean Designee) will be honored. See: https://deanofstudents.arizona.edu/absences

Threatening Behavior Policy

The UA Threatening Behavior by Students Policy prohibits threats of physical harm to any member of the University community, including to oneself. See http://policy.arizona.edu/education-and-student-affairs/threatening-behavior-students.

Accessibility and Accommodations

Our goal in this classroom is that learning experiences be as accessible as possible. If you anticipate or experience physical or academic barriers based on disability, please let me know immediately so that we can discuss options. You are also welcome to contact the Disability Resource Center (520-621-3268) to establish reasonable accommodations. For additional information on the Disability Resource Center and reasonable accommodations, please visit http://drc.arizona.edu.

If you have reasonable accommodations, please plan to meet with me by appointment or during office hours to discuss accommodations and how my course requirements and activities may impact your ability to fully participate.

Please be aware that the accessible table and chairs in this room should remain available for students who find that standard classroom seating is not usable.

Code of Academic Integrity

Students are encouraged to share intellectual views and discuss freely the principles and applications of course materials. However, graded work/exercises must be the product of independent effort unless otherwise instructed. Students are expected to adhere to the UA Code of Academic Integrity as described in the UA General Catalog. See:

The University Libraries have some excellent tips for avoiding plagiarism, available at
http://new.library.arizona.edu/research/citing/plagiarism.

UA Nondiscrimination and Anti-harassment Policy

Harassment, discrimination, hateful or disrespectful language, and bullying will **<u>not</u>** be tolerated. If you have been subjected to any of this, please contact me.

The University is committed to creating and maintaining an environment free of discrimination; see http://policy.arizona.edu/human-resources/nondiscrimination-and-anti-harassment-policy

Meeting Minutes

Meeting Minutes are to be submitted every week to D2L. There is a template from CATME that should be used. This will be used for documentation of student contributions.

Peer Evaluations

Peer evaluations and feedback will be done through CATME online platform. You will receive instructions later in the semester

"Firing" a team member

A team may "fire" a team member who is not contributing to the project. The lack of contribution must be documented (most likely in the weekly meeting minutes), and represent multiple instances of unexcused absences from meetings or failure to deliver an agreed upon deliverable. Every member of the group should agree to the firing and must be approved by the instructor. I may require mediation prior to making my decision.

The "fired" team member must complete their own version of the project on their own. Depending on how late in the semester this occurs, the "fired" member may use some or all of the work done by the group until that point.

Mentor Expectations

Mentors do not have to be "experts" on every unit operation involved for the project. The basic goal is for a mentor to be a **resource** for the group. More specifically

- Be available to meet with the team once a week at least for the first weeks of the semester.
- Help the students with order of magnitude; realistic mass and energy balances; suggesting alternative processes to consider; library resources such as patents, CEP, etc.; realistic product purity; interpreting patents and publications; shifting through web information, safety considerations, environmental considerations, economic hazards, etc.
- It is suggested that students come to mentor meetings with agendas for your meetings. These meetings should involve updates on progress, current roadblocks for progress, and should conclude with goals for next meeting.
- Sometimes Mentors just need to tell team to move on, make the best assumptions possible with the given information and go with it.
- Overall, the mentor is a person to bounce ideas off of who has worked as an engineer in the field.

A suggested time line for the students to keep them on track is as follows:

January xx– Classes Start, project selection is finalized, mentors assigned etc.
Mid to Late January – Project is defined, background literature has been found or ordered, product purity and amount to be produced or remediated/recycled is known
February– preliminary process flow diagram. Initial unit operations are chosen and detailed designs of the unit operations are begun.
Month of March – Major unit operations are designed and a preliminary cost analysis is done. Alternatives are considered to most costly unit operations or operations that are not giving required purity and opportunities to recycle reactants, network heat exchangers, optimize the process are considered. Calculations are completed for equipment
1st two weeks in April – Economic, safety and environmental analysis completed
2nd two weeks in April – Reports are written and oral presentations prepared and practiced.

A tentative semester schedule and list of homework due dates is posted on D2L. Homework and assignment due dates are also reflected in the D2L assignment due dates.

Subject to Change Statement
Information contained in the course syllabus, other than the grade and absence policy, may be subject to change with advance notice, as deemed appropriate by the instructor.