Instructor and Contact Information
Instructor: Andrea Achilli, PhD, PE
Office location: CE Building 306C, Phone: 520 621-6586, email: achilli@email.arizona.edu
Office Hours: “Open Door Policy” or please schedule a meeting
Web information, including course home page, instructor home page, and D2L information TBD

Course Objectives and Expected Learning Outcomes
During the course, the students will foster and develop rational thought processes as they pertain to the proficient and safe operation of environmental engineering process units, the analysis of data obtained from engineering unit processes, the exposition of technical information, the expository writing, and teamwork.

Learning outcomes:
• Ability to identify, formulate, and solve complex engineering problems by applying principles of engineering, science, and mathematics
• Ability to develop and conduct appropriate experimentation, analyze and interpret data, and use engineering judgment to draw conclusions
• Ability to communicate effectively with a range of audiences
• 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

Absence and Class Participation Policy
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
Participating in the course and attending lectures and other course events are vital to the learning process. As such, attendance is required at all lectures and laboratory section meetings. Students who miss class due to illness or emergency are required to bring documentation from their health-care provider or other relevant, professional third parties. Failure to submit third-party documentation will result in unexcused absences.

**Required Texts or Readings**
Class notes and assigned reading TBD

**Assignments and Examinations: Schedule/Due Dates**

**Lab Protocol**
- Long pants, closed toed shoes, and safety glasses MUST be worn in the laboratory at all times. Lab coats and Safety Glasses are provided. If you are not dressed appropriately, you will not be allowed to participate in the laboratory experiment and you will receive 2 grades less than your laboratory partners (i.e. An A lab report will become a C for the individual).
- If you are more than 5 minutes late for lab or leave early, then you will receive one grade less than your partners.
- Contacts may not be worn during the Reactor experiments.
- All laboratory data sheets must be signed by the TA or instructor at the end of the laboratory period. All computer data must be sent to D2L within 24 hours of the laboratory experiment.
- Laboratory write ups are due 1 week after the laboratory experiment was completed. They are due at the beginning of the next laboratory class (i.e. 5 pm). Laboratory reports and pre-labs will be penalized 5% per hour for being late. Requirements and rubric will be posted on D2L. All reports must be submitted to D2L and as a hard copy.
- Pre-labs are required for the RO (both weeks). If not complete, you may not begin the lab. These are to be submitted to D2L 24 hours before you start the lab so T at 5 pm. They will be checked for completeness at that time. Bring copy to Lab for reference.
- Pre-labs for the Reactor labs due 48 hours after the first time you attend lab (Friday at 5 pm). It will be graded and returned prior to your second lab session. Submit to D2L.
- Attendance is expected in the lecture and will affect your participation grade.
- For Grad Students, lab reports are individual assignments

**Final Examination or Project**
There is no final examination or project in this course

**Grading Scale and Policies**
3 Labs @ 30% Each 90%
Attendance/Participation – 10%

Specific Lab Score Breakdown

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<tr>
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<th>Pre-Labs 10%</th>
<th>Lab Report 90%</th>
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<td>RO</td>
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<tr>
<td>CSTRs</td>
<td>Pre-Lab 10%</td>
<td>Lab Report 90%</td>
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<td>AOPs</td>
<td>Pre-Lab 10%</td>
<td>Lab Report 90%</td>
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**Scheduled Topics/Activities**
This laboratory experience focuses on unit operations and processes commonly applied in environmental engineering and supports fundamental concepts developed in required courses for Environmental Engineering majors. Individual and group reports and oral presentations will serve as
vehicles for the development of technical communications skills. 50 minutes lecture and two and a half hours of laboratory per week during 6 weeks.

Schedule (Please check D2L for most current one)

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
At the University of Arizona we strive to make learning experiences as accessible as possible. If you anticipate or experience physical or academic barriers based on disability or pregnancy, you are welcome to let me know so that we can discuss options. You are also encouraged to contact Disability Resources (520-621-3268) to explore reasonable accommodation. For additional information on the Disability Resource Center and reasonable accommodations, please visit http://drc.arizona.edu.

If our class meets at a campus location: 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: http://deanofstudents.arizona.edu/academic-integrity/students/academic-integrity.

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

Selling class notes and/or other course materials to other students or to a third party for resale is not permitted without the instructor’s express written consent. Violations to this and other course rules are subject to the Code of Academic Integrity and may result in course sanctions. Additionally, students who use D2L or UA e-mail to sell or buy these copyrighted materials are subject to Code of Conduct Violations for misuse of student e-mail addresses. This conduct may also constitute copyright infringement.

UA Nondiscrimination and Anti-harassment Policy
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

Our classroom is a place where everyone is encouraged to express well-formed opinions and their reasons for those opinions. We also want to create a tolerant and open environment where such opinions can be expressed without resorting to bullying or discrimination of others.

Additional Resources for Students
UA Academic policies and procedures are available at http://catalog.arizona.edu/policies

Student Assistance and Advocacy information is available at http://deanofstudents.arizona.edu/student-assistance/students/student-assistance

rev. 5/2020
Confidentiality of Student Records

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.