

ENGR 480 - MidPac Water Treatment Competition  
Spring 2020

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**Course Description:** Research, design, construction, and testing of a treatment device that can successfully compete in the 2020 ASCE Mid Pacific (MidPac) Water Treatment Competition. Gain an understanding of design constraints and criteria, reactor kinetics, the physical and chemical treatment process of screening, sedimentation, filtration, colloid destabilization, pH and dissolved oxygen control, and disinfection.

**Prerequisites:** ENGR 115

**References:** 1) Davis, Mackenzie, 2011. *Water and Wastewater Engineering, Design Principles and Practice*.  
2) Viessman, Warren, Mark Hammer, , Elizabeth Perez, and Paul Chadik, 2009. *Water Supply and Pollution Control, Eighth Edition*.

**Grading:** CR: Regular attendance to group meetings, full participation in research, design, construction, and testing of water treatment device, participation in activities to prepare for MidPac competition, participation in actual MidPac competition if possible.  
NCR: Failure to meet the criteria for CR above.

**Deadlines:** Receive Mailer II: January 15  
Confirm Mailer II received: February 15  
Local team design competition: February 16  
Individual attendee registration: March 1  
Design report submission for review: March 16  
Design Report submitted to ASCE MidPac representative: March 22 (23:59)  
Presentation submitted for review April 9  
Practice presentation for review April 11  
Presentation submitted to ASCE MidPac Representative: April 15 (23:59)  
Captain meeting at Berkeley: April 23 (15:00)  
Water Treatment Presentations:: April 24 (11:00)  
Water Treatment: April 25 (8:00)

**Academic Honesty:** The ERE department and the university policy regarding academic honesty is **strictly upheld**. Any student found to violate this policy will receive an automatic F grade on the assignment, will face disciplinary action by the University, and will almost always receive a disciplinary F grade in the course. The department academic honesty policy can be viewed at <http://engineering.humboldt.edu/ere-academic-honesty-policy>  
The university academic honesty policy can be viewed at [http://www.humboldt.edu/studentrights/academic\\_honesty.php](http://www.humboldt.edu/studentrights/academic_honesty.php)  
The policy regarding use of campus computing resources can be viewed at <http://www.humboldt.edu/its/policy>

**Last Day to Drop:** Without serious and compelling reason: February 3  
Withdrawal with a serious and compelling reason: April 3

**Disability Services:** If you have any type of disability that may hamper your full participation in course activities, it is your responsibility to inform me of your need for accommodations as soon as possible. I expect to hear from you within the first two weeks of the semester so that appropriate accommodations can be arranged. Complete information on the services available at HSU can be found at the Student Disability Resource Center (SDRC) in Campus Events Field 4/5, 826-4678 (voice) or 826-5392 (TDD) or their website <http://disability.humboldt.edu>. Some accommodations may take up to several weeks to arrange.

If you qualify for extra time on exams or need other accommodations, it is your responsibility to obtain and provide me with the academic adjustments form from the SDRC. The form must be presented to me in a timely manner (strongly recommend submitting at the beginning of the semester) so appropriate arrangements can be made in advance for all exams. It is strongly recommended that you communicate accommodation and scheduling arrangements approximately one week prior to each exam.

**Library Information:** Engineering and Science library research guides:  
[http://libguides.humboldt.edu/prf.php?account\\_id=3860](http://libguides.humboldt.edu/prf.php?account_id=3860)

**Additional Info:** HSU Student Rights and Responsibilities Information:  
<http://www2.humboldt.edu/academicprograms/syllabus-addendum-campus-resources-policies>