

Water Treatment System Design

Instructor: James Farrell 306-F Civil Engineering Building
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Grade Basis: Midterm Exams 20% each; Final Exam 25%; Homework 15%

Grading: A (85-100%); B (75-85%); C (65-75%); D (50-65%); E (<50%)

Text: Mackenzie L. Davis, *Water and Wastewater Engineering, Design Principles and Practice*, McGraw Hill, 2011. ISBN 978-0-07-339786-3

Date	Topic	Reading	Homework 476A/576A	HW 576A Discussion Questions
8/25/15	Introduction - Water Quality	2-22 to 2-39		
8/27/15	Coagulation	3-1 to 3-29	3.1, 3.3, 3.5, 3.7, 3.8, 3.9	3.1, 3.2
9/1/15	Coagulation & Flocculation		due 9/8/15	
9/3/15	Lime-Soda Softening	4-1 to 4-40	4.1, 4.2, 4.3, 4.10.4.11, 4.18	4.1, 4.3
9/8/15	Lime-Soda Softening		4.20, 4.27, 4.29	
9/10/15	Lime-Soda Softening		due 9/17/15	
9/15/15	Ion Exchange	5-1 to 5-25	5.1, 5.2, 5.2, 5.4, 5.8, 5.9	5.1
9/17/15	Ion Exchange			
9/22/15	Exam 1			
9/24/15	Ion Exchange		due 10/1/15	
9/29/15	Reverse Osmosis & Nanofiltration	6.1 to 6.18	6.1, 6.4, 6.6, 6.8, 6.10, 6.12	6.1
10/1/15	Reverse Osmosis & Nanofiltration			
10/6/15	Reverse Osmosis & Nanofiltration		due 10/13/15	
10/8/15	Sedimentation	7.1 to 7.39	7.1, 7.3, 7.6, 7.9, 7.13, 7.16	
10/13/15	Sedimentation		due 10/20/15	
10/15/15	Exam 2			
10/20/15	Granular Filtration	8.1 to 8.47	8.1, 8.2, 8.5, 8.8, 8.12, 8.13	8.1, 8.2
10/22/15	Granular Filtration		8.17, 8.21	
10/27/15	Granular Filtration		due 11/3/15	
10/29/15	Membrane Filtration	9.1 to 9.19	9.1, 9.2, 9.3, 9.7, 9.8	9.1, 9.2
11/3/15	Membrane Filtration			
11/5/15	Membrane Filtration		due 11/12/15	
11/10/15	Disinfection	10.1 to 10.48	10.1, 10.2, 10.3, 10.5, 10.6	10.1, 10.2
11/12/15	Disinfection		10.8, 10.11, 10.14, 10.16	
11/17/15	Disinfection		due 11/24/15	
11/19/15	Exam 3			
12/1/15	Residuals Management	11.1 to 11.52	11.1, 11.2, 11.4, 11.5, 11.8	11.1, 11.2
12/3/15	Residuals Management		due 12/8/15	
12/8/15	Course Review			
12/17/15	Final Exam 8-10 AM			

Additional Policies, Warranties and Disclaimers:

1. Required attendance policy: Attendance at lectures is not mandatory. For examinations: All holidays or special events observed by organized religions will be honored for those students who show affiliation with that particular religion. Absences pre-approved by the UA Dean of Students (or Dean's designee) will be honored.
2. Late homework will not be accepted without prior approval of the instructor.
3. Policies regarding expected classroom behavior: no use of cell phones or mobile devices during class.
4. Policies against plagiarism follow the Student Code of Academic Integrity: <http://deanofstudents.arizona.edu/policies-and-codes/code-academic-integrity>.
5. Policies against threatening behavior by students: <http://policy.web.arizona.edu/threatening-behavior-students>.
6. Policies against discrimination and harassment: <http://policy.arizona.edu/human-resources/nondiscrimination-and-anti-harassment-policy>.
7. Required extracurricular activities: none
8. Special materials required for the class: none
9. Accommodations for students with disabilities: It is the University's goal that learning experiences be as accessible as possible. If you anticipate or experience physical or academic barriers based on disability or pregnancy, please let me know immediately so that we can discuss options. You are also welcome to contact Disability Resources (520-621-3268) to establish reasonable accommodations.
10. Information contained in the course syllabus, other than the grade and absence policies, may be subject to change with reasonable advance notice, as deemed appropriate by the instructor.
11. Final Exam Regulations: <http://www.registrar.arizona.edu/schedule101/exams/examrules.htm>,
12. Final Exam Schedule: <http://www.registrar.arizona.edu/schedules/finals.htm>.