

Water Treatment System Design

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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
8/22/17	Introduction - Water Quality	2-22 to 2-39		
8/24/17	Coagulation	3-1 to 3-29	3.1, 3.3, 3.5, 3.7, 3.8, 3.9 due 9/5/17	3.1, 3.2
8/29/17	Coagulation & Flocculation			
8/31/17	Lime-Soda Softening	4-1 to 4-40	4.1, 4.2, 4.3, 4.10.4.11, 4.18 4.20, 4.27, 4.29 due 9/14/17	4.1, 4.3
9/5/17	Lime-Soda Softening			
9/7/17	Lime-Soda Softening			
9/12/17	Ion Exchange	5-1 to 5-25	5.1, 5.2, 5.2, 5.4, 5.8, 5.9 due 9/28/17	5.1
9/14/17	Ion Exchange			
9/19/17	Exam 1			
9/21/17	Ion Exchange			
9/26/17	Reverse Osmosis & Nanofiltration	6.1 to 6.18	6.1, 6.4, 6.6, 6.8, 6.10, 6.12 due 10/10/17	6.1
9/28/17	Reverse Osmosis & Nanofiltration			
10/3/17	Reverse Osmosis & Nanofiltration			
10/5/17	Sedimentation	7.1 to 7.39	7.1, 7.3, 7.6, 7.9, 7.13, 7.16 due 10/17/17	
10/10/17	Sedimentation			
10/12/17	Sedimentation/Granular Filtration			
10/17/17	Granular Filtration	8.1 to 8.47	8.1, 8.2, 8.5, 8.8, 8.12, 8.13 8.17, 8.21 due 10/31/17	8.1, 8.2
10/19/17	Exam 2			
10/24/17	Granular Filtration			
10/26/17	Membrane Filtration	9.1 to 9.19	9.1, 9.2, 9.3, 9.7, 9.8 due 11/9/17	9.1, 9.2
10/31/17	Membrane Filtration			
11/2/17	Membrane Filtration			
11/7/17	Disinfection	10.1 to 10.48	10.1, 10.2, 10.3, 10.5, 10.6 10.8, 10.11, 10.14, 10.16 due 11/21/17	10.1, 10.2
11/9/17	Disinfection			
11/14/17	Disinfection			
11/16/17	Exam 3			
11/21/17	Residuals Management	11.1 to 11.52	11.1, 11.2, 11.4, 11.5, 11.8 due 12/5/17	11.1, 11.2
11/28/17	Residuals Management			
11/30/17	Residuals Management			
12/5/17	Course Review			
12/14/17	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>.