

## 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
xxxx	Introduction - Water Quality	2-22 to		Discussion Questions
xxxx	No class	2-39		
xxxx	Coagulation/Flocculation	3-1 to	3.1, 3.3, 3.5, 3.7, 3.8,	3.1, 3.2
xxxx	Coagulation/Flocculation	3-29	3.9 due xxxx	
xxxx	Lime-Soda Softening	4-1 to	4.1, 4.2, 4.3, 4.10.4.11, 4.18	4.1, 4.3
xxxx	Lime-Soda Softening	4-40	4.20, 4.27, 4.29	
xxxx	Lime-Soda Softening		due xxxx	
xxxx	Ion Exchange	5-1 to	5.1, 5.2, 5.3, 5.4, 5.8, 5.9	5.1
xxxx	Ion Exchange	5-25		
xxxx	<b>Exam 1</b>			
xxxx	Ion Exchange		due xxxx	
xxxx	Reverse Osmosis & Nanofiltration	6.1 to	6.1, 6.4, 6.6, 6.8, 6.10, 6.12	6.1
xxxx	Reverse Osmosis & Nanofiltration	6.18		
xxxx	Reverse Osmosis & Nanofiltration		due xxxx	
xxxx	Sedimentation	7.1 to	7.1, 7.3, 7.6, 7.9, 7.13,	
xxxx	Sedimentation	7.39	7.16 due xxxx	
xxxx	Sedimentation/Granular Filtration			
xxxx	Granular Filtration	8.1 to	8.1, 8.2, 8.5, 8.8, 8.12, 8.13	8.1, 8.2
xxxx	<b>Exam 2</b>	8.47	8.17, 8.21	
xxxx	Granular Filtration		due xxxx	
xxxx	Membrane Filtration	9.1 to	9.1, 9.2, 9.3, 9.7, 9.8	9.1, 9.2
xxxx	Membrane Filtration	9.19		
xxxx	Disinfection		due xxxx	
xxxx	Disinfection	10.1 to	10.1, 10.2, 10.3, 10.5, 10.6	10.1, 10.2
xxxx	Disinfection	10.48	10.8, 10.11, 10.14, 10.16	
xxxx	Disinfection		due xxxx	
xxxx	Specific Contaminants			
xxxx	<b>Exam 3</b>			
xxxx	Residuals Management	11.1 to	11.1, 11.2, 11.4, 11.5,	11.1, 11.2
xxxx	Residuals Management	11.52	11.8 due xxxx	
xxxx	<b>Final Exam Time TBD</b>			

**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>.