



Full Syllabus



Course Title	
<u>Seminar on water and wastewater technologies</u>	
Lecturer	
Dr. Liron Friedman	
Semester	
Spring	
Course requirements	
-	
Final grade components	
Active participation: 10%	
First presentation on the selected topic - 20%	
Presentation of the seminar report - 30%	
Submission of seminar report - 40%	
Course schedule	
Class no. / Date	Subject and Requirements (assignments, reading materials, tasks, etc.)
1 23.2.22	Introduction to water challenges and scarcity. Principles of Environmental Engineering. Water terms and units. Water in Israel as a case study. Water laws, regulations, and trends
2 2.3.22	Water terms and units, technologies to treat water.
3 9.3.22	How to critically read a research paper? How to write a literature review summary? יש סיכום של גרמי בספרייה
4 16.3.22 (till 18:00)	Water treatment technologies, Water Cyber
5 23.3.22	Wastewater terms and units, measuring methods
6 30.3.22	Introduction to bio-removal processes in wastewater
7 6.4.22	Mid semester PPT (topic)
10.4.21	Wastewater technologies for reuse
8 13.4.22	Passover holiday
9 20.4.22	Passover holiday
10 27.4.22 (till 19:00)	Biogas and solid reuse
11 (4.5.22)	Yom Hazikaron – memorial day
12 11.5.22	Advanced wastewater treatments and trends (industrial, centralized, decentralized)
13 18.5.22	Advanced trends: Wastewater-based epidemiology (WBE), Climate footprint of water
14 25.5.22	Visit SHAFDAN Wastewater treatment/desalination plant



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15 1.6.22	Students PPT
16 8.6.22	Students PPT
	Required course reading
	<ul style="list-style-type: none"> - Kaufman, N., Barron, A.R., Krawczyk, W., Marsters, P., McJeon, H., 2020. A near-term to net zero alternative to the social cost of carbon for setting carbon prices. Nat. Clim. Chang. - Brussels, 14.10.2020 Final, C. 663, 2020. EU methane strategy. Eur. Union Com. 1689–1699.
	Optional course reading
	<ol style="list-style-type: none"> 1. M.T. Madigan. [et al.], Brock Biology of Microorganisms, 12th ed., Benjamin Cummings, (2009). 2. M.T. Madigan. [et al.], Brock Biology of Microorganisms, 12th ed., Benjamin Cummings, (2009). 3. J. Willey, L. M. Sherwoo, C.J. Woolverton, Prescott/Harley/ Klein's Microbiology, McGraw-Hill Science/Engineering/Math, 7th ed. 4. Siegel S.M., 2015. Let There Be Water: Israel's Solution for a Water-Starved World. Thomas Dunne Books/St. Martin's Press, New York, NY, USA. 5. Wastewater Engineering Treatment and Reuse, Metcalf & Eddy, fourth ed. (2003), McGraw 6. Aguirre-Villegas, H.A., Larson, R.A., 2017. Evaluating greenhouse gas emissions from dairy manure management practices using survey data and lifecycle tools. J. Clean. Prod. 143, 169–179. https://doi.org/10.1016/j.jclepro.2016.12.133
Comments	



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