

Applied and Environmental Microbiology 2024F (Biol. 4711FA)

Lecture: 10:00 am - 11:30 am (Monday and Wednesday)

Lecture Room: AT1010

Office Hour: Monday, 3:30 – 4:30 pm (OR by appointment)

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Outline of topics

1. Evolution of the biosphere
2. Physiological ecology: Microbial energetic and survival.
3. Quantification of environmental microbes (numbers, biomass and activity).
4. Molecular-based detection of microorganisms.
5. Microbial Diversity
6. Water treatments and bioremediation.
7. Microorganisms in aquatic and terrestrial environments.
8. Biogeochemical cycles.

Examinations

1st Mid-term exam: September 23 (Monday)

2nd Mid-term exam: October 23 (Wednesday)

Final exam: TBA.

Final date to register: September 16 (Monday)

Final date to withdraw: November 8 (Friday)

Mark distributions:

- 40% for 2 Mid-term Exams (20% each)
- 20% for 4 Assignments (5% each)
- 40% for Final Exam

Books and References

Textbook (recommended):

Environmental Microbiology: From genomes to biogeochemistry (2008). By Eugene L. Madsen. Blackwell Publishing.

References:

1. Environmental Microbiology, by R.M. Maier, I.L. Pepper and C.P. Gerba. Published by Academic Press.
2. Brock Biology of Microorganisms, by M.T. Madigan and J.M. Martinko. Published by Pearson/Prentice Hall.
3. Selective articles from journals.