

University of Toronto
at Scarborough

Winter 2014

"MICROBIAL BIOGEOCHEMISTRY"
(EESC30H3)

Instructor: Dr. Silvija Stefanovic

Lecture: Friday 1-3pm; HW214

Office: SW-648

Office hours: Monday 6-7pm
Friday 3-4pm

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TA: Stephanie Gagliardi

Assignments:

You will have two individual assignments during the term, each worth 10% of the final grade. You will be able to access the problem sheets on the Blackboard at the times detailed below. The second week of the tutorial, for each assignment, you will need to complete microorganism identification exercise. The assignments are due during the tutorials at the dates detailed below. More details on the assignments will be circulated during the weekly tutorial sections which will start on of Jan 21th.

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Assignment #1
Assignment #2

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Jan .21th
Mar. 18th

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Feb.4th

Lecture topics:

1. Introduction, ground rules, expectations and course structure. Concept of microbial biogeochemistry; Microbial ecology	Jan. 10 th
2. Microbial metabolism and energy production	Jan. 17 th
3. Interactions among microbial populations	Jan. 24 th
4. Interactions between microbes and plants	Jan.31 st
5. Midterm	Feb. 7 th
6. Microbes in terrestrial environment	Feb.14 th
7. READING WEEK	Feb.21 st
8. Microbes in aquatic environments	Feb. 28 st
9. Microbes in extreme environments	Mar.7 th
10. Biogeochemical cycling of carbon, nitrogen and sulphur	Mar. 14 th
11. Biodegradation of organic pollutants	Mar. 21 st
12. Biodegradation of inorganic pollutants (metals)	Mar. 28 th
13. Course review; Final exam preparation	April 4 th

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Associated Readings in suggested book:

Week 1 - Lec 1- Ch. 1

Week 2 - Lec 2- Ch. 1

Week 3 - Lec 3- lecture notes

Week 4 - Lec 4- Ch. 9

Week 5 - Midterm

Week 6 - Lec 5- Ch. 6

Week 7- **READING WEEK**

Week 8 - Lec 6- Ch. 7

Week 9 - Lec 7- Ch. 8

Week 10 - Lec 8- 4, 11

Week 11- Lec 9- Ch. 3

Week 12 - Lec 10- lecture notes