

ENVE 202
ENVIRONMENTAL MICROBIOLOGY
(Section I)

Instructor : Assoc. Prof. Bulent ICGEN

Course page : Homepage for this course <http://www.metu.edu.tr/~bicgen/courses/envmic.html>
Print out lecture slides before each class and annotate these notes during lecture

Credits : 4

Semester(s) : Spring 2013

Time & place : Wednesday 10:40-12:30; CZ17
Thursday 10:40-11:30; CZ17

Office hours : By appointment

Office : Z34

Phone : 5858

Email : bicgen@metu.edu.tr

Texts : **Required**
Microbiology - An Introduction, by Tortora, Funke and Case
Supplementary
Brock Biology of Microorganisms, by Madigan, Partinko and Parker
Wastewater Microbiology, by Bitton

Requirements:

Course description:

The purpose of this course is to introduce students to basic microbiological concepts and techniques used in the fields of environmental engineering. This class is meant to provide you with a fundamental understanding of concepts in microbiology, biochemistry and microbial ecology that are relevant in environmental engineering microbiology research as well as engineering practice. Specific applications of these fundamentals will be discussed as appropriate.

Course grades will be based on the following:

1. A midterm exam on the first third of the course (**20 points**).
2. A midterm exam on the second third of the course (**20 points**).
3. A comprehensive final exam (**25 points**).

4. Overall lab (**20 points**). Attendance is mandatory and no lab can be made up if missed. **A minimum 12 points need to be collected from the lab to take the final exam of the ENVE 202 course.** Be prompt coming to lab as important announcements may be made at the very beginning of lab. You are responsible for any material or announcements you may have missed if you are absent or tardy.
5. A graded, term paper assignment on an environmental microbiology topic, preferably a controversial one, to be approved by the instructor (**15 points**). For the details of term paper see assignment part. **The term paper needs to be submitted to take the final exam of the ENVE 202 course.**

Thus, there are 100 points possible. The letter grades, coefficients and percentage equivalents are given below.

Percentage	Course Grade
90-100	AA
85-89	BA
80-84	BB
75-79	CB
70-74	CC
65-69	DC
60-64	DD
50-59	FD
49 and below	FF

Exams will be based upon material covered in class lectures.

Attendance policy:

Attendance is highly recommended. Any absences must be well justified and explained to the instructor in advance in order to make up any of the graded material.

Make-up policy:

There will be no make-up exams unless the following:

- For planned excused absences, you must contact the instructor 48 h in advance of the missed exam and provide adequate documentation.
- For absences due to catastrophic events such as serious illness, accident, or death in the immediate family, proper documented justification is required.

I will require official documentation for any missed assignments or exams!

Academic conduct:

The penalty for course-related academic dishonesty (i.e., cheating on exams, plagiarism, etc.) will be failure of the entire course along with a report of the incident being sent to Judiciaries.

ENVE 202 ENVIRONMENTAL MICROBIOLOGY
Spring 2013-Syllabus

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<u>WEEK</u>	<u>DATE</u>	<u>CHAPTERS*</u>	<u>TOPICS</u>
1	Feb. 20 Feb. 21	Tortora 1-3 Brock 2	The microbial world & classification
2	Feb. 27 Feb. 28	Tortora 4 Brock 4	Functional anatomy of prokaryotic and eukaryotic cells
3	Mar. 06 Mar. 07	Tortora 5 Brock 5	Microbial metabolism & enzymes
4	Mar. 13 Mar. 14	Tortora 6 Brock 6 Bitton Part A	Microbial growth, batch & continuous cultures
5	Mar. 20 Mar. 21	Tortora 4	What do microbes do? Cycles & others Exam I (5.40 PM) Place will be announced
6	Mar. 27 Mar. 28	Tortora 8 Brock 7, 8, 10	Microbial genetics
7	Apr. 03 Apr. 04	Tortora 10, 11 Brock 12	The prokaryotes: domains bacteria & archaea
8	Apr. 10 Apr. 11	Tortora 12 Brock 13	The eukaryotes: fungi, algae, protozoa and helminths
9	Apr. 17 Apr. 18	Tortora 13 Brock 9	Viruses, viroids & prions
10	Apr. 24 Apr. 25	Brock 28 Bitton Part C	Wastewater microbiology Exam II (5.40 PM) Place will be announced
11	May. 01 May. 02	Brock 19 Bitton Part D	Holiday Bioremediation
12	May. 08 May. 09	Bitton Part E	Microbial indicators <u>Last Day for Term Papers</u>
13	May. 15 May. 16	Tortora 14, 15 Brock 25	Principles of disease and epidemiology

14	May. 22	Tortora 20	Antimicrobial drugs & Biosafety
	May. 23	Brock 20, 24	

Final Exam
Time & Place will be announced

***Suggested readings** are from chapters in:

- ✓ Microbiology - An Introduction, by Tortora, Funke and Case
- ✓ Brock Biology of Microorganisms, by Madigan, Partinko and Parker
- ✓ Wastewater Microbiology, by Bitton