BIOLOGY 3380: Introductory Microbiology
Syllabus – Fall, 2014

Lecture: MWF 9:05am-9:55am, 1456 Klaus

Instructors:
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Course description: This course provides an in-depth overview of microbes and the interactions of microbes with ecosystems. Specific topics will include microbial structure/function, diversity, physiology, metabolism, genetics, ecology, evolution and pathogenesis. The course format will consist of interactive lectures, which will draw on information from the textbook and the latest scientific discoveries in the field of microbiology.

Textbook:
Brock Biology of Microorganisms, 13th Edition
Michael T. Madigan, John M. Martinko, David A. Stahl, and David P. Clark.
ISBN-10: 032164963X
ISBN-13: 9780321649638
Publisher: Pearson- Benjamin Cummings
Copyright: 2012

Additional reading material will be announced and added to the course website on T-square.

Prerequisites (all require a minimum grade of "D":
BIOL 1510, Biological Principles or BIOL 1511, Honors Biological Principles
CHEM 2311, Organic Chemistry I

Grading:
Four exams - 75 %
Quizzes, assignments, and class participation - 25 %

There will be **THREE** (3) lecture exams and one (1) **FINAL EXAM**. The final exam will not be comprehensive and will cover lecture material after exam 3 only. All four exams together comprise 75% of your final grade. All exams will be closed book and will consist of multiple-choice, short answers and essay questions. Any missed exam will count as 0 and cannot be dropped if missed without documentation. Make up exams will be different than

the original exams. Quizzes, assignments, and class participation will comprise the remaining 25% of the final grade.

Grading scale:
100-90% = A to A-
89-80% = B+ to B-
79-70% = C+ to C-
69-60% = D+ to D-
<60% = F

Extra credit:
Extra credit **may** be offered if warranted based on class performance. Extra credit activities may involve attending specific departmental seminars and symposia, taking good quality notes, and participating in in-class activities.

Expectations:
Students are responsible for knowing the material covered in lectures. Students are expected to read the assigned chapters prior to class to aid in their understanding and participation during lectures. Lecture information will NOT come entirely from the textbook. Students are also responsible for knowing the material covered in the lectures, **even if it has not been covered in the textbook, *Brock Biology of Microorganisms***. It is the responsibility of the student to obtain any missed information, instructions or materials that results from a missed lecture. Students are also expected to be proactive, meeting with their TA or instructors should they encounter difficulties in the class, require assistance or have any unanswered questions. Students are also responsible for knowing the material in the relevant chapters of the textbook *Brock Biology of Microorganisms,* **even if it has not been covered in the lecture**.

Lecture pdfs posted on T-square are only an outline. Lecture Powerpoint presentations will be posted on T-square either before or after lecture (at instructor discretion), but always before the respective exam. Additional material may be covered in lectures, and you may be tested on it.

This course moves fast and covers a lot of material. This is necessary for the objectives and scope of the course, and to prepare you for microbiology courses in graduate or professional school. **We encourage you to ask questions!**

Classroom policies:

Consideration: Silence all alarms—cell phone, pager, etc. Remove headphones and headsets. No talking unless asking or answering questions relevant to the course.
Lateness: Please be on time. If you are late and miss a quiz or part of a quiz, you will not be given an opportunity to make it up. **You will not be allowed to stay past the end of class to finish exams, no matter how late you came in.**
Excuses and Make-ups: Documentation of excused absence must be obtained through the Office of the Dean of Students (http://deanofstudents.gatech.edu) and provided by the class period immediately following the quiz or exam missed. Valid excuses include: personal emergencies such as being hospitalized, or being in a car accident, excused absence due to official school event, family event over which you do not have control, such as a funeral.

Quizzes: There are no make-ups for quizzes. If you have a valid excuse, your next exam will be prorated to be worth more in lieu of the quiz. If you do not have a valid excuse, you will receive a 0 for that quiz.
Exams: If you have a valid excuse, you can make up the exam during the instructor's office hours (or at another pre-arranged time) within 3 days of the missed exam. If you do not have a valid excuse, you will receive a 0 for that exam.
Regrade requests: Any request for a reconsideration of the grading of a question on an exam, quiz, or problem set must be submitted to either Dr. Kostka or Dr. Stewart in writing. This request must include a clear explanation of why you think your answer should be considered correct.
GT Honor Code:
All students are expected to follow the Georgia Tech Academic Honor Code (www.honor.gatech.edu). Violations will be taken very seriously. This includes, but is not limited to the following issues pertaining to exams, quizzes, clicker activities and presentations for this class. Examples of academic honor violations from the policy statement include committing or attempting: 1) plagiarism, 2) cheating, 3) unauthorized group work, 4) fabrication, falsification and misrepresentation, 5) multiple submission.
Americans With Disabilities Act:
Students with disabilities needing academic accommodation should:
(1) register with and provide documentation to the ADAPTS Disability Services Program; and
(2) bring a letter to the instructor indicating the need for accommodation and what type. This should be done during the first week of class.
This syllabus and other class materials are available in alternative format upon request.

Syllabus change policy:
Syllabus changes substantially affecting the grading of the course will not be made. ****Other syllabus changes may be made and will be announced.****
Important Georgia Tech Dates:

Monday	8/18/14	Classes begin
Friday	8/22/14	Last day to register and/or make schedule changes
Monday	9/1/14	Official school holiday
Friday	10/10/14	Last day to drop individual courses with a grade of "W"
Monday, Tuesday	10/11/14-10/14/14	Fall break
Thursday, Friday	11/27/14-11/28/14	Official school holiday
Friday	12/5/14	Last day of classes
Monday to Friday	12/8/14-12/12/14	Finals week

Course Schedule:
Please note that topics may be modified/ omitted or and exam dates may be changed.
****Changes will be announced either in lecture or via T-Square.****

Week	Topic	Chapters	Instructor
1	Overview of microbial life	1, 2	Kostka
2	Cell components, cell structure/ function	3	Kostka
3	Nutrition and metabolism	4	Kostka
4	Growth	5	Kostka
Exam 1	**Wednesday, September 10th**		Kostka
5	Microbial ecology, habitats, and diversity	23	Kostka
6	Methods in microbial ecology	22	Kostka
7	Microbial ecology, habitats, and diversity	23	Kostka
8	Biogeochemical cycles	23, 24	Kostka
Exam 2	**Friday, October 10th**		Kostka
9	Molecular biology	6	Stewart
10	Gene expression	8	Stewart
11	Gene expression	8	Stewart
12	Bacterial genetics	11	Stewart
Exam 3	**Friday, November 7th**		Stewart
13	Genetic engineering	12	Stewart
14	Microbial genomics	13	Stewart
15	Animal-microbial interactions	24, 28	Stewart
16	Overview of bacterial diseases	32-35	Stewart
Final Exam	**Week of 8-12 December (Exam 4)**		Stewart