

Department of Biology
UNIVERSITY OF MASSACHUSETTS DARTMOUTH
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BIO 103.7101 (12882): TOPICS IN HUMAN – MICROBE INTERACTIONS

Spring 2019: March 20th – May 8th

Phone: 508-999-9162
Instructor: Dr. Alan J. Ventetuolo
Office: SENG – 330 A

Email: *Refer to "Communication Policy" below*

Office Hours: N/A: All questions/concerns will be addressed online

Course Description: An overview of human-microbe interactions, microbiological concepts and current public health challenges.

Fulfills University Studies Cluster 2A Requirement ("Science in the Natural World")

*Not offered for credit to biology majors. Appropriate for non-science/engineering majors.
3 credits*

Required Text:

- *Microbes and Society 4th Ed.*, Weeks/Alcamo, Jones and Bartlett Publishers
ISBN 9781284023473
 - N.B. Navigate 2 access is **mandatory** for this course. It is your responsibility to ensure that the text you are purchasing comes packaged with a valid Navigate 2 access code. **Do not** purchase digital textbook/Navigate 2 access from anywhere (including the UMD Bookstore) except Jones & Bartlett Publishers.

Outline of Course Topics and Required Readings:

Module I:

- Chapter 1: The Microbial World: Surprising and Stunning
- Chapter 2: Microbes in Perspective: Of Collectors and Classifiers

- Chapter 5: Bacteria: The First Microbes
- Chapter 6: Viruses: At the Threshold of Life
- Chapter 7: Protists: A Microbial Grab Bag

EXAM I on Chapters 1, 2, 5, 6, 7 (11/13-14)

Module II:

- Chapter 8: Yeasts and Warm Fuzzies
- Chapter 11: Controlling Microbes: Not Too Hot to Handle
- Chapter 12: Microbes and Food: A Menu of Microbial Delights
- Chapter 13: Food Preservation and Safety: The Competition
- Chapter 14: Biotechnology and Industry: Microbes at Work

EXAM II on Chapters 8, 11, 12, 13, 14 (12/1-2)

Module III:

- Chapter 15: Microbes and Agriculture: No Microbes, No Hamburgers
- Chapter 16: Microbes and the Environment: No Microbes, No Life
- Chapter 17: Disease and Resistance: The Wars Within
- Chapter 18: Viral Diseases of Humans: AIDS to Zoster
- Chapter 19: Bacterial Diseases of Humans: Slate-Wipers and Current Concerns

EXAM III on Chapters 15, 16, 17, 18, 19 (12/17-18)

Cluster 2A Learning Objectives:

- Master fundamental concepts related to the topic addressed
- Utilize and understand the scientific method
- Utilize and understand basic quantitative information
- Utilize problem-solving

Examinations / Course Requirements:

- Three examinations worth **(16.67) points each**. The examinations will consist of primarily (40) – (50) objectively formatted questions (i.e., multiple choice, matching, and true/false) based on the associated readings and chapter "key terms." Short answer questions may be included at my discretion.

The exams will be time restricted. The amount of time associated with each online exam will be dependent on the complexity and number of questions. Online

exams in this course will have the same time restrictions as if the exam was taken in the Day School.

There will be specific instructions associated with each exam that you will receive via a *myCourses* announcement. Please be advised that you are not allowed to look up answers in your text or on the web during the exam, as this is considered academic dishonesty. You are held to the same standards as other students that take in-class, proctored, timed examinations.

All exam/assignment dates and posted periods are clearly listed in the “To Do” tab of the *myCourses* site and visible on the first official day of the course. Please be sure that you record these dates in your personal calendar so you do not forget them. **Anyone that does not take the exam during its posted period will receive a grade of zero. It is imperative that you do not have any conflicting personal, work, vacation or travel conflicts that would prevent you from taking the required exams during their scheduled period.** Exams can be taken anytime within the posted period.

- Assigned Practice Activities associated with each chapter addressed in the course accessible via Navigate 2 worth a total of **(25) points**. Quizzes will not be time-restricted, but will have a deadline for submission. A maximum of two attempts for each Practice Activity will be allowed, with the highest grade being factored into your final average. Practice Activities will be automatically submitted by the due date and time. **Any Practice Activity not attempted by the due date and time, will result in a grade of zero.**
- *Active* participation in the online format, worth **(25) points**. In order to achieve full participation points, students must log into the site *and* post comments on the discussion thread *at least* twice weekly. You are strongly encouraged to comment on student posts, as well as post questions pertaining to the reading material. Please understand that copying and pasting material to these posts without proper references constitutes plagiarism and will be dealt with accordingly. I will run an audit of student activity at the conclusion of the course to objectively assess your participation.

N.B. *"In a distance education context, documenting that a student has logged into an online class is not sufficient, by itself, to demonstrate academic attendance by the student. A school must demonstrate that a student participated in class or was otherwise engaged in an academically related activity, such as by contributing to an online discussion or initiating contact with a faculty member to ask a course-related question."* More information on what constitutes attendance in the online environment can be found in Volume 5, pages 59-60, of the Federal Student Aid Handbook.

Please understand that online courses are standard university level courses but administered in an online format. Unfortunately, some students think an online course is an easy way to get an “A” without doing much work; this is a fallacy. If you are someone that procrastinates, is often unable to meet deadlines, does not read and/or pay attention to detail, lacks self-motivation, or lacks the computer access necessary to meet the course requirements, you should re-think your appropriateness for the demands of an online course.

Teaching Procedures

The course will be facilitated solely online. My advice to optimally succeed and obtain the most benefit from the course is to do the following:

1. Read and study the assigned chapters.
2. Read and study the posted chapter outline notes.
3. Read and study the posted Power Point presentations for each associated chapter.
4. **Explain or define the “Key Terms” listed for each chapter.**
5. Access www.jblearning.com, the eLearning site for your text to augment, reinforce and clarify the material contained in each chapter.
6. Complete all assigned Practice Activities via Navigate 2 by the posted due dates.

Communication Policy

I will log into the *myCourses* site several times during the week and will respond to all relevant questions or comments left on the discussion thread at that time. Should you have a question pertaining to the material, please post it on the appropriate discussion board; if your question is of a personal nature, please email me using the mail tab on the *myCourses* site. All email correspondence must take place via the *myCourses* Mail tab while the course is in session.

Following completion of the course, all email correspondence should be sent to aventetuolo@umassd.edu; when emailing me, please use your UMD email account and be sure to include your name and a subject heading; I will not respond to personal email accounts or emails that do not contain a subject heading.

Please be courteous and respectful with all email correspondences.

Grading Policy

Your grade will be based on the number of points you have accrued in the course:

Exams: 50 %
Navigate 2 Quizzes: 25%

Participation: 25%

All grades are **final and non-negotiable** and are electronically submitted to the Registrar within 72 hours of the completion of the course. Please note that grades are not issued on the basis of what you want or need to gain entry or remain in an academic program; they are issued on the basis of what you have legitimately earned.

You may check your final grades and even print out an unofficial copy of your semester transcript by accessing the UMD online system (COIN). I will not mail, email or phone grades in to students.

The grading format I will use is as follows:

A	>91.6%
A-	88.6-91.5%
B+	84.6-88.5%
B	80.6-84.5%
B-	76.6-80.5%
C+	72.6-76.5%
C	68.6-72.5%
C-	64.6-68.5%
D	57.6-64.5%
F	<57.5%

The above grading scale is very generous; there will be no additional scaling up of grades.

Course Withdrawal

There is no penalty for withdrawal, other than a (W) on your transcript, as long as it is done by the last date for student- generated withdrawal. A (W) will not affect your GPA (grade point average) but may affect your SPI (student progress index) which may have consequences on your financial eligibility or academic standing. Verbal withdrawals cannot be accepted. If you choose to withdraw, please withdraw via COIN or fill out the necessary withdrawal form by the appropriate deadline. *Students who do not officially withdraw from the course, but instead simply stop participating, will receive a letter grade for the course.*

Incomplete Grades

A grade of (I) is reserved for students that have completed the majority of the coursework during and have achieved a passing average. The instructor must be notified by the student as to circumstances that may result in the issuance of an (I) with documentation

provided. No incomplete grade will be issued without a "Request for Grade of Incomplete" form being completed and approved by the Registrar.

Make-Up Exams

Make-up exams will only be considered if there is documentable evidence of personal illness/injury or death of an immediate family member. Notification must be received by email within 24 hours of onset. Verifiable documentation (doctor's name, address, phone number) must be submitted and verified before a decision will be made for an exam make-up. Make-up exams may be of a different format (e.g., essay, short answer) than the original exam and will be time limited.

There will be no make-up exams allowed for students that have missed the availability window for the exam for other reasons other than the above.

Academic Difficulty

Students experiencing academic difficulty should contact me as quickly as possible for assistance.

Academic Negligence

I maintain a zero-tolerance policy towards academic negligence in any form. Academic negligence is demonstrated by failure to do assigned work, academic dishonesty, or distracting or disruptive behavior. Any faculty member may, at any time, recommend in writing to the Dean of Academic Affairs that a student guilty of academic negligence be dropped from a course with a grade of (W) or (F).

As stated in the *Academic Ethical Standards* section of the *UMD Student Handbook*, academic dishonesty may result in expulsion from the University.

A responsible, courteous and mature attitude is expected and required of all students at all times. Students are required to abide by the Code of Conduct as stated in the college catalog. *Any attempt to create an intimidating, hostile or offensive situation or subject a person to unwanted and unsolicited attention will not be permitted.*

Academic Calendar

It is your responsibility to be current with the official UMD academic calendar and follow it.

Requirements for Completion of the Course

- Each student enrolled in the course must be thoroughly familiar with the contents of the online lectures and this syllabus.
- Students must take, and achieve, at least a minimum passing average on all examinations and adhere to and meet all scheduled deadlines.
- Students must have access to Navigate 2 and successfully complete all assigned Practice Activities.
- Students must, at the very least, enter *at least* two acceptable chapter posts *per Module* on the Discussion Boards to be considered actively enrolled in the course.
- Students must have computer/internet access from the start date through end date of the course.
- Students must be available to participate in the online course from the start date through end date of the course. There will be no allowances for student vacations or other circumstances that result in student non-participation or inability to take the scheduled online exams.
- Students are bound by the details and provisions and rules/regulations of the official UMD catalog and of this syllabus.
- Students are bound to the official UMD academic calendar.
- Students must be free of academic negligence.
- Students must be officially registered in the course by the Registrar.

UMass Dartmouth Student Academic Integrity Policy*

I Academic Integrity

All UMass Dartmouth students are expected to maintain high standards of academic integrity and scholarly practice. The University does not tolerate academic dishonesty of any variety, whether as a result of a failure to understand required academic and scholarly procedure or as an act of intentional dishonesty.

A student found responsible of academic dishonesty is subject to severe disciplinary action which may include dismissal from the University. The procedure for responding to incidents of academic dishonesty may be found in Section III of this document. You may also refer to the Student Handbook for information about the judicial process.

A high standard of academic integrity promotes the pursuit of truth and learning and respect for the intellectual accomplishments of others. These are values that are fundamental to the mission of this University. Such values are undermined by academic dishonesty.

Academic freedom is a fundamental right in any institution of higher learning. Honesty and integrity are necessary preconditions of this freedom. Academic integrity requires that all academic work be wholly the product of an identified individual or individuals. Joint efforts are legitimate only when the assistance of others is explicitly acknowledged and deemed appropriate by the instructor of the course. Ethical conduct is the obligation of every member of the University community, and breaches of academic integrity constitute serious offenses.

Maintenance of the standards of academic integrity and the successful administration of this policy depend on the mutual cooperation of faculty and students.

Faculty cooperation is essential for successful application of the procedures defined by this Academic Integrity Policy. Faculty members promote academic integrity by making clear on their syllabi their expectations concerning homework assignments, collaborative student efforts, research papers, examinations, computer-based infractions, and the like. Efforts should be made to detect and to prevent cheating and plagiarism in all academic assignments. If faculty members have evidence of academic dishonesty, they are expected to report such evidence promptly.

Students must assume responsibility for maintaining honesty in all work submitted for credit and in any other work designated by the instructor of the course. Students are also expected to report incidents of academic dishonesty to the instructor or dean of the instructional unit.

The intent of this policy is to make clear the standards of academic integrity at UMass Dartmouth.

II Violations of Academic Integrity

The various ways in which academic integrity can be violated are discussed below. The comments and examples within each section provide explanations and illustrative material, but do not necessarily exhaust the scope of these violations.

A. Cheating

Cheating is the use of unacknowledged materials, information, or study aids in any academic exercise. The use of books, notes, calculators, phones and conversation with others is restricted or forbidden in certain academic exercises. Their use in these cases constitutes cheating. Similarly, students must not request others (including commercial term paper companies) to conduct research or prepare any work for them, nor may they submit identical work or portions thereof for credit or honors more than once without prior approval of the instructor.

B. Fabrication

Fabrication is the falsification or invention of any information or citation in an academic exercise. "Invented" information may not be used in any laboratory experiment or other academic exercise without authorization from the instructor. It is improper, for example, to analyze one sample in an experiment and covertly "invent" data based on that single experiment for several more required analyses. The student must also acknowledge reliance upon the actual source from which cited information was obtained. A writer should not, for example, reproduce a quotation from a book review or other secondary source and indicate that the quotation was obtained from the book itself.

C. Facilitating Academic Dishonesty

Students who knowingly or negligently allow their work to be used by other students or who otherwise aid others in academic dishonesty are violating academic integrity. Such students are as guilty of intellectual dishonesty as the student who receives the material even though they may not themselves benefit academically from that dishonesty.

D. Plagiarism

Plagiarism is the representation of the words or ideas of another as one's own in any academic exercise. To avoid plagiarism, every direct quotation must be identified by quotation marks or by appropriate indentation and must be properly cited in the text or in a footnote. Acknowledgment is required when material from another source stored in print, electronic or other medium is paraphrased or summarized in whole or in part in one's own words. To

acknowledge a paraphrase properly, one might state: "to paraphrase Plato's comment..." and conclude with a footnote identifying the exact reference. A footnote acknowledging only a directly quoted statement does not suffice to notify the reader of any preceding or succeeding paraphrased material. Information which is common knowledge such as names of leaders of prominent nations, basic scientific laws, etc, need not be footnoted; however, all facts or information obtained in reading or research that are not common knowledge among students in the course must be acknowledged.

In addition to materials specifically cited in the text, only materials that contribute to one's general understanding of the subject may be acknowledged in the bibliography. Plagiarism can, in some cases, be a subtle issue. Any questions about what constitutes plagiarism should be discussed with the faculty member.

E. Denying others access to information or material

It is a violation of academic integrity to deny others access to scholarly resources, or to deliberately impede the progress of another student or scholar. Examples of offenses of this type include: giving other students false or misleading information; making library material unavailable to others by stealing or defacing books or journals, or by deliberately misplacing or destroying reserve materials; or altering computer files that belong to another.

F. Proprietary/Confidential Information

Related to academic integrity is the unauthorized use without written permission of proprietary and/or confidential information in any school assignment.

G. Human and Animal Subjects

Research involving human beings requires review and approval of the Institutional Review Board (IRB) for the Protection of Human Subjects and informed written consent. Research involving the use of animals requires review and approval by the Institutional Animal Care and Use Committee (IACUC).

III Academic Integrity Infractions and Consequences

Any violation of academic honesty is a serious offense and is therefore subject to an appropriate penalty. Faculty may address instances of student academic dishonesty in their classes under their authority to evaluate and assign grades, even if the consequences exceed those written below. They may also refer the incident for further action, utilizing university procedures that can document repeat offenders and adjust consequences accordingly. Those who refer instances of academic dishonesty for further action can do so through Student Judicial process, initiating action by completing an Academic Integrity Policy Report Form found at:

<http://www.umassd.edu/studentaffairs/judicialaffairs/forms/academicintegrityform.pdf>.

Violations at UMass Dartmouth are classified into three levels according to the nature of the infraction. For each level of violation a corresponding set of sanctions is recommended. Faculty, Deans, staff in Judicial Affairs, or others involved in adjudicating incidents are not bound by these illustrations, which are intended as general guidelines for the academic community. Since adherence to a code of conduct can be seen as a function of socialization into the group whose norms are reflected in such a code, culpability may be assessed differentially for those with more and less experience as members of the academic community; thus, violations of academic integrity by graduate students will presumably be penalized more severely than violations by first semester first year students.

Examples are cited below for each level of violation. These examples, too, are illustrations and should not be considered all-inclusive.

Example of Level One Infraction

Infraction:

Plagiarism: The student represents the work of another as his/her own in a limited academic exercise, or in a limited or minor portion (1-2 instances) of a larger exercise, and the faculty member believes this is not an accidental act by the student.

Cheating: Working with another student on a laboratory or other homework assignment when such work is prohibited.

Consequences:

- Letter to student in lieu of hearing*

And

the faculty member's choice of the following consequences:

- redo the work to be graded without prejudice
- redo the work with a lowered grade for the work
- failing grade for the work

*student may request a hearing

Example of Level Two Infraction

Infraction:

Plagiarism: The student represents the work of another as his/her own in any academic exercise for a major portion (consistently throughout the assignment, > 50%); a Level 1 violation by a student who already has committed one or more Level 1 infractions.

Cheating: Copying on exams; using prohibited materials such as calculators or notes during exams; and/or collaborating before an exam to develop methods of exchanging information during an exam.

Consequences:

- Letter to student in lieu of hearing*

And

the faculty member's choice of the following additional consequences:

- redo the work while still receiving a failing grade for the work
- failing grade for course

*student may request a hearing

Example of Level Three Infraction

Infraction:

Plagiarism: The student represents the work of another in its entirety (whether purchased or obtained by other means) as his/her own in any academic work; a Level 2 violation by a student who already has committed one or more Level 2 infractions.

Cheating: Infractions of academic honesty in ways similar to criminal activity such as forging a grade form, stealing an examination from a professor or from a university office, or buying an examination.

Consequences:

- Referral for a Judicial Hearing , with recommendation for a minimum of a one semester suspension up to and including dismissal from the university.

Appropriate Evidence

Faculty who apply penalties for academic dishonesty, or refer the matter to Student Judicial Affairs, should maintain copies of documents or other evidence that led to the charge of academic dishonesty and have this material available for inspection if required in an appeal. Examples: material printed from the internet (or derived from other sources) that is substantially the same as work submitted by the student or written work in which the voice, usage, diction, and/or sentence structure are significantly different from the rest of the student's work (especially an observed writing sample). Records should also be kept of contacts with the student regarding the matter.

Process of Adjudication

1. Level 1 and Level 2 offenses may be handled between the student and the faculty member, utilizing the Academic Integrity Policy Report Form. The student has the option to avoid a Judicial Hearing in favor of accepting the letter sent by the Coordinator for Student Judicial Affairs.
2. Level 3 offenses will include the submission of the Academic Integrity Policy Report Form and will also require a judicial hearing since the recommendation for being found responsible of a level 3 offense is a minimum of a 1 semester suspension from the University.
3. Actions at any Level may be appealed. Information about the appeal procedures may be found at: <http://www.umassd.edu/studenthandbook/studentjud/section11.cfm>

IV Additional Consequences of Violating the Academic Integrity Policy

Students committing acts of academic dishonesty not only face university discipline and possible criminal action but run a serious risk of harming their future educational and employment opportunities. Prospective employers and other educational institutions frequently use recommendation forms that ask for judgment and comment on an individual's moral or ethical behavior. In all cases in which a grade of "F" is assigned for disciplinary reasons, the "F" will remain on the student's transcript, even if the course is retaken and a passing grade is achieved.

* This policy is substantively derived from the “Policy on Academic Integrity for Undergraduate and Graduate Students” of Rutgers University, available online through the Teaching Excellence Center of Rutgers University (<http://teachx.rutgers.edu>).

The contents of this syllabus are subject to change prior to the start-date of the course.

**N.B. THIS SYLLABUS IS TENTATIVE AND SUBJECT TO CHANGE ,
PRIOR TO THE START-DATE OF THIS COURSE.**