

Course Syllabus

Instructor Information

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Course Information

Course

Title: Microbiology for Science Majors, BIOL 2421.WB, WB9

Course Dates: January 22, 2013 – May 16, 2013

Course Credits: 4 credits – lecture and lab

Prerequisites – A minimum grade of “C” in BIOL 1406 and BIOL 1407, or BIOL 2401 and BIOL 2402, or CHEM 1311 and BIOL 1406 or BIOL 2401.

Course Description: Students learn specific information and concepts in the classification, structure, cultivation and ecology of microorganisms. Students learn mathematical calculations of growth parameters and the effectiveness of chemotherapeutic agents. Students learn terminology, specific information and concepts of the relationships between microorganisms and human life. Cause and effect relationships between microbial growth and human disease, interpretation of symptomatic and laboratory information in diagnosis of disease, prevention of disease and treatment of disease are stressed. Lab fee required. (ICOs 1, 2, 3, 4, 5, 6)

Course Objectives

1. Learner will understand how microorganisms live and reproduce.
2. Learner will understand the basic principles and techniques of genetic engineering.
3. Learner will know the principles and terminology of disease.
4. Learner will understand how microorganisms cause disease.
5. Learner will know the basics and applications of immunology.
- 6.. Learner will know the causes and treatments of communicable diseases of today.

This course is a core course for ADN Nursing, Physician's Assistant and Medical Surgical Technician. This course meets the general education requirements for an Associate in Science degree in Biology.

Required Materials

Textbook: *Microbiology: An Introduction*, 11th ed., by Tortora, Funke, & Case

Access Code: *Virtual Unknown* (Must be purchased from Internet)

Access Code: *MasteringMicrobiology* (in textbook package)

Prerequisites and Basic Skills: In order to take this course online, you must have received a minimum grade of “C” in BIOL 1406 and BIOL 1407, or BIOL 2401 and BIOL 2402, or CHEM 1311 and BIOL 1406 or BIOL 2401. Additionally, you should not attempt to take this course online unless you are very comfortable using a computer. You are expected to have the following basic computer skills: website navigation, word processing, send/receive/save emails, organize/backup computer files, view online videos/tutorials, download software, cut and paste between a word processor and email program, change subject/title of email message, compose/reply to email messages in complete sentences.

Successful Online Learner: The following statement describes certain attributes of the most successful online learners. “The successful online learner can work fairly well independently, engaging the course materials with minimal intervention on the part of the instructor. The learner who needs significantly more input from the instructor and is not willing or able to engage in collaborative discussions and activities with peers is less likely to succeed online.”

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Email Information for non-assignments: For general email questions or comments please use the following format.

Title your email with the following in the subject area: BIOL2421 – brief description of message.

Always include your name in body of the email message. I won't recognize you by your email address. If your name is not in the message it will be returned to you unanswered.

Please do not send assignments in an email message.

Importance of Email Rules: Why does OC require you to use the student email account instead of your regular email account? One reason is that messages from companies such as Yahoo, Google, AOL, and others commonly end up getting filtered out and placed in a junk folder. Using the OC email also helps to protect the faculty from receiving email which contains viruses, Trojan horses, worms, etc. that may damage our computers. The IT department has access to both learner and faculty email accounts and not to your regular email account, so they can aid learners in the event of a problem. While this policy may seem inconvenient to you it is in place for your protection and ours.

I know the email rules may seem cumbersome to you at first, but keep in mind that I have around 100 learners in my various courses at any given time. If half of the learners send me a message missing a name, title, course, or some other basic information, I would either have to look up the information or send an email asking for clarification. This would require many unnecessary hours of extra emailing, just to get basic information that should have been included in the header or subject area. I'm not sure about you, but I don't have an extra couple of hours in my day. It is for this reason that received email messages that do follow the email rules will be returned to you unanswered with an explanation of what needs to be added.

Dropping the Course: If you consider dropping this course, please discuss your reasons with me prior to withdrawing from the course. Learners that began their college experience as freshman in the Fall 2007 or later can only withdraw from 6 classes in their entire undergraduate college career. This INCLUDES a four-year degree!

Review of Online Exams: Unfortunately, there is no way for me to make the exams available to online learners for review. Due to the way BlackBoard features operate; doing so would compromise the integrity of the tests in this course.

Study Groups: I highly recommend that you try to find other learners in this course to get together with for the purpose of learning the course material. This is a difficult course, but no more difficult than the same course that is taught on campus. Through the years I have seen the learners that form study groups consistently perform at a higher level than the learners who stay isolated and try to do it on their own. This is observed in online courses as well. Of course, there are always exceptions. This brings up another important issue. There is a difference between studying together and cheating.

Course Evaluation:

Announcements: Various bits of information are placed here throughout the course. Please check it frequently because I place important information here that often arises suddenly.

Tegrity/Audio Lectures: This is a Tegrity course. Tegrity provides me with the technology to capture the classroom lecture and sync it with Powerpoints, image files, or videos that will be available online to learners in traditional and web courses. Make sure you go to the Tegrity tab each week and listen to the assigned lectures for that week. You may listen to these lectures on a computer or download the lectures to an iPod or other mp3 player.

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Black Board Collaborate: During the year I will begin a pilot using Collaborate. This will allow distant learners to participate in my on campus in real-time. I will be class sessions will be delivered to the internet through live streaming technology. If you are available during the class time, you will be able to watch, listen and even ask questions from your home or work through your computer. More information on this to follow.

Virtual Unknown Assignments: Virtual Unknown is a lab simulation software program. You will have to [purchase this online](#). There are instructions for obtaining the software under the "Course Information" link in Black Board. Virtual Unknown will walk you through each step. You must follow directions exactly or you will not get the correct answers. Upon completion of each assignment, you will attach the lab report to the assignment in Black Board. The file is in an .raf format. [You cannot view it outside of the software.](#)

Discussion Board: Each learner should check the discussion board frequently for new postings. As situations arise, I will post information. There is a general discussion area for student use. The "Ask Your Instructor" form is where questions you have can be posted and answered. This will allow you to help each other during the course. I will monitor the board to lend my assistance, but another learner can usually help out before I get to the board myself. If you are unclear about a subject, post a question. If you can clarify an idea for someone who has posted a question, post an answer. Participation in the discussion board is extremely beneficial in a distance education course. Before emailing a question to me, check the discussion board to see if an answer has already been posted.

Please do not start a new thread each time. If you are replying to a previous post, use the reply feature rather than beginning a new thread. This will keep the discussion board much more organized and easier for everyone to follow.

Exams: There are five lecture exams and four separate laboratory exams. Once the exams have been closed they will not be reopened, so be sure to take them by the due date. You may take them any time before they are due, but once the due date has passed, you may not take it. Should there be a known conflict prior to the exam, make arrangements with the instructor to take it before the due date. Each exam has a set time limit. When the exam opens you will be notified of the time allowed. Generally, the lecture exam is one hour and the lab practical is half an hour. [The exams will automatically shut off when the time limit has been reached.](#) It will save your answers and submit them for grading. [Points will be deducted for exceeding the allowed time](#) on ALL quizzes. Do not wait until the last minute to take the exam in case there are any technical difficulties. Please manage your time accordingly.

Once I have graded an exam that is not a multiple choice exam, I will place a .01 at the end of the grade. For example if you scored a 90 on an exam, you would see 90.01 after I have looked at it.

Allow each exam to completely load before clicking on anything. Otherwise, the exam will lock up and you will not be able to reenter it. Once you begin an exam, you must complete it. It will not allow you to reenter the exam at a later time.

[There will be a comprehensive lecture final covering the entire semester's material.](#) This exam may be taken anytime during finals week [up to Midnight on May 15, 2013.](#)

Assignment Submission: [All assignments will be submitted through the assignment in Black Board.](#) It functions like adding an attachment to an email. I strongly suggest that you save your assignment first to your computer and KEEP it. This way, if there is a problem with submission, you can resend it to me without having to complete the assignment again.

Grade Computation:

Chapter Quizzes, Navigation and Get Ready = 5%

Lecture Exams = 40%

Virtual Unknown Assignments = 5%

Lab Reports = 5%

Lab Exams = 20%

Research Project = 5%

Final Exam = 20%

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Tutor Lab: Learners residing in this area are encouraged to visit the tutor lab which is called the Synapse. Student I.D. is required for participation in the Synapse. Synapse hours of operation are posted outside of the door at room WH 117 and on the Biology Website. 335-6881

There is also "SmartThinking" tutoring available through the OC portal. Professional tutors are available for assistance through the internet.

Grievances: Learner grievances should first be discussed with the instructor. Unresolved issues may then be discussed with the instructor's immediate supervisor.

Policies and Procedures

Incomplete Policy: Incomplete grade may be given only if (1) the learner has passed all work completed, and (2) he/she has completed a minimum of 75% of the required coursework. A grade of "I" will only be assigned when the conditions for completions have been discussed and agreed upon by the instructor and the learner. An Incomplete Contract **must be signed** and submitted by the learner before an incomplete can be given.

Expectations for Engagement – Online Learning:

To help make the web-based learning experience fulfilling and rewarding, the following Expectations for Engagement provide the parameters for reasonable engagement between students and instructors for the online learning environment. Students and instructors are welcome to exceed these requirements.

Reasonable Expectations of Engagement for Instructors

1. As an instructor, I understand the importance of clear, timely communication with my students. In order to maintain sufficient communication, I will
 - provided my contact information at the beginning of the syllabus;
 - respond to all messages within 24 hours if received Monday through Thursday and within 48 hours if received Friday through Sunday; and,
 - notify students of any extended times that I will be unavailable and provide them with alternative contact information (for me or for my supervisor) in case of emergencies **during the time I'm unavailable.**
2. As an instructor, I understand that my students will work to the best of their abilities to fulfill the course requirements. In order to help them in this area, I will
 - provide clear information about grading policies and assignment requirements in the course syllabus, and
 - communicate any changes to assignments and/or to the course calendar to students as quickly as possible.
3. As an instructor, I understand that I need to provide regular, timely feedback to students about their performance in the course. To keep students informed about their progress, I will
 - post grades for discussion postings within one week of the discussion thread closing.
 - provide grades for major assignments within 2 weeks of the due date or at least 3 days before the next major assignment is due, whichever comes first.

Reasonable Expectations of Engagement for Students

1. As a student, I understand that I am responsible for keeping up with the course. To help with this, I will
 - line up alternative computer and internet access in case my primary computer crashes or my internet services is unavailable;

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- recognize that the college provides free wi-fi and computer labs during regular campus hours to help me with accessing my course; and,
 - understand that my instructor does not have to accept my technical issues as a legitimate reason for late or missing work if my equipment or service is unreliable.
2. As a student, I understand that it is my responsibility to communicate quickly with the instructor any issue or emergency that will impact my involvement with or performance in the class. This includes, but is not limited to
- getting “kicked off” of the system during tests or quizzes;
 - having trouble submitting assignments; and
 - dealing with a traumatic personal event.
3. As a student, I understand that it is my responsibility to understand course material and requirements and to keep up with the course calendar. While my instructor is available for help and clarification, I will
- seek out help from my instructor and/or from tutors;
 - ask **questions if I don't understand; and,**
 - access my course several times during the week to keep up with assignments and announcements.
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Long-Term absence policy: Learners are expected to make contact with the instructor each week by completing their assignments. If you are absent from the course for more than **5 days**, an email will be sent to the instructor, the learner and a Student Success Coach. You will need to contact your instructor by email explaining the reason immediately to clear the alert and halt future contact from your instructor and/or coach.

Statement of Academic Dishonesty: In cases of academic dishonesty, the instructor has the authority to impose appropriate scholastic penalties. Complaints or appeals of disciplinary sanctions may be filed in accordance with the college due process procedure as stated in the [Student Handbook](#) under the heading titled *Student Right to Due Process* on page 31.

Statement of cheating/plagiarism and Copyright – disciplinary actions: The instructor has the right to drop a learner with a grade of “F” if the learner is found to **plagiarize someone else’s work in the class or someone else’s work from the internet. This also applies to any learner’s found to be re-using work from having previously taken the course!**

Student Evaluation of Instruction (SEI): The SEI process for face-to-face and online courses is scheduled for the week of April 28th.

Statement of Special Accommodations: Odessa College complies with Section 504 of the Vocational Rehabilitation Act of 1973, and the Americans with Disabilities Act of 1990. If you have any special needs or issues pertaining to your access to and participation in this or any other class at Odessa College, please feel free to contact me to discuss your concerns. You may also call the Office of Disability Services at 335-6861 to request assistance and accommodations.

Hardware/Software Requirements

Computer: A minimum of 64 MB RAM, 1 G of free disk space, 150 MHz or higher recommended, a monitor capable of at least 800 x 600 resolution

Peripherals: Speakers to be able to listen to audio files.

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Software: *Anti-virus software* is highly recommended for learners and instructors. Online courses involve much file sharing, which increases your risk of computer virus infection. Anti-virus software will help protect your computer in case of exposure to a computer virus.

Other software: You are required to submit assignments typed in Microsoft Word document, and I will ask you to view course content that is in the form of Microsoft Word. In this case, **you must have access to Microsoft Word (2007)**, and documents must be sent in that format. You may need to download a free MS 2010 conversion package from www.microsoft.com

There will be audio/video files in the course for which you will need [Windows Media Player](#) or [QuickTime](#) or [Real Player](#).

Internet connection: 56 K modem or better

Browser and settings: Microsoft Internet Explorer 6" (IE 6) works best with Blackboard on computers running the Microsoft Windows operating system.

Java and Cookies must be enabled. To enable Java:

1. In Internet Explorer 6, go to the "Tools" menu and choose "Internet Options".
2. Choose the "Privacy" tab and move the slider to "Medium" (which is the default setting) to enable Cookies.
3. To enable Java (if not installed, first see next item "Java Plug-in for Windows..." or Java Plug-in for Macintosh" below), while remaining in the "Internet Options" window choose the "Advanced" tab.
4. Scroll down until you see the "Java (Sun)" item and check the box beside "Use Java...".
5. Click "OK".
6. You may need to close your browser and all other applications and restart your computer before this setting takes effect.

Email: Learners enrolled in OdessaCollege must use OdessaCollege email address. Go to <http://www.odessa.edu/gmail/> to set up your email account. Your account was set up for you at registration. Do not create a new account. Simply follow the instructions.

Preparation for Computer Emergencies

Computer Crash: Not having a working computer or a crashed computer during the semester will NOT be considered as an acceptable reason for not completing course activities at a scheduled time.

Server problems: When the Blackboard server needs downtime for maintenance, the Blackboard administrator will post an announcement in your course informing the time and the date. If the server experiences unforeseen problems your course instructor will send an email.

Complete Loss of Contact: If you lose contact with me completely (i.e. you cannot contact me via Blackboard or email), you need to call me at my office, 335-6533, and explain the reason you cannot contact me and leave me a way to contact you.

Backup Data: Definitely create a backup of all assignments/documents/emails that you produce during the semester. It is highly suggested that you utilize a thumb drive or external hard drive in addition to saving all course files on your computer. Thumb drives provide a very convenient method of storage. A 2GB model is a great investment in your peace of mind for around \$5-10. You never know when lightning may strike and render a computer useless. Backing up files is necessary in the virtual world.

Alternate Computer: Make arrangements to have access to another computer that you can use in the event you have computer problems. Identify a college, library, Internet café, employer, friend, or other

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source that would provide you with computer access in case of emergency. Always be prepared for waking up to a non-functional computer.

If you take care with these few simple suggestions you will understand why technology problems are NOT acceptable reasons for deadline extensions.

Student Support Services

ADA Accommodation/Support

Rivera-Weiss, Becky	432-335-6861	brivera@odessa.edu
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Admissions & Registration & Transcripts

Doughty, Karen (Director)	432-335-6443	kdoughty@odessa.edu
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Blackboard Technical Support

Lujan, Dianna	432/335-6538	dlujan@odessa.edu
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Book store

Powell, Joyce (Manager)	432-335-6654	jpowell@odessa.edu
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Business Office

Pollock, Debbie (Manager)	432-335-6600	dpollock@odessa.edu
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Computer Services

Carson, David (Director)	432-335-6649	dcarson@odessa.edu
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Counseling

Clemmer, Kristi	432-335-6865	kcclemmer@odessa.edu
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Help Desk (Student Success Center)

Ferrini, Susan	432-335-6876	sferrini@odessa.edu
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Financial Aid and Scholarship

Nesmith, Dee (Director)	432-335-6429	dnesmith@odessa.edu
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Library

Petersen, Carolyn (Director)	432-335-6641	cpetersen@odessa.edu
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Testing Center/Career Center

Pease, Terri (Coordinator)	432-335-6816	tpease@odessa.edu
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Associate Dean of Arts and Sciences

Acosta, Diana	432-335-6412	dacosta@odessa.edu
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Access to Odessa College Library Online Catalog

<http://www.odessa.edu/dept/library/>

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Module	Name	Type		Description	Due Date
1	Introductions	Discussion	GS	Get to know your fellow learners	1/26/13
	Navigation	Assignment	GS	Learn to navigate the course	
	Get Ready for Micro	Assignment	GS	Refresh on basics	
2	Chapter 1: Microbial World & You	Study	Lec	Read chapter & watch Tegrity	2/02/13
	Chapter 1 Quiz	Quiz	Lec	Take quiz over chapter 1	
	Microscope Lab	Study	Lab	Refresh on using microscope	
	Microscope Post Lab	Assignment	Lab	Take the Quiz	
3	Chapter 2: Chemical Principles	Study	Lec	Read chapter & watch Tegrity	2/09/13
	Chapter 2 Quiz	Quiz	Lec	Take quiz over chapter 2	
	Aseptic Technique & Cell Morphology	Study	Lab	Learn to handle bacteria	
	Aseptic Technique Post Lab	Assignment	Lab	Take the Quiz	
	Virtual Unknown 1: Getting Started with VU	Assignment	Lab	Submit lab report	
4	Chapter 4: Functional Anatomy of Cells	Study	Lec	Read chapter & watch Tegrity	2/16/13
	Chapter 4 Quiz	Quiz	Lec	Take quiz over chapter 4	
	Staining Procedures	Study	Lab	Learn the different stains	
	Staining Post Lab	Assignment	Lab	Take the Quiz	
	Lecture Exam 1: Chapters 1, 2 and 4	Test		See the review	
5	Chapter 14: Principles of Disease	Study	Lec	Read chapter & watch Tegrity	2/23/13
	Chapter 14 Quiz	Quiz	Lec	Take quiz over chapter 14	
	Pure Culture/Environmental Cultures	Study	Lab	Learn various streaking methods	
	Colonial Morphology	Study	Lab	Learn about bacterial colonies	
	Cultures Post Lab	Assignment	Lab	Take the Quiz	
6	Chapter 15: Mechanism of Pathogenicity	Study	Lec	Read chapter & watch Tegrity	3/02/13
	Chapter 15 Quiz	Quiz	Lec	Take quiz over chapter 15	
	Haemophilus/Corynebacterium/Bordetella	Study	Lab	Study the Handouts	
	Haemophilus Post Lab	Assignment	Lab	Take the Quiz	
	Virtual Unknown 2	Assignment	Lab	Submit lab report	
	Lab Exam 1: Microscope, Stains, Cultures	Test		See the review	
7	Chapter 5: Microbial Metabolism	Study	Lec	Read chapter & watch Tegrity	3/09/13
	Chapter 5 Quiz	Quiz	Lec	Take quiz over chapter 5	
	Primary Media Lab	Study	Lab	Learn to identify bacteria	
	Primary Media Post Lab	Assignment	Lab	Take the Quiz	
	Virtual Unknown 3	Assignment	Lab	Submit lab report	
8	Chapter 6: Microbial Growth	Study	Lec	Read chapter & watch Tegrity	3/23/13
	Chapter 6 Quiz	Quiz	Lec	Take quiz over chapter 6	
	Staphylococcus Lab	Study	Lab	Learn about this genus	
	Staphylococcus Post Lab	Assignment	Lab	Take the Quiz	
	Lecture Exam 2: Chapters 14, 15 and 5	Test		See the review	
9	Chapter 8: Microbial Genetics	Study	Lec	Read chapter & watch Tegrity	3/30/13
	Chapter 8 Quiz	Quiz	Lec	Take quiz over chapter 8	
	Begin Research Project	Assignment	Lec	Begin work on project	
	Streptococcus Lab	Study	Lab	Learn about this genus	
	Streptococcus Post Lab	Assignment	Lab	Take the Quiz	
10	Chapter 9: Biotechnology	Study	Lec	Read chapter & watch Tegrity	4/06/13
	Chapter 9 Quiz	Quiz	Lec	Take quiz over chapter 9	
	Spirochete Lab	Study	Lab	Learn about spirochetes	
	Spirochete Post Lab	Assignment	Lab	Take the Quiz	
	Virtual Unknown 4	Assignment	Lab	Submit lab report	
11	Chapter 10: Classification	Study	Lec	Read chapter & watch Tegrity	4/13/13
	Chapter 10 Quiz	Quiz	Lec	Take quiz over chapter 10	
	Urinary Tract Infection	Study	lab	Learn about common UTIs	
	Hepatitis Lab	Study	Lab	Learn types of hepatitis	
	UTI and Hepatitis Post Lab	Assignment	Lab	Take the Quiz	
	Lab Exam 2: Haemophilus, Corynebacterium, Bordetella, Primary Media, Staph and Strep	Test		See the review	

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12	Chapter 13: Viruses, Viroids& Prions Chapter 13 Quiz Enterics, Microscan& MIC Panel Lab Enterics Post Lab Virtual Unknown 5 Lecture Exam 3: Chapters 6, 8 and 9	Study Quiz Study Assignment Assignment Test	Lec Lec Lab Lab Lab	Read chapter & watch Tegrity Take quiz over chapter 13 Learn modern identification Submit lab report See the review	4/20/13
13	Chapter 16: Innate Immunity Chapter 16 Quiz Research Project Due Lab Exam 3: Urinary, Hepatitis, Enterics, Microscan	Study Quiz Assignment Quiz	Lec Lec Lec Lab	Read chapter & watch Tegrity Take quiz over chapter 16 Turn in completed research See the review	4/27/13
14	Chapter 17: Specific Immunity Chapter 17 Quiz Protozoan and Helminthes Lab Lecture Exam 4: Chapters 10, 13 and 16	Study Quiz Study Test	Lec Lec Lab	Read chapter & watch Tegrity Take quiz over chapter 17 Learn common parasites See the review	5/04/13
15	Chapter 18: Practical Apps. Of Immunology Chapter 18 Quiz Chapter 19: Disorders of the Immune System Chapter 19 Quiz Fungi Lab Lab Exam 4: Protozoan, Fungi, Helminthes	Study Quiz Study Quiz Study Test	Lec Lec Lec Lec Lab	Read chapter & watch Tegrity Take quiz over chapter 18 Read chapter & watch Tegrity Take quiz over chapter 19 Common fungi See the review	5/11/13
16	Lecture Exam 5: Chapters 17 - 19 AIDS/STDs and Antimicrobials Final Exam	Test Study Test		See the review Study handouts for final Use previous reviews	5/15/13 5/15/13