Lecture: M W 7:00-8:15 pm  Island Hall 156
Prerequisite:  Biol 2421 (Microbiology); Immunology highly recommended

Instructor: Gregory W. Buck, Ph.D.  Office—Center for the Sciences 251;  
Gregory.Buck@tamucc.edu  Tel 361.825.3717  Office Hours: Mon  Wed 10:00 a.m.-
11:15 a.m., Tues Thurs  1:00 p.m.-2:15 p.m. Other days & times: By appointment.

Course Description: The course entails a survey of selected major pathogenic bacteria, 
viruses, fungi, and parasites causing disease in humans, using an organ system approach.  
The course only highlights major mechanisms of HOW bacteria cause disease 
(pathogenesis), but specifically delves into WHY specific traits encoded by bacterial 
genes (virulence factors) may result in disease states, what effects these diseases have on 
individuals (in short, human microbial ecology), and the basis for therapeutic intervention 
(antimicrobial treatments). Some effect on groups and populations (public health 
microbiology) will be discussed. Students are not expected to learn or understand the 
details of basic science involved in either pathogenesis or virulence of etiologic agents.

Student Learning Outcomes: Students will be able to achieve all outcomes at a level of 
≥70%:
1.  Describe the pathology of infectious diseases caused by bacteria and viruses, and by 
certain selected fungi and parasites;
2.  Categorize and analyze infectious diseases by each organ system;
3.  Justify the general treatment of infectious diseases with current specific 
pharmaceutical interventions;
4.  Discuss the epidemiology and immune responses to the pathogens;
5.  Critique information given on the Internet for accuracy related to current diseases, 
organisms, or treatments;
6.  Assess information given in case studies for differential diagnoses and most probable 
etiologic agent(s).

Textbooks—Required:
1. Murray, P. R., K.S. Rosenthal, and M.A. Pfaller. 2013. Medical microbiology, 7th 
While the 6th ed. is a bit dated, you may still use it.

284-0253-92

Textbooks—Suggested: Any immunology text will suffice; you may use either text below:

**Supplies/materials required (at student cost):** Required textbooks.

**Audience defined:** Biology and BIMS students (Pre-professional) at junior, senior, and post-baccalaureate levels who have an interest in how microorganisms cause disease. **While CLS students now have a separate course, information needed for the CLS Registry exam overlaps with what pre-professional students need to know.**

**REQUIRED UNIVERSITY POLICIES**

**Students with Disabilities and Veterans:** All programs in Life Sciences (LSCI) comply with the federal Americans with Disabilities Act (ADA) of 1990, including the ADA Amendments from 2008 (PL 110-325). This anti-discrimination statute provides civil rights protection for persons with disabilities. This statute requires that all qualified students with disabilities be guaranteed a learning environment that provides reasonable accommodations of their disabilities. This act also includes **returning veterans** who may be experiencing cognitive, emotional and/or physical access issues in the classroom or on campus. If you believe you have a disability requiring an accommodation, please call or visit Disability Services at (361) 825-5816 in Corpus Christi Hall, Room 116. Please contact this office in a timely manner, as they must review requests and prepare accommodations and send the accommodation letters.

If you need disability accommodations in this class, please contact the instructor as soon as possible. If you have mobility problems, are pregnant, or you may have a history of seizures, please notify the instructor PRIVATELY so that assistance can be given in case of fire drills or emergencies. Please have your Faculty Notification Letter from the Disabilities Service Office when you talk with Dr. Buck.

**Grade Appeals:** As stated in the Texas A&M University-Corpus Christi University Rules and Procedures (Section B [Academic Program], Part 13 [Students]: 13.02.99.C2 [Student Grade Appeals] and 13.02.99C2.01 [Student Grade Appeal Procedures]), any student who believes that he or she has not been held to appropriate academic standards as outlined in the class syllabus, equitable evaluation procedures, or appropriate grading, may appeal the final grade given in the course. The burden of proof is on the student to demonstrate the appropriateness of the appeal. A student with a complaint about a grade is encouraged to first discuss the matter with the instructor. For complete details, including the responsibilities of the parties involved in the process and the number of days allowed for completing the steps in the process, consult the University Rules and Procedures specified above (accessible through the University Rules and Procedures website at [http://www.tamucc.edu/provost/university_rules/index.html](http://www.tamucc.edu/provost/university_rules/index.html)). For assistance and/or guidance in the grade appeal process, students may contact the Office of Student Affairs.

**Academic Advising:** The College of Science and Engineering requires that students meet with an Academic Advisor as soon as they are ready to declare a major. The Academic Advisor will set up a degree plan, which must be signed by the student, a faculty mentor, and the department chair. The College's Academic Advising Center is located in Center for Instruction--Suite 350, and can be reached at 825-6094.
CLASS POLICIES

Attendance: It is the responsibility of the student to obtain any material missed during an absence from his/her classmates. **It is the responsibility of the student to obtain any material missed during an absence from his/her classmates.** Power Points are not placed in the library, on Blackboard™ 9.1, or on a website. In general, only unavoidable absences are excused (major family illness or accidents, deaths, funerals). Other events (scientific meetings, professional school, training seminars, job interviews, work-related events) will be determined on a case-by-case basis. For emergencies, please leave a voice mail or e-mail for the instructor. For all other unavoidable events, a note from a doctor, dentist, funeral director, supervisor or notification letter from an admissions committee is necessary to receive an excused absence. All notes should be received within one week of the absence. **Please bring your textbooks to class each time.**

Missed or tardy assignments: Students will be given a Late Assignment Penalty for tardy work: 10% assignment grade deduction per class day late. However, after the 3rd day, late assignments will not be accepted. In-class late assignments are defined by being turned in after 7:05 pm. Missed exams are excused only per TAMUCC guidelines; such exams are given only under EXTREME circumstances, and **I am not obligated to give a make-up exam in the exact same format as a regular exam, even for an official University-sanctioned excuse.** Make-up work for missed case presentations will be given only under EMERGENCY circumstances as defined by TAMUCC catalogue and Student Handbook, and may involve writing a 3 page précis of a 10+ page journal article. **I usually do not give make-ups for quizzes and extra credit.**

Please note that case studies and extra credit may be sent to me by e-mail or slid under my office door; tardiness is determined by the time noted on the instructor’s Inbox, but allowances can be made for server problems. Files contaminated by viruses, spyware, and worms will not be accepted. **DO NOT ASK THE CUSTODIANS to let you into my office to place an assignment on my desk.**

Academic Integrity: TAMUCC academic policies are in force, including standards for academic integrity & honesty, plagiarism, grammar and spelling. All policies are described in the TAMUCC catalogue and the Code of Conduct in the Student Handbook. **DO NOT LOOK IN STUDENT ORGANIZATION FILES FOR OLD CASE STUDIES! THIS IS PLAGIARISM, AND I WILL AWARD ALL OFFENDING PARTIES A ZERO ON THE ASSIGNMENT! We also have to report all instances of cheating to the Dean of Students office on an Academic Misconduct form—this report will be forwarded to graduate and professional schools.**

Citation format: Please use Council of Science Editors format.

Professional Courtesy: **DO NOT USE CAMERA PHONES IN LECTURE OR LAB. DO NOT SEND TEXT MESSAGES DURING CLASS.** Please turn off all cell phones, beepers, Bluetooth devices, Palm Pilots, Black Berrys, etc., before entering the classroom or laboratory, or at least place them on silent mode. **I would prefer that**
earpieces not be worn in lecture—please see me if you have concentration problems. Recording of lectures with tape recorders can only be done with permission of instructor. Please refrain from eating in class; if you must eat for medical reasons, please see me privately.

Class room Behavior: “Texas A&M University-Corpus Christi, as an academic community, requires that each individual respect the needs of others to study and learn in a peaceful atmosphere. Under Article III of the Student Code of Conduct, classroom behavior that interferes with either (a) the instructor’s ability to conduct the class or (b) the ability of other students to profit from the instructional program may be considered a breach of the peace and is subject to disciplinary sanction outlined in Article VII of the Student Code of Conduct. Students engaging in unacceptable behavior (including excessive text messaging) may be instructed to leave the classroom. This prohibition applies to all instructional forums, including classrooms, electronic classrooms, labs, discussion groups, field trips, etc.”

List-serve: All students must subscribe to the opportunities list serve; I will use Blackboard 9.1 to make a distribution list of individuals’ e-mail addresses. To subscribe, send a separate e-mail to opportunities-list-request@sci.tamucc.edu. Make sure that your e-mail appears in the “From” heading. In the subject heading, type “subscribe,” then send the e-mail. Next, you will receive a second message with a long set of letters and numbers in the subject line. You must also reply to that message in order to be subscribed to the list-serve.

After the initial message to subscribe, to send items on the list-serve, just type opportunities-list@sci.tamucc.edu (do NOT add –request after list). You may not receive the messages from the list-serve if your Internet service provider (Yahoo, Hotmail, Excite, Roadrunner, Grande, etc.) keep these messages from being placed in junk-mail. The University administration prefers that you use the islander.tamucc.edu accounts. If class is cancelled due to a pending hurricane, that information is sent via your islander.tamucc.edu account, not to other accounts.

Special Clinical Laboratory Science Information: This course continues to augment the University Skills through the ASCP Board of Registry Examination components:
--Registry Level 1: Recall; most information transcends this level;
--Registry Level 2: Data analysis and interpretation, especially with tables and graphs;
--Registry Level 3: Critical thinking beyond rote memorization occurs by analysis, synthesis and evaluation of material presented in lectures and case studies;
--Oral skills will be improved through discussion of case studies;
--Reading and writing skills are improved through essays on exams

As stated earlier, while CLS students now have a separate course, information needed for the CLS Registry exam overlaps with what pre-professional students need to know.

Dropping courses: I hope that students do not find it necessary to drop this class. However, life events can sometimes occur that make dropping a course necessary or
Please consult with me before you decide to drop to be sure it is the best thing to do. You as adults have to be the final judge of your action whether to drop or not. For students applying to professional or graduate school, you will have to explain why you dropped this class or any other class. Receiving a “W” is NOT automatic; you must initiate the paperwork in the Student Services Center (the “Round Building”). Just stopping attendance and participation WILL NOT automatically result in your being dropped from the class.

Deadline to drop course with a “W” grade: F Nov 15
Deadline to withdraw from University for the fall term: M Dec 9

Evaluation:
80%: Class exams—these four (4) evaluations are given at 100 pts each, including a comprehensive final, and may consist of short answer, essay, multiple choice, case studies, matching or descriptive T/F questions.

20%: Four Case Studies—these exercises will be done in groups and done outside of class.
Extra Credit assignments may be given at prerogative of instructor, who is NOT obligated to give make-up extra credit opportunities. These opportunities include case studies, Internet assignments, or journal articles to read/summarize.

Grading scale
4 class exams (including final exam, which may or may not be cumulative)
@ 100 pts. each = 400 pts
4 case histories@ 25 pts. each = 100 pts.
Total 500 pts.

Extra credit assignments are added in, and do not count toward the 500 total points.

N.B: Instructors reserve the right to assign talks by visiting seminar speakers as an extra case history not included in the four (4), or as a make-up. Instructor may also give information on selected microorganisms not covered in lecture as handouts (“The Weekly Microbe”), Web-based assignments, case histories, journal articles, or MMWR synopses. These organisms can be included on examinations. Students will be responsible for all material (textbook, guest lectures, web sites, case studies, and handouts) covered in the lecture.

A>90%     B=80-89.9%     C=70-79.9%    D=60-69%    F<60%

N.B: You may have either a Case Study or Extra Credit assignments during the Dead Week (final week of classes).
Caveat: If a test is cancelled because of inclement weather, the test is automatically rescheduled for the next class date.

Dates to Remember:
Exams:  W Oct 2 M Oct 29 M Dec 2 Final M Dec 16 (7:15 pm)  
Cases assigned: W Sep 23 W Oct 16 W Nov 13 M Nov 25 –all cases due one week after assignment!

Tentative Lecture Schedule  BIMS 4374 Fall 2013 v5 7:00-8:15 pm IH 156  
Caveat: The syllabus is a general guide; deviations may be necessary.

Texts: M=Chapters in Murray et al, 7th ed;  G= pages in Gallagher and MacDougall; I= chapters in Abbas and Lichtman, 2nd ed  K= chapters in Kuby Immunology, 6th ed.  HW=Homework

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<th>Wk</th>
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<th>Day</th>
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<th>Readings</th>
<th>Wkly Microbe</th>
<th>Examples*</th>
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<td>1</td>
<td>W</td>
<td>Sep 4</td>
<td>The Microbes</td>
<td>M-Ch 1, 3, 12, 13</td>
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<td>2</td>
<td>M</td>
<td>Sep 9</td>
<td>Pathogenesis</td>
<td>M-Ch 2</td>
<td>Normal Flora</td>
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<td>3</td>
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<td>Sep 11</td>
<td>Infection &amp; Immunity 1</td>
<td>M-7-8; I-Ch 1, 2, 6, 8; K-Ch 2-4</td>
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<td>W</td>
<td>Sep 18</td>
<td>Infection &amp; Immunity 2</td>
<td>M-Ch 9-11; I-Ch 1, 2, 6, 8; K-Ch 2-4</td>
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<td>6</td>
<td>M</td>
<td>Sep 23</td>
<td>Immunity &amp; Vaccines; Case Study 1</td>
<td>M-Ch. 11 K-Ch. 1, 18, 19</td>
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<td>M</td>
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<td>Antimicrobials 1</td>
<td>M-Ch 17; G-5, 7-13</td>
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<td>M</td>
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<td>Antimicrobials 2</td>
<td>G-Ch 14-25</td>
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<td>9</td>
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<td>Lectures 1-8</td>
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<td>10</td>
<td>W</td>
<td>Oct 7</td>
<td>Resp Infectns 1: Viruses</td>
<td>M-Ch.50, 54, 55, 56, 57</td>
<td>Pneumonia etiologic agents, Viruses</td>
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<td>11</td>
<td>M</td>
<td>Oct 9</td>
<td>Resp Infectns 2: Bacteria</td>
<td>M-Ch.18, 19, 25, 30 Burkholderia, F. tularensis Pseudomonas</td>
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<td>12</td>
<td>W</td>
<td>Oct 14</td>
<td>Resp. Infections 3: Bacteria</td>
<td>M-Ch. 31, 32, 33, 34 Mycobac., H. flu</td>
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<td>13</td>
<td>W</td>
<td>Oct 16</td>
<td>Intravas. Infect: Sepsis;</td>
<td>M-Ch. 18, 19, 20, 35, Staph &amp; Strep</td>
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<td>13</td>
<td>M</td>
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<td>Oct 21</td>
<td>Anaerobes &amp; CNS Infectn 1</td>
<td>M-Ch. 37, 38</td>
<td>Anaerobes</td>
<td><em>Clostridium, H. flu, Meningococci</em></td>
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<td>14</td>
<td>W</td>
<td>Oct 23</td>
<td>CNS Infectn 2</td>
<td>M-Ch.23, 24, 26</td>
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<td>Oct 28</td>
<td>CNS Infectn 3</td>
<td>M-Ch. 53, 54, 58, 60, 61, 64, 82</td>
<td>Naegleria</td>
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<td><em>HSV, EBV, Rabies, Adeno, Prions</em></td>
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<td>Oct 30</td>
<td>GI Infectn 1</td>
<td>M-Ch. 21, 27, 30, 34</td>
<td>Enterobacteriaceae</td>
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<td><em>Enterobacteriaceae, Bacillus</em></td>
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<td>M</td>
<td>Nov 4</td>
<td>GI Infectn 2</td>
<td>M-Ch 28, 31-33, 54, 55, 59, 73, 81</td>
<td>Vibrio</td>
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<td><em>Helicobact., Campylobact., Clostridium, Giardia, Rota, Polio, Echo</em></td>
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<td>W</td>
<td>Nov 6</td>
<td>Exam 2</td>
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<td>18</td>
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<td>Nov 11</td>
<td>GU-STD 1</td>
<td>M-Ch. 49, 51</td>
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<td><em>HPV, HSV</em></td>
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<td>11</td>
<td>W</td>
<td>Nov 13</td>
<td>Case Study 3</td>
<td>Case Study 3</td>
<td>M-Ch. 39, 40, 43, 46, 47, 54, 70, 71</td>
<td>Treponema, E. coli, Proteus, Neisseria, Candida</td>
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<td>20</td>
<td>M</td>
<td>Nov 18</td>
<td>Obligate Intracellular Parasites</td>
<td>M-Ch 39-43</td>
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<td><em>Chlamydia, Rickettsia, Erhlichia, Orientia, Coxiella</em></td>
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<td>12</td>
<td>W</td>
<td>Nov 20</td>
<td>Skin &amp; Soft Tissue Infectn</td>
<td>M-Ch. 21-24, 25, 28, 30, 33, 36, 39, 70,52, 53, 63, 71</td>
<td>Pseudomonas</td>
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<td><em>Yersinia, Staph., Strep., Nocardia, Clostridium, superficial mycoses; Hepatitis viruses</em></td>
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<td>Grad Student Presentations; Case study 4</td>
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<td>Nov 27</td>
<td>No Class; Happy Thanksgiving!</td>
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<td>14</td>
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<td>W</td>
<td>Dec 4</td>
<td>HIV/Immuno-comp.</td>
<td>M-Ch 25, 62, 73</td>
<td>Candida, MAC, Aspergillus</td>
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<td>25</td>
<td>M</td>
<td>Dec 9</td>
<td>Bioterrorism</td>
<td>Handouts</td>
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<td>Anthrax, tularemia, smallpox, brucellosis aflatoxins</td>
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<td>M</td>
<td>Dec 16</td>
<td>Final Exam</td>
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