

**CEDAR CREST COLLEGE**  
***Biology 327 – Microbial Pathogenesis and Human Immunology***  
**Course Syllabus - Part II: Lecture Schedule, Assignments & Policies**  
**Spring 2007**

**COURSE MATERIALS:**

- Marjorie Kelly Cowan and Kathleen Park Talaro, *Microbiology: A Systems Approach*, 1<sup>st</sup> ed., McGraw Hill, 2006 **OR** M. T. Madigan, J. M. Martinko, J.M. and J. Parker, *Brock Biology of Microorganisms*, 10th Ed., Prentice Hall, 2003 (use of one of these texts is highly recommended for a resource).
- Marjorie Kelly Cowan, *The Microbe Files*, Benjamin Cummings, 2002 (required).
- Philip M. Tierno, *The Secret Life of Germs: Observations and Lessons from a Microbe Hunter*, Atria, 2001 (required).
- Additional material will be provided to supplement texts. A 2 or 3 inch 3 ring binder is highly recommended to organize these regularly provided handouts.

*Lecture schedule subject to change if needed.*

<b>DATE</b>	<b>LECTURE</b>	<b>FOR CLASS</b>
Jan 17 – W Lecture 1	<ul style="list-style-type: none"> <li>• Themes and goals of the course</li> <li>• Discussion of historical impact, ways to classify diseases &amp; organisms</li> <li>• Overview of the microbes of infectious diseases, review of organism types</li> <li>• Introduce discussion topic 1 and preparation</li> </ul>	Review microbiology basics Cowan: Chapter 1 Brock: Chapter 1
Jan 19 – F Topic 1	<p><i>Discussion 1: Human host and biota interactions. Prepare to discuss the following areas:</i></p> <ol style="list-style-type: none"> <li>1. <i>Differences between resident, transient &amp; opportunistic biota</i></li> <li>2. <i>Symbiotic relationships of mutualism, parasitism, antagonism, &amp; commensalism</i></li> <li>3. <i>Steps required for a successful pathogen</i></li> </ol>	Research topic. To share and hand in, prepare notes with the following: introduction paragraph of topic, data points and resources, conclusion paragraph
Jan 22 – M Lecture 2	<ul style="list-style-type: none"> <li>• Infection progression</li> </ul>	Cowan: 13:384-400 Brock: 21:737-742
Jan 24 – W Lecture 3	<ul style="list-style-type: none"> <li>• Disease Tracking- Epidemiology</li> <li>• Introduce discussion topic 2</li> </ul>	Cowan: 13:401-411 Brock: 25:847-871
Jan 26 – F Topic 2	<p><i>Discussion 2: Epidemiology &amp; Public Health. Different groups are at risk from age, leisure activities, geographical location, health status, pets, and previous medical history</i></p>	Research topic and prepare notes for class
Jan 29 – M Lecture 4	<ul style="list-style-type: none"> <li>• Steps and types of diagnosis</li> <li>• Ways to identify microbes, specimens, phenotypic &amp; genotypic methods</li> </ul>	Microbe Files (MF) intro Cowan: 17.1 – 17.4 Brock: 24:805-814, 838-844

Jan 31 – W Lecture 5	<ul style="list-style-type: none"> <li>Immunology methods</li> <li>Introduce discussion topic 3</li> </ul>	Cowan: 17.5 Brock: 24:818-836
Feb 2 – F Topic 3	<i>Discussion 3: Chemotherapy and key treatments</i>	Research topic and prepare notes for class Cowan: 12 Brock: 20:707-723
Feb 5 – M Lecture 6	<ul style="list-style-type: none"> <li>Immunology methods</li> </ul>	Cowan: 17.5 Brock: 24:818-836
Feb 7 – W Lecture 7	<ul style="list-style-type: none"> <li>Introduction to lines of host defense</li> <li>1<sup>st</sup> line of defense, non-specific</li> <li>Introduce discussion topic 4</li> </ul>	Cowan: 14.1 – 14.3 Brock: 21:749-751
Feb 9 – F Topic 4	<i>Discussion 4: Issues of global health (global expansion of topic 2). Use the World Health Organization to expand on health issues around the world that we don't usually face in the USA.</i>	Research topic and prepare notes for class
Feb 12 – M	<b>Exam I (material through Friday's material)</b>	
Feb 14 – W Lecture 8	<ul style="list-style-type: none"> <li>2<sup>nd</sup> line of defense, innate response</li> </ul>	Cowan: 14.4 Brock: 21:752, 22:756-762
Feb 16 – F Lecture 9	<ul style="list-style-type: none"> <li>Specific immunity</li> </ul>	Cowan: 15.1 – 15.3 Brock: 22:763
Feb 19 – M Lecture 10	<ul style="list-style-type: none"> <li>Recognition of antigens, B cells, and antibody production</li> </ul>	Cowan: 15.4 – 15.4 Brock: 22:771-777
Feb 21 – W Lecture 11	<ul style="list-style-type: none"> <li>T-cell response and cell-mediated immunity, types of immunity</li> </ul>	Cowan: 15.6-15.7 Brock: 22:764-771, 777-778
Feb 23 – F Topic 5	<i>Discussion 5: Microbes fighting back. What are the issues of resistance and the medical implications of these concerns? Consider the future of clinical microbiology .</i>	Research topic and prepare notes for class, paper handout
Feb 26 – M Lecture 12	<ul style="list-style-type: none"> <li>Immunizations</li> </ul>	Cowan: 15.8 Brock: 22:777-781
Feb 28 – W Lecture 13	<ul style="list-style-type: none"> <li>Disorders in immunity &amp; allergies</li> <li>Introduce topic 6</li> </ul>	Cowan: 16.1 – 16.4 Brock: 22:761-785
Mar 2 – F Topic 6	<i>Discussion 6: Pros and cons of vaccinations. This is a hot topic in many circles. Are some vaccines a risk for some individuals? Why? What are the overall benefits and risks?</i>	Research topic and prepare notes for class
<b>Mar 5 – 9</b>	<b>BREAK</b>	Read <u>The Secret Life of Germs</u>
Mar 12 – M Lecture 14	<ul style="list-style-type: none"> <li>Autoimmune reactions and immunodeficiency</li> <li>Introduce discussion topic 7</li> </ul>	Cowan: 16.5 – 16.14 Brock: 22:761-785
Mar 14 – W	<ul style="list-style-type: none"> <li><b>Exam II (immunology - immunodeficiency)</b></li> </ul>	
Mar 16 – F Topic 7	<i>Discussion 7: The Secret Life of Germs. What did you learn? What did you like and dislike? What got your attention? What bothered you most? What did you want to go tell other people?</i>	Complete reading of book and prepare notes for class
Mar 17 – M Lecture 15	<ul style="list-style-type: none"> <li>Infectious diseases of the upper respiratory tract</li> </ul>	Cowan: 21 Brock: 26, few in 27 & 28

Mar 21 – W Lecture 16	<ul style="list-style-type: none"> <li>Infectious diseases of the upper respiratory tract</li> </ul>	Cowan: 21 Brock: 26, few in 27 & 28
Mar 23 – F Lecture 17	<ul style="list-style-type: none"> <li>Infectious diseases of the lower respiratory tract</li> </ul>	Cowan: 21 Brock: 26, few in 27 & 28
Mar 26 – M Lecture 18	<ul style="list-style-type: none"> <li>Infectious diseases of the skin &amp; eyes</li> </ul>	Cowan: 18 Brock: 26
Mar 28 – W Lecture 19	<ul style="list-style-type: none"> <li>Infectious diseases of the skin &amp; eyes</li> <li>Introduce case study discussion 8</li> </ul>	Cowan: 18 Brock: 26
Mar 30 – F Topic 8	<i>Discussion 8: Case studies (respiratory, skin &amp; eyes). Read through the different case studies to be discussed. You will be assigned to lead the analysis of a specific case in the class. Prepare answers to the case questions and explanations for them.</i>	MF: Respiratory, skin & eye chapters. Study assigned case and prepare notes for class
Apr 2 – M	<b>Exam III (immunizations through skin &amp; eye infections)</b>	
Apr 4 – W Lecture 20	<ul style="list-style-type: none"> <li>Infectious diseases of the gastrointestinal tract</li> </ul>	Cowan: 22 Brock: 28, 29
<b>Apr 6 – F</b>	<b>BREAK</b>	
Apr 9 – M Lecture 21	<ul style="list-style-type: none"> <li>Infectious diseases of the gastrointestinal tract</li> </ul>	Cowan: 22 Brock: 28, 29
Apr 11 – W Lecture 22	<ul style="list-style-type: none"> <li>Infectious diseases of the cardiovascular and lymphatic systems</li> <li>Introduce case study discussion 9</li> </ul>	Cowan: 20 Brock: 27
Apr 13 – F Topic 9	<i>Discussion 9: case studies (gastrointestinal, cardiovascular &amp; lymphatic system). Read case studies and prepare to lead your assigned one as before.</i>	MF: GI and Cardio/Lymph chapters. Study assigned case and prepare notes for class
Apr 16 – M Lecture 23	<ul style="list-style-type: none"> <li>Infectious diseases of the cardiovascular and lymphatic systems</li> </ul>	Cowan: 20 Brock: 27
Apr 18 – W Lecture 24	<ul style="list-style-type: none"> <li>Genitourinary/Urogenital</li> </ul>	Cowan: 23 Brock: 26 part III, 25.7
Apr 20 – F Lecture 25	<ul style="list-style-type: none"> <li><u>1 page research project summary for general public audience due</u></li> <li>Genitourinary/Urogenital</li> </ul>	Cowan: 23 Brock: 26 part III, 25.7
Apr 23 – M Lecture 26	<ul style="list-style-type: none"> <li><u>Research paper due</u></li> <li>Infectious diseases of the central nervous system</li> </ul>	Cowan: 19 Brock: 27
Apr 25 – W Lecture 27	<ul style="list-style-type: none"> <li>Infectious diseases of the central nervous system</li> <li>Introduce case study discussion 10</li> </ul>	Cowan: 19 Brock: 27
Apr 26 – R	<i>4<sup>th</sup> Annual Health &amp; Wellness Conference (An abstract of the 1 page research summaries will be submitted to present them displayed on a poster)</i>	
Apr 27 – F Topic 10	<i>Discussion 10: case studies (genitourinary, CNS) Read case studies and prepare to lead your assigned one as before.</i>	MF: Urogenital & CNS chapters, prepare assigned as before.
Apr 30 – M/F	<ul style="list-style-type: none"> <li>Course evaluations</li> <li>Play <i>Infection!</i></li> </ul>	
<b>TBA</b>	<b>FINAL EXAM (from gastrointestinal through CNS; as well as cumulative overview)</b>	

### **Other Scheduling tid-bits:**

- Last day to add or drop a course Tuesday, Jan 23, 4 pm
- Last day to withdraw from a course Tuesday, Apr 10, 4pm
- Final exams Saturday, May 5 – Wednesday, May 9
- Senior grades due Thursday, May 10, 12pm

## **STUDENT RESPONSIBILITIES**

### Lecture Attendance Policies:

1. You are expected to be in attendance, to be at class on time and as scheduled, to not leave early, to come prepared, and to not distract and detract from the learning of those around you. Attendance will be documented.
2. It is your responsibility to obtain notes and handouts from a classmate for any missed material for lecture absences. Find a note-taking and study buddy early in the course.
3. In the unfortunate event of an unplanned absence due to a personal or family medical emergency, you must contact the Dean of Student Affairs (Joan Laffey: 610-437-4471, x3371; [jmlaffey@cedarcrest.edu](mailto:jmlaffey@cedarcrest.edu)) to obtain appropriate documentation for an excused absence. These offices will contact me. You should also contact me about the situation and to make alternative coursework plans.
4. Expected absences for extenuating circumstances should be discussed in advance with the Dean of Student Affairs and then with me.

### Exam Policy:

1. You are expected to be at each exam on time and as scheduled. Only emergencies or special circumstances will be allowed as reasons for any make-up. Any adjustments must fulfill the following 3 requirements:
  - You must notify me on or before the day of the exam. This should happen before the time of the scheduled exam, pending valid emergencies.
  - There is a documented (from the Health Center, Dean of Students, or Academic Services) reason that is considered valid (at my discretion).
  - The test must be completed within exactly one week of the absence or, or as otherwise arranged. It is your responsibility to contact me to schedule any approved make-up exam, and this should be done as soon as possible.
2. Without a legitimate/credible excuse on or before the test day, you will receive a zero for that test. Without making-up an excused exam within one week, you will receive a zero for that test.
3. Some make-ups may not necessarily correspond to the regular test format. They will be given at a designated time and may also be scheduled during the week of final exams.
4. If you arrive late for an exam, you forfeit that time in taking the test.
5. You are expected to sit with a space between you and the next student, as possible, and in the order indicated for each exam. This means you may not be in your usual spot in the room.

6. Before each exam, all material must be placed in the front of the room, or as directed. Purses, papers, notebooks, books, PDAs, cell phones, headphones, guests, calculators or other devices are not allowed unless otherwise directed. Exams must be in ink (and not in red or pink).

#### Final Exam Policy:

1. Your obligation for this course includes attendance at the final exam on the day and time scheduled by the Registrar's Office. You should not make travel arrangements (nor should your family make them for you) until the final exam schedule is published. If you must make plans early, you should schedule your travel after the last final exam day.
2. Unexcused absence for the final exam will result in a zero for that exam.
3. Final exam times cannot be rearranged unless three or more exams occur within a 24-hour period. Any exception must be petitioned and reviewed by the Department of Biological Sciences within a week of when the final exam schedule is announced in class.

#### Assignment Policies:

1. Assignments are to be done as scheduled and work to be handed in before the beginning of the class in which it is due unless otherwise instructed. Up to 10% of the assignment grade will be deducted for each weekday for which the assignment is late.
2. If you miss class on a day on which an assignment is due, it is your responsibility to get the assignment in on time or as soon as possible (to minimize your deducted points).
3. If you miss class on a day on which an assignment is given, it is your responsibility to get the assignment from a classmate for from me.
4. Do not use pink or red in for assignments you will be turning in.

#### Academic Policies:

1. Please refrain from all activities that detract from the learning of others around you. This includes but is not limited to the following areas. Please silence cell phones during class unless there is an impending emergency, do not routinely come to class late, do not eat or talk in ways that are distracting to those around you, and do not leave the classroom except for the bathroom or related emergencies. Other interruptions must be cleared in advance.
2. As stated in the syllabus overview, I fully support the Honor Philosophy and Classroom Protocol that is implicit in the Honor Philosophy, the Academic Standards of Integrity, and the Statement on Academic Dishonesty or Plagiarism set out by the *Cedar Crest College Catalog* and the *Student Handbook*.
  - Plagiarism will result in a zero for the assignment.
  - Cheating in lecture or lab will result in a zero for the test/assignment.
  - Plagiarism and cheating violations may be reported to the Provost, Academic Services, and/or the Honor & Judicial Board, and may result in failure of the course.
  - Violations or known violation intentions should be brought to my attention.

## LECTURE GRADING

1. Lecture breakdown points (other course points include 300 points from the lab work, see laboratory separate schedule):
  - 300 points = 3 exams, 100 points each
  - 100 points = regular discussion write-ups (10 points each)
  - 100 points = research paper (75 points), general public presentation (25 points)
  - 200 points = cumulative final
  - 700 total
2. **Attendance is mandatory.** The only exceptions being cases of family emergency or medical reason as discussed above. In these circumstances the above protocol must be followed. If there is no legitimate excuse for a lecture/laboratory absence and/or the instructor is not notified prior to an absence, the student will have his/her final grade lowered by 10%.
3. Students are expected to follow the Cedar Crest College Classroom Protocol. Students are expected to arrive promptly for each class session. Late arrivals or early departures will not be tolerated. Students are expected to be respectful in class. Please silence cell phones unless otherwise arranged. Guests should be cleared in advance. If there are repeated classroom disruptions of these and/or others, the student will have his/her final grade lowered by 10%.
4. As all exams must be taken as scheduled, save for emergencies or previous special arrangements. If an exam is not taken as arranged, the student will receive a zero for that test.
5. Plagiarism will result in an “F” for the assignment and will be reported to the Provost.
6. Cheating in lecture or lab will result in failure of the course.
7. This is an upper level course with roughly one third of lecture time scheduled as discussion. Students are expected to prepare for and participate in these discussions as a part of their content material and grade.
8. There is no extra credit associated with the course. A sense of scientific and medical microbiology excitement and intrigue is associated with the course!