

Microbiology 128C

A Substantial Writing Component Course:
Emerging Infectious Diseases

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Developed by Dr. Leanne H. Field (August, 1998)

MICROBIOLOGY 128C (46800)

COURSE POLICY

FALL 1998

INSTRUCTOR:

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ENROLLMENT IN MIC 128C

You must have completed the prerequisites for MIC 128C prior to enrollment, i.e. credit for MIC 228 or registration for MIC 228. Students who do not have these prerequisites will be dropped from the course by the 5th class day, September 1, 1998.

REQUIRED TEXT: Pechenik, Jan A. 1997. A Short Guide to Writing About Biology (3rd ed.) Addison-Wesley Educational, New York, N.Y. (Please purchase this book. It is available at the campus bookstores.)
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COURSE REQUIREMENTS: MIC 128C is a Substantial Writing Component (SWC) course which meets the following university requirements:

1. Each course certified as having a substantial writing component must include at least three writing activities per semester, exclusive of in class quizzes and examinations. These three or more writing activities must total approximately 16 typewritten, double-spaced pages (about 4,000 words). A major rewriting of a paper (requiring additional original writing, not merely editing) can be considered a separate writing activity.

2. During the course, each student must receive a timely and detailed critique following each writing activity concerning the quality of the student's written expression and ways in which the paper can be improved.

3. The quality of a student's written expression must be an important component in determining the student's course grade.

COURSE OVERVIEW:

The topic chosen for the Fall 1998 sections of MIC 128C is EMERGING INFECTIOUS DISEASES. Teams of two students will choose one microorganism which is associated with an emerging or reemerging infectious disease, and will study and write about this pathogen for the entire semester. Each member of the team (working without his or her partner) will be given four writing assignments about their chosen pathogen, including one annotated bibliography and three papers (outlined below). These assignments are designed to build upon each other and provide students with a detailed understanding of a single emerging pathogen. At the end of the semester, each team of two students will collaborate on a 12-15 minute oral presentation about their emerging pathogen. These presentations will give members of the class the opportunity to learn about several emerging pathogens and the infectious diseases which they cause.

SUMMARY OF WRITTEN AND ORAL ASSIGNMENTS:

1. Writing Assignment 1: Epidemic Reports
Approximate length: 2 -3 pages

Students will research and briefly summarize 3 recent epidemics which have been associated with their emerging pathogen. This paper should include an analysis of common features shared by the epidemics, and should discuss "the factors related to emergence" which are illustrated by the epidemics. The reader should come away with a clear understanding of why this pathogen is considered to be emerging or reemerging. Copies of the 3 epidemic reports should be turned in with the summary for grading. The information in this assignment also will be incorporated into Writing Assignment 4 (see below).

2. Writing Assignment 2: Annotated Bibliography
Approximate length: 1-2 pages

Students will be taught by Ms. Nancy Elder, Head Librarian of the Life Science Library, about library research methods and the many resources which are available to them at The University of Texas at

Austin. Ms. Elder will guide the class in an interactive on-line computer search of the MEDLINE data base for information about the emerging pathogen *Cryptosporidium*. Using available resources, students will research the literature and submit for approval a preliminary bibliography, and then turn in an annotated bibliography about their emerging pathogen. In an annotated bibliography, each reference is accompanied by a few sentences of explanation describing the work. The completed annotated bibliography should consist of: 1 book chapter, 2 review articles, and 5 original peer-reviewed research papers (related to the pathogenesis and/or the host's response to infection with the pathogen). This bibliography will serve as the body of information for Writing Assignment 4.

3. Writing Assignment 3: Summary of an Original Research Paper
Approximate length: 2-3 pages

Students will read a paper from the original, peer-reviewed scientific literature relating to the pathogenesis of their emerging pathogen and write a summary of that paper. Exercises in class and information in the text will help guide students in effectively reading a research paper, in analyzing data, and in accurately summarizing the essence of the paper in one or two sentences. Students will have the opportunity to present their 2 sentence summaries and a figure or table from their paper to the class using an overhead projector or other visual aid. This experience will help prepare them for the final oral presentation. A copy of the original research paper should be turned in with the summary for grading. The original research paper used in this assignment also will become part of Writing Assignment 4.

4. Writing Assignment 4: Literature Review Paper
Approximate length: 8-10 pages (excluding references)

In this paper, students will expand upon previous assignments by writing a short literature review summarizing the present state of knowledge about their emerging pathogen as it has been reported in books and journals. The challenge of this assignment will be for students to evaluate and understand the information they have collected, to paraphrase and summarize it in their own words, and to present it in a coherent, organized manner. Students will be given a suggested format to follow. The instructor will be available to meet with students individually to review their outlines, notes, and bibliography before they begin drafting this paper. The finished paper should be submitted for grading in a three ring binder along with copies of the three epidemic reports (from Writing Assignment 1), copies of the two review articles, and copies of the five original research papers (including the one used in Writing Assignment 3).

5. Oral Presentation (teams of two students)

Approximate length: 12-15 minutes

By this time in the semester, students have gained a thorough understanding of their emerging pathogen and are ready to communicate aspects of what they have learned to the class. The challenge of this assignment will be for teams of two students to streamline the information they have and to present it to the audience in an interesting manner using visual aids. Visual aids can be as "low tech" as a blackboard, or as "high tech" as a power point presentation. Each member of the team will present

6-7 minutes of information and students will be given both an individual grade and a "team grade" for the overall effectiveness of their presentation. Written materials used during the presentation and copies of the visual aids are to be turned in at the completion of the presentation.

GENERAL REQUIREMENTS FOR WRITING ASSIGNMENTS:

1. Assignments should be typed and double-spaced with a font size of 12 point. (Note that regardless of the font size and style, the total number of words per page should be approximately 250.) Margins on the left and right should be 1 1/4 in. and 1 in. on the top and bottom. Each writing assignment should include a title page. References should be cited on a separate page at the end of the assignment.

2. Please prepare two copies of all writing assignments and referenced papers. One set will be graded; the other will be retained by the instructor. Note that the notebook prepared for Writing Assignment 4 also will be kept by the instructor.

GENERAL CRITERIA FOR GRADING WRITING ASSIGNMENTS:

1. Scientific Content - Is the scientific content accurate and complete?
2. Organization- Is the paper well organized? Does it flow with a logical beginning and end?
3. Style- Does the paper read easily? Does it have correct emphasis in each paragraph and section?
4. Use of the English Language - Does the paper use correct sentence and paragraph structure, grammar, word usage, and spelling?
5. References- Are the references presented in the correct format (i.e. ASM style)?

POLICY ON LATE ASSIGNMENTS:

Assignments turned in late will have 5 points per day deducted from the total score.

POLICY ON REWRITING PAPERS:

At the end of the semester, students will be given the opportunity to rewrite a paper of their choice and submit it for regrading by the instructor. Students must turn in the both the original paper and the revision for regrading.

DETERMINATION OF FINAL GRADES:

Final grades in this course will be determined as follows:

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| 1. Writing Assignment 1 | 10% |
| 2. Writing Assignment 2 | 5% |
| 3. Writing Assignment 3 | 20% |
| 4. Writing Assignment 4 | 35% |
| 5. Oral Presentation | 20% |
| 6. Participation and In-Class Writing Assignments | 10% |

CLASS ATTENDANCE AND PARTICIPATION:

Please note that your attendance and participation in class are important for the success of this course. Therefore, attendance will be taken each class period. Students will be allowed one unexcused absence without penalty. Other absences must be preapproved by the instructor. Students who miss class (with the prior approval of the instructor) will have the opportunity to complete a make-up writing assignment so that their grade will not be penalized.

POLICY ON SCHOLASTIC DISHONESTY

Students who violate University rules on scholastic dishonesty (including plagiarism) are subject to disciplinary penalties, including the possibility of failure in the course and/or dismissal from The University. Since each dishonesty harms the individual, all students, and the integrity of The University, policies on scholastic dishonesty will be strictly enforced.

The writing you submit for evaluation in this course must be your own. Submitting another student's work as your own, or using someone else's words without giving them due credit is plagiarism, a serious form of academic dishonesty. Plagiarism may be the result of simple ignorance in how to reference others' work or the result of sloppy, careless documentation. It is your responsibility to learn the accepted conventions for documenting the work of others. Ignorance is no excuse! If you are unsure about what is acceptable, please study your text and/or the other books about scientific writing which are on reserve in the Life Science Library. Skilled counselors are also available to help you at the Undergraduate Writing Center and the Learning Skills Center on campus (see below).

RESOURCES AVAILABLE TO STUDENTS IN THIS COURSE:

1. RESOURCES ON EMERGING PATHOGENS:

- a. Introductory Lecture on Emerging Infectious Diseases
During the second class period, the instructor will present an introductory lecture on emerging infectious diseases which will emphasize the six factors that shape infectious disease emergence. Students will be given a copy of a book chapter entitled "Factors in Emergence" taken from Lederberg, J., R.E. Shope, and S.C. Oaks (eds.), *Emerging Infections- Microbial Threats to Health in the United States*. 1992. National Academy Press, Washington, D.C. This chapter discusses the factors that have resulted in disease emergence and reemergence and lists examples of emergent bacteria, rickettsiae, chlamydiae, viruses, protozoans, helminths, and fungi.
- b. Books on Reserve in the Life Science Library
Several current books about emerging infectious diseases have been purchased by the Life Science Library and are on reserve for your use. These books are listed in a separate handout. Students will be given a list of the emerging pathogens which appear in these books. Choosing one of the pathogens from this list will make it easy to find the "book chapter" reference for Writing Assignment 4. Ms. Nancy Elder, Head Librarian, and Ms. Susanne Markgren, Reference Assistant, are available to assist you with these books or with your reference questions.
- c. Emerging Infectious Diseases Website
(<http://www.esb.utexas.edu/field/128c>)
A website has been set up with a variety of links that deal with emerging infectious diseases, including home pages for The Centers for Disease Control and Prevention, The World Health Organization, The Texas Department of Health, Medscape, and others.

Included on the CDC website is the peer-reviewed journal ,
Emerging Infectious Diseases, published by the National Center
for Infectious Diseases. All issues of this journal (which has been published
since 1995), and other library reserve materials can be accessed on
the website.

2. RESOURCES ON WRITING :

a. Books on Reserve in the Life Science Library
Several general reference books on scientific writing have been
place on reserve at the Life Science Library for your use.

a. The Undergraduate Writing Center (UWC) (471-6222)
Located on the second floor of the Flawn Academic Center, the UWC
helps UT students improve their writing. Without charge,
consultants at the UWC will help students organize
ideas, clarify thoughts, or revise papers- whatever a students may need.
Students may drop-in or phone in advance for an appointment.
MIC 128C students will be given a brochure about the
services offered by the UWC.

b. The Learning Skills Center (LSC) (471-3614)
The LSC, located in Jester Center A332, offers UT students a number
of services including tutoring in writing by trained peer
counselors. In the Study Skills Lab, students can improve their grammar,
vocabulary, or writing processes through self-study materials. Non-
native English speakers can improve their skills in speaking
English, listening comprehension, writing, and reading with various
lab resources.

c. Computers on Campus
For students who do not own a computer, please consult the following
websites for information about computers on campus that
you may use:

1. For university wide computer support, access the UT COMPUTING
WEBPAGE at:
www.utexas.edu/computer

2. For computers in the life sciences, access the webpage for the
LIFE SCIENCES COMPUTATIONAL FACILITY at:
www.lifesci.utexas.edu/lscsf/computing.html

DEAR DODIE,

THANK YOU SO MUCH FOR REVIEWING THIS FOR ME !!! HERE ARE SOME QUESTIONS THAT
ARE STILL ON MY MIND ABOUT THE COURSE:

1. DOES THIS COURSE CONTAIN TOO MANY ASSIGNMENTS FOR THE ONE HOUR OF CREDIT?

2. ARE THE WRITING ASSIGNMENTS REASONABLE LENGTHS?
3. SHOULD WRITING ASSIGNMENT 1 (EPIDEMIC REPORTS) INCLUDE 2 RATHER THAN 3 EPIDEMIC PAPERS?
4. DO YOU THINK THE NUMBER OF REFERENCES REQUIRED FOR WRITING ASSIGNMENT 2 (AND THUS FOR ASSIGNMENT 4) IS THE RIGHT NUMBER?
5. DO YOU THINK STUDENTS SHOULD BE REQUIRED TO TURN IN THEIR NOTES AND OVERHEADS AFTER THE ORAL PRESENTATION ?
6. SHOULD THERE BE SOMETHING IN WRITING ABOUT THE CRITERIA USED TO GRADE THE ASSIGNMENTS? (I DON'T HAVE THIS STRAIGHT IN MY OWN MIND YET!)
7. WOULD YOU TAKE ATTENDANCE?
8. DO YOU HAVE ANY SUGGESTIONS ABOUT THE PACING OF THE CLASS SCHEDULE?
9. ANY OTHER COMMENTS OR SUGGESTIONS?