Syllabus: MICR 483.001
Course Title: Infectious Diseases

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Catalog Description: The pathobiology of microbes, immunology, epidemiology, and public health issues of infectious diseases.

Prerequisites: MICR 300, MICR 350; completion of CO 1 – 8; junior or senior standing

Required texts, course materials
No required text. Some required course material prepared by course instructors. Course materials are typically taken from current publications reflecting cutting edge research, medical processes, and current public health issues (that may be biological, medical, or ethical). Reading materials are prepared shortly before each lecture. Additional required materials will be obtained by each student as independent activities for lectures and for their Capstone projects.

Course Objectives:
• Core Objective 11 (Global Contexts): Students will apply and evaluate modes of academic inquiry, creative expression, or results of research to problems in historical and contemporary global contexts. Students will articulate connections among local, national, and international contexts and evaluate the ways that historical and contemporary global influences affect their current situations.
• Core Objective 14 (Application): Students will be able to demonstrate their knowledge and skills developed in previous Core and major classes by completing a project or structured experience of practical significance.

More specifically, students in this course will
• Expand their understanding and mastery of essential microbiological and immunological principles.
• Develop a critical understanding of the microbial basis for infectious diseases in humans and the role of host immune defense mechanisms.
• Practice professional-level oral and written communication skills.

Student Learning Outcomes: Students will be able to
• Critically read, interpret, and assess current literature in human infectious diseases (bacterial, viral, fungal, parasitic).
• Identify the historical, economic, cultural, and societal impacts of critical issues in infectious diseases.
Identify, analyze, and interpret connections between localized events relating to infectious diseases and their global contexts (CO 11).

Develop a research plan, policy suggestion, or proposal based on literature research and communicate their results orally and in writing, following scholarly standards in molecular microbiology and immunology (CO14).

**Teaching format**

Classes meet on Wednesday and Friday at 11:00 AM in the Jones Conference Room (Savitt Bldg, room 54). The class on Wednesday is held in conjunction with another class, CMB 794, which is a journal club for graduate students. The graduate students will give presentations of recent publications on a variety of topics in human virology and infectious diseases. MICR 483 students must attend this class, read the presented paper and take notes on the discussion. Students may also present a paper and lead the discussion if time permits. A quiz on the paper and discussion will be given on Friday of that week at the start of class. During the Friday class, attended by only MICR 483 students, there will be a lecture given by the instructor on a variety of topics in microbiology and immunology. Some of these lectures will incorporate discussions with students. Some of the Friday classes will also be devoted to oral presentations given by the students on their capstone projects.

**Unique class procedures/structures**

**In-class material:** The regularly scheduled classes may consist of lectures on one or more of the following topics: pathobiology of microbes, immunology, epidemiology, or public health issues of infectious diseases, as well as short presentations given by students on current publications on these same topics.

**Independent student work:** Students will prepare an extensive, in-depth written report (the Capstone project). Students will also prepare a professional-level oral presentation on their Capstone project. See Description of Assignments (below) for more details.

**Capstone Projects**

Details on the written report and examples of topics (other topics are possible) are provided in the Infectious Diseases Capstone Project document. Students must submit a draft written proposal (including a brief overview, detailed outline, and preliminary list of at least 15 relevant references) during week 6 of the semester. The final proposal will be due on week 12 of the semester.

**Description of Assignments**

**Choosing a Capstone project topic:** Students will choose a relevant infectious disease topic based on their own literature research, which must be approved by the instructor. Topics must be related to the pathobiology of microbes, immunology, epidemiology, and public health issues of infectious diseases.

**Oral presentation:** Students will give a formal oral presentation during the semester. This should be a 25-30 minute-long PowerPoint-type of presentation. The presentation will give in depth information on the student’s chosen topic, including the historical background, societal context, economic impact, scientific scope, relevance and impact of technology, and importance of the topic to infectious diseases.
Written report: The students will also write a report, which can be either a literature review with a proposal for future policy or research direction or an NIH-style Research Plan on their topic. The literature review with proposal paper should be about 20 double-spaced pages (ranging between 15 and 25 pages), not including references, tables and figures. The paper must include an executive summary (limited to 300 words) and references. The quality of this paper must be suitable for publication in a professional journal. If an NIH-style Research Plan is chosen, it must follow the NIH requirements for the Research Plan of a grant application (link to NIH information: Research Plan and Research Strategy for Research Plan).

Quizzes: Each Friday at the start of class there will be a quiz on the current publication material covered during the previous Wednesday class on Virology and Infectious Diseases. Quiz questions may focus on the local versus global contexts of the topic. Each quiz is worth 8-10 points. The total of all quizzes is 100 points. A missed quiz will be given a score of zero unless an alternative quiz time is arranged with the instructor 2 school days prior to the quiz.

Exams: There will be one exam given during normal class time plus a final exam (given during finals week). Exam questions may focus on local and global interconnections between issues in virology and infectious diseases. Each exam is worth 100 points. A missed exam will be given a score of zero unless an alternative exam time is arranged with the instructor 3 school days prior to the exam.

Grading Criteria

Four components: Student grades will be based on scores from four components: i) their oral presentation; ii) their written report (draft and final); iii) weekly quizzes; and iv) exams.

Value of each component: The oral presentation will count for 100 points toward the final grade, the written report will count for 300 points toward the final grade (both the draft proposal and final report are graded and receive points), and the quizzes plus the two exams will count for 300 points toward the final grade. There is no extra credit activity for this course.

Anticipated Grade scale: A (93-100%), A- (90-92.9%), B+ (87-89.9%), B (83-86.9%), B- (80-82.9%), C+ (77-79.9%), C (73-76.9%), C- (70-72.9%), D+ (67-69.9%), D (63-66.9%), D- (60-62.9%), F (below 60%). Grading scale may also be curved.

Statement on Academic Dishonesty

Cheating, plagiarism or otherwise obtaining exam answers or grades under false pretenses constitute academic dishonesty according to the code of this university. Academic dishonesty will not be tolerated and penalties can include canceling a student’s enrollment without a grade, giving an F for the course or for the assignment. For more details, see the UNR General Catalog. The official UNR policy is to report the offense to the Office of Student Conduct. You are expected to know what constitutes cheating, or academic dishonesty. UNR defines it as:

“Academic dishonesty is defined as: cheating, plagiarism or otherwise obtaining grades under false pretenses. Plagiarism is defined as submitting the language, ideas, thoughts or work of another as one's own; or assisting in the act of plagiarism by allowing one's work to be used in this fashion. Cheating is defined as (1) obtaining or providing unauthorized information during an examination through verbal, visual or unauthorized use of books, notes, text and other materials; (2) obtaining or providing information concerning all or part of an examination prior to that examination; (3) taking an examination for another student, or arranging for another person to take an
exam in one's place; (4) altering or changing test answers after submittal for grading, grades after grades have been awarded, or other academic records once these are official.”

For more information, please refer to the Student Conduct Information at:
http://www.unr.edu/stsv/acdismpl.html
or Academic Standards for Students at:
http://www.unr.edu/sjmas/Academicstandards1.htm

**Classroom Rules of Conduct**
- Silence your cell phone.
- No headphones.
- No talking during lecture, except when asking a question or when directed by the instructor to discuss a topic with your peers.
- Be considerate to your neighbors; rude or abusive behavior will be reasons for dismissal from class.

**Statement on Disability Services**
Any student with a disability needing academic adjustments or accommodations is requested to speak with the instructor or the Disability Resource Center (Thompson Building Suite 101) as soon as possible to arrange for appropriate accommodations if deemed appropriate.

**Statement on Audio and Video Recording**
Surreptitious or covert video-taping of class or unauthorized audio recording of class is prohibited by law and by Board of Regents policy. This class may be videotaped or audio recorded only with the written permission of the instructor. In order to accommodate students with disabilities, some students may be given permission to record class lectures and discussions. Therefore, students should understand that their comments during class may be recorded. Only audio recordings may be made and must be approved in advance by the instructor. Such recordings are solely for the personal use of the student making the recording, while that student is enrolled in this class.

**Student Absences**
By NSHE policy in Title 4 Chapter 20 A, Section 3, paragraph 1, http://system.nevada.edu/tasks/sites/Nshe/assets/File/BoardOfRegents/Handbook/T4-CH20%20-%20General%20Policies%20Regulating%20Students%20and%20Student%20Government.pdf, there are no official absences from any university class. It is the personal responsibility of the student to consult with the instructor regarding absence from class. In the event that a student misses a class because of an official university function or event or because of serious personal issues, the Office of the Vice President for Student Services may, at its discretion, send an explanation to affected faculty. The instructor shall make the final determination on whether the missed work can be done at a time other than during the regularly scheduled class period.

**Statement of Disability Services**
Any student with a disability needing academic adjustments or accommodations is requested to speak with the Disability Resource Center (Thompson Building, Suite 101) as soon as possible to arrange for appropriate accommodations.
Academic Success Services
Your student fees cover usage of the Math Center (784-4433 or www.unr.edu/mathcenter/), Tutoring Center (784-6801 or www.unr.edu/tutoring/), and University Writing Center (784-6030 or http://www.unr.edu/writing_center/). These centers support your classroom learning; it is your responsibility to take advantage of their services. Keep in mind that seeking help outside of class is the sign of a responsible and successful student.