

**Course Syllabus: MICR 2330-001 Microorganisms and Diseases (CRN#11248)**

**Classroom:** Physical Science Building Room #208

**Instructor:** Jian-Ying Zhang, MD, Ph.D., Professor, Department of Biological Sciences, UTEP

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**Class Hours:** MW 4:30pm -5:50pm; **Office Hours:** Appointment by email

**More information for the class:** 49% or Less Online Instructional Method

**Required Materials:** Nester, et al. Microbiology, A Human Perspective, 9<sup>th</sup> Ed., 2019 or 10<sup>th</sup> Ed., 2022

**Course Description:**

- Survey of microorganisms important to humans with emphasis on pathogens;
- Diagnostic procedures for pathogenicity and immune responses to the more common pathogens.

**Course Objectives:**

After the completion of this course, students can understand the basic concepts and information in the science of microbiology, and are able to describe and use the general methods learned from this course to study microorganisms important to humans with emphasis on pathogens.

**Evaluation:**

One midterm exam and two projects will be given for this course. The final examination will be comprehensive, covering all reading and lectures, and will be given during the last week of this semester. The exercises (Review Questions) that accompany each chapter will be given. The exercises encourage students to immediately use their newly acquired knowledge and, thus, by practice, improve retention.

**Grading:**

Your grade in this course is based on a combination of projects, midterm exam, final exam. Grades are based on a straight percentage scale; there is no curve and no +/- grades are awarded. So, an A=100-90%, a B=89.9-80%, a C=79.9-70%, a D=69.9-60%, and F=<60%. Midterm: 100 points; Projects: 100 points; Final Exam: 100 points; Course Total: 300 points

**Academic Integrity Policy:** UTEP's policies regarding academic integrity apply in this course. Information on this policy can be found at <http://academics.utep.edu/Default.aspx?tabid=23785>

**Civility Statement:** Please be respectful of all students' right to learn without disruptions. In line with this statement please make an active effort to respect the other students in the classroom. Avoid making excessive amounts of noise and try to remember to turn off your cell phone.

**Disability Statement:** If you have a disability and need classroom accommodations, please contact The Center for Accommodations and Support Services (CASS) at 747-5148, or by email to [cass@utep.edu](mailto:cass@utep.edu), or visit their office located in UTEP Union East, Room 106. For additional information, please visit the CASS website at [www.sa.utep.edu/cass](http://www.sa.utep.edu/cass).

**Course Schedule** (*The following schedule is tentative, and the dates of lectures may be changed.*)

- 1<sup>st</sup> week:  
Introduction  
Ch 01: Human and the Microbial World
- 2<sup>nd</sup> week:  
Ch 02: The Molecules of Life  
Ch 03: Microscopy and Cell Structure
- 3<sup>rd</sup> week:  
**Labor Day Holiday (no class)**  
Ch 04: Dynamics of Prokaryotic Growth
- 4<sup>th</sup> week:  
Ch 05: Control of Microbial Growth  
Ch 06: Metabolism: Fueling Cell Growth
- 5<sup>th</sup> week:  
Ch 07: The Blueprint of life, from DNA to Protein  
Invited Guest Lecture: Bioterrorism and Countermeasures
- 6<sup>th</sup> week:  
Ch 08: Bacterial Genetics  
Ch 09: Biotechnology and Recombinant DNA
- 7<sup>th</sup> week:  
Ch 10: Classification and Identification of Prokaryotes  
Ch 12: The Eukaryotic Members of the Microbial World
- 8<sup>th</sup> week:  
**Class Review**  
**Midterm exam**
- 9<sup>th</sup> week:  
Ch 13: Viruses, Viroids, and Prions  
Ch 14: The Innate Immune Response
- 10<sup>th</sup> week:  
Ch 15: The Adaptive Immune Response  
Ch 16: Host-Microbe Interactions
- 11<sup>th</sup> week:  
Ch 17: Immunologic Disorder  
Ch 18: Applications of Immune Responses
- 12<sup>th</sup> week:  
Ch 19: Epidemiology  
Ch 20: Antimicrobial Medications
- 13<sup>th</sup> week:  
Ch 21: Respiratory System Infections & Ch 22: Skin Infections
- 14<sup>th</sup> week:  
Ch 24: Digestive System Infections  
Ch 27: Blood and Lymphatic Infections
- 15<sup>th</sup> week:  
Ch 28: HIV Disease and Complications of Immunodeficiency  
**Class Review**
- 16<sup>th</sup> week:  
**Final Examination**