**Course Description:** Morphological and functional aspects of the cell. Lecture and lab will emphasize cell structure and how this relates to physiological, biochemical, and molecular processes. **Prerequisites:** Bot 200, Micr 200, Zoo 200. 4 Credits.


**SM-Hum-Musser@wiu.edu** WG 352 Office Hours: M F 11-12, W 10-12 309 298 3191

Mr. Keshab Mainali  KK-Mainali@wiu.edu

**Lecture Course Objectives**
Describe the science of biology including cell structure and division.
Describe function of cell organelles, cell physiology, cell metabolism.
Explain what genes are and how they work.
Explain recombinant DNA technology and cell technology.

**Methods of Evaluating Student Progress (subject to modification):**

**Lab (~ 138 points):**
Lab homework (~ 4 points each) 48 points
Lab exercises (~ 3 points each) 42 points
Lab quizzes (~ 4 points each) 48 points

Course grade: Lecture = 75% of grade and Lab = 25% of grade
+/- Grade system:  A = 93-100%  A- = 90-92%
B+ = 87-89%  B = 83-86%  B- = 80-82%
C+ = 77-79%  C = 73-76%  C- = 70-72%
D+ = 67-69%  D = 63-66%  D- = 60-62%
F = 0 – 59%

Multiply your earned lecture percentage by 0.75, multiply your lab percentage by 0.25, and add these scores together for your overall course grade. You must pass the both the lab and lecture sections separately to pass the course. Departmental policy states that attendance and proper completion of the exercises count towards your lab grade. An absence is Excused if solid documentation is provided for: e.g. illness (your own), death in the immediate family (sibling, parent, grandparent, child, spouse), and official university trips, military service obligations). Documentation will be required within 2 weeks of the absence for it to be considered an EXCUSED absence. For illness, you must provide a note from your physician. If you decide not to see your physician when you are ill, your absence will be counted as an Unexcused absence. You cannot make up a missed lab. If you have more than one UNEXCUSED lab session or more than three TOTAL lab absences, this will result in a final grade of “F” for the entire course, regardless of your points in lecture.
Lab Conduct and Guidelines

1. All electronic devices must be silenced and remain out of sight during the lab.
2. Food or drinks are not allowed in the lab.
3. Homework is to be turned in to the instructor at the beginning of lab. If you are absent from the lab, the homework is due to my mailbox by the next day, Friday by 4:30PM.
4. Quizzes on the previous week's material will be administered in the first 10 minutes of lab. If you are 5 minutes late you have the remaining 5 minutes to take the quiz. If you arrive 10+ minutes late you will be unable to take the quiz.
5. If you arrive 30+ late a laboratory period, you will be dismissed with an unexcused absence and thus forfeit the points possible for that day.
6. Lab periods will vary in length (some shorter than allotted time, others taking the full time). Do not assume that you will be dismissed early, and do not schedule appointments during your designated lab time. You will NOT be excused to attend any appointment.
7. If you are absent, labs and quizzes are not made up. For excused absences, the lab exercise and quiz points will be deducted from the total possible score so you are not penalized for the excused absence. The homework is still due. For unexcused absences, you will get zero for the lab exercise and the quiz. The homework is still due.
8. Appropriate lab attire is required (ie. Closed toe shoes, long hair tied back, etc.)
9. Disruptive and destructive behavior will not be tolerated and will result in dismissal for the lab.
10. Bring any concerns with grades to the instructor's attention as soon as possible
11. Do your own work. Cite your work properly. Cheating and/or plagiarism are UNACCEPTABLE!
12. Read the lab exercise (Lab Ex.) description before coming to the lab.

Definition of Plagiarism: "Plagiarism is the theft of someone else's words, work, or ideas. It includes such acts as (1) turning in a friend's paper & saying it is yours; (2) using another person's data or ideas without acknowledgment; (3) copying an author's exact words & putting them in your paper without quotation marks; & (4) using wording that is very similar to that of the original source but passing it off as entirely your own even while acknowledging the source." V. E. McMillan in Writing Papers in the Biological Sciences (2006, Bedford/St.Martin's Press, New York, pg 16). This includes information in written or audio information from online websites, textbooks or laboratory manuals, honors & masters theses, all writing assignments, & images.

Academic Accommodations - Notify the instructor for accommodations. Contact Disability Recourse Services at 298-2512 for special assistance in emergency evacuations (fire, tornado, etc.).

The syllabus & schedule is subject to change, including additional assignments, quizzes, etc.

Laboratory schedule
Lab Ex 1 – Prokaryotes, Eukaryotes
Lab Ex 2 – Metric System, Pipetting
Lab Ex 3 – Protoplasmic Properties
Lab Ex 4 – Spectrophotometry
Lab Ex 5 – Chromatography
Lab Ex 6 – Enzymes Transformation
Lab Ex 7 – Cell Cycle, Cell Division
Lab Ex 8 – Bacterial Transformation
Lab Ex 9 – Bacterial Growth, Great Discoveries
Lab Ex 10 – DNA Purification
Lab Ex 11 – Agarose Gel Electrophoresis
Lab Ex 12 – Protein Fingerprinting
Lab Ex 13 – Cellular Respiration
Lab Ex 14 – Photosynthesis

*** TBA – Schedule may be modified to include the Lab Exercise - Testing for Genetically Modified Organisms