

**Kennesaw State University**  
**Department of Molecular and Cellular Biology**  
**General Microbiology 3340**

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**Course:** BIOL 3340  
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**Pre-requisites:** BIOL 2107 and BIOL 2108. Students are required to have completed the prerequisite courses with a grade of “C” or better before taking Biology 3340.

**Catalog Description:** BIOL 3340. Microbiology 3-3-4.

A study of prokaryotic and unicellular eukaryotic organisms, emphasizing morphology, physiology, control, identification, symbiotic relationships, and practical applications. Immunology is studied as a response of vertebrates to microbial infection. The laboratory emphasizes basic microbiological methods of culture and identification of microorganisms. The role of microbes in the environment and in medicine is also investigated.

**Learning Outcomes:**

1. To understand what microorganisms are, and their roles in nature.
2. To understand the cell structure, metabolic processes, and growth of microorganisms.
3. To understand the applied uses of microorganisms.
4. To master the basic skills of handling, examining, and identifying microorganisms.
5. To investigate cell structure, metabolic processes, and growth of microbes using lab experiments.
6. To investigate the applied uses of microorganisms using lab experiments.
7. To fulfill the lecture and lab requirements of this course at an average level or above.

**Text Book:** Prescott's Principles of Microbiology by Joanne Willey, Linda Sherwood.

**Laboratory Manual:** 3340 Laboratory Exercises available for print out before each lab:

**Laboratory Meetings:**

All Sections: TBA

**Required Laboratory Equipment:** Lab coat & Safety glasses.

### General Class Policies:

- Attendance is *required* for periods in which an invited speaker or student presentation is scheduled.
- If you miss a lecture, **YOU** are responsible for obtaining all notes, announcements, and assignments.
- Lecture notes will be available D2L
- The lecture schedule provided is TENTATIVE and subject to changes. Students will be notified of schedule changes as soon as possible in class or will be posted on the instructor's web site under "notices".
- **Cellular telephones, pagers and other similar devices must be turned off during class.**
- No snacking is allowed in the class room once lecture begins.
- If you miss class, it is your responsibility to get any missed notes and handout from another student. Instructor's Power point lectures/quiz/exam samples will be posted on instructor's web page.

### General Laboratory Policies:

- Procedure for each experiment will be available via D2L. Print each lab exercise prior to lab and maintain in a file.
- You must prepare for laboratory each week by reading the scheduled exercises in the laboratory manual.
- Before leaving the laboratory, each student must have the instructor or laboratory assistant to inspect the condition of his or her work area, microscope, and other equipment. Failure to clean the work area and equipment or to return equipment to its proper place will result in a 1 point reduction in the lab report grade per offense.

### Attendance Policy:

- You must attend the laboratory section in which you are registered.
- Attendance of each lab session is essential for success in this class. Roll will be taken and this will factor into the final course grade.
- Each absence will result in a loss of **5 points\*\*** in the total grading policy (see grading policy below).
- Attendance is *required* for periods in which an invited speaker or student presentation is scheduled.
- If you miss 3 lab sessions, **YOU** will be considered **FAIL**.
- Students will be notified of schedule changes as soon as possible in class.

### Lab Safety regulations:

- Students are required to obey all **safety regulations** during laboratory, as published in the laboratory manual. In particular:
- No food or drink is allowed in the lab as per department and university regulations. This includes unopened food packages and beverage containers.

- Students are required to wear safety glasses. Students are encouraged to purchase their own safety glasses.
- Shorts and short skirts are prohibited. Open-toed shoes, open-heeled shoes, sandals, and bare feet are prohibited.
- All waste must be disposed in properly labeled containers as directed by the instructor or lab assistant.
- Cellular telephones, pagers and other similar devices must be turned off during lab session.
- **Failure to obey safety regulations will result in a 10 points penalty per offense\*\*\***

### **Assignment and Quizzes and Exams**

- Cellular telephones, pagers and other similar devices must be turned off and kept in bags at all times during quizzes and exams.
- Evaluation will take the form of Assignments, Quizzes and Group activities
- Lab reports may **not** be placed in the box on the instructor's door.
- Lab reports may **not** be submitted electronically, except in extreme circumstances and with the **prior** approval of the instructor.
- Several weeks identified on the schedule, the laboratory will begin with a laboratory quiz. The quiz will contain questions about the new lab exercise that you are starting and the lab from the week before. Lab quizzes graded (see course grading table).
- There are three "laboratory report grades", One of the "lab report" grade is a practical consisting of a successful streak plate. The other two are the laboratory worksheets for Units 3 and 5. The lab worksheets are due the week after the lab is completed.
- The last laboratory exercise is a "mixed unknown" which is also graded.
- All laboratory work must be completed and turned in on time.

***All quizzes, assignments and other course materials are related to lab work not collected by students will be shredded and recycled at the conclusion of the final exam period***

### **MAKING UP FOR MISSED LAB SESSIONS, QUIZZES, AND ASSIGNMENTS**

Lab sessions will not be repeated for a particular group. Make-up quiz/exam/assignments will only be granted in extreme circumstances, and at the instructor's discretion. Examples of acceptable excuses include: serious illness, funeral and others. The determination of the validity of other excuses and the necessary documentation to support them will be at the instructor's discretion. There is no make up for Final exam.

#### **Inclement Weather:**

In adverse weather situations, find out the status of school closings by checking the following weblink:[https://portal2.kennesaw.edu/pls/portal92/APP\\_SNOW.DYN\\_SHOW\\_STATUS.show](https://portal2.kennesaw.edu/pls/portal92/APP_SNOW.DYN_SHOW_STATUS.show)

### **COURSE GRADING PROCEDURE:**

Final letter grades A, B, C...in the course will be assigned according to the point breakdown listed below:

Graded assignments	Totals	Final course grades	Percentage (%)
4 Exams @ 100 pts. Each*	400 pts.	<i>A</i>	90-100
2 Class Activities @ 10 pts. each	20 pts.	<i>B</i>	80-89
6 Pre-Lab Quizzes @ 10 pts. each	60 pts.	<i>C</i>	70-79
Lab Reports (3) @ 3x10	30 pts.	<i>D</i>	60-69
Lab Unknown Report	100 pts.	<i>F</i>	<60
<b>Grand Total</b>	<b>610</b>		

- \*Exams will include questions from lectures labs
- \*\*Failure to attend each lab will result in 5 points (see attendance policy for lab) & absence for 3 labs is considered Fail in the course.
- \*\*\*Failure to obey safety regulations will result in a 10 points penalty per offense ( see lab safety regulations).

**Tentative Course Outline** (subject to change upon the discretion of the instructor).

Dates	Text Chapter	Topic
TBA	-	Introduction and Overview
	Chapter 1	History and Scope of Microbiology
	Chapter 3	Prokaryotic Cell Structure
	Chapter 4	Eukaryotic Cell Structure
	Chapter 5	Viruses and Other Cellular Agents
	-	<b>Exam 1</b>
	Chapter 6	Microbial Nutrition
	Chapter 7	Microbial Growth
	Chapter 8	Microbial Control
	Chapter 9	Introduction to Metabolism
	Chapter 10	Catabolism
	Chapter 12	Gene: Structure, replication and Expression
		<b>Exam 2</b>
	Chapter 12	Gene: Structure, Replication & Expression (Cont.)

	Chapter 17	Microbial Taxonomy
	Chapter 30	Pathogenicity of Microorganisms
	-	<b>Exam 3</b>
	Chapter 32	Clinical Microbiology, Immunology & Survey of selected Human pathogens
	Chapter 33	Epidemiology and Infectious Disease
	<b>Last Day of Class</b>	<b>Review of Final Exam</b>
	<b><i>Cumulative</i></b>	<b>Final Exams</b>

### 3340 Laboratory Schedule

<b>Week of</b>	<b>Lab Exercises</b>	<b>Pre lab Quiz</b>
	No Lab	
	Laboratory Safety Training Begin Unit 1. Aseptic technique	None
	Finish Unit 1. Begin Unit 2 Microscopy	Microscopy
	No lab (Monday Holiday)	None
	Finish Unit 2.	None
	Begin Unit 3. Biochemical Characterization	Biochem. Character.
	Finish Unit 3. Unit 4 deleted.	None
	Begin and Finish Unit 5. Quantitative Microbiology-Bacterial growth	Quantitative Microbiology
	Begin Unit 6. Control of Microbial Growth	Microbial Growth
	Finish Unit 6. Begin Unit 7. Microbial Ecology-Soil & water Microbiology	Microbial Ecology

	Continue Unit 7. Begin Unit 8 Food Microbiology	Food Microbiology
	Finish Unit 7. Finish Unit 8. Begin Unknowns.	None
	Continue Unknowns - Gram Staining and Begin Biochemical Tests	None
	Finish Unknowns Last Lab	None
	Unknown report due (submit lecture time)	

### **Academic Integrity**

KSU student is responsible for upholding the provisions of the Student Code of Conduct, as published in the Undergraduate and Graduate Catalogs. Section II of the Student Code of Conduct addresses the University's policy on academic honesty, including provisions regarding plagiarism and cheating, unauthorized access to University materials, misrepresentation/falsification of University records or academic work, malicious removal, retention, or destruction of library materials, malicious/intentional misuse of computer facilities and/or services, and misuse of student identification cards. Incidents of alleged academic misconduct will be handled through the established procedures of the University Judiciary Program, which includes either an "informal" resolution by a faculty member, resulting in a grade adjustment, or a formal hearing procedure, which may subject a student to the Code of Conduct's minimum one semester suspension requirement.

### **Plagiarism and Cheating**

The above is in accordance to the University policy concerning plagiarism and cheating as stated in the KSU Student Code of Conduct. Refer to KSU document. All instances of academic misconduct, both intentional and unintentional, will be handled through established procedures of the University Judiciary Program (<http://www.kennesaw.edu/judiciary/procedur.shtml>). Students violating the University's academic honesty code are subject to University-level disciplinary action, which may include suspension or expulsion from the University. For exams, any student observed cheating will receive an automatic zero for the entire exam in addition to any penalties assessed through campus disciplinary procedures.

### **Academic Withdrawal Policy**

Students may withdraw from one or more courses anytime before the last three weeks of the semester. However, as of Fall 2004, students will be allowed a maximum of eight total withdrawals if they enter KSU as a freshman. Transfer students will be allowed one withdrawal per fifteen credit hours attempted, for a maximum of eight. Students who choose to pursue a second degree at KSU will be allowed two additional withdrawals. Students who entered KSU before the Fall of 2004 will

be allowed one withdrawal per fifteen credit hours attempted for a maximum of eight. To withdraw, the student should complete an official withdrawal form in the Office of the Registrar. Students who officially withdraw from courses on or before the last day to withdraw without academic penalty will receive a "W". Students who officially withdraw after the last day to withdraw without academic penalty (and before the last three weeks of the semester) will receive a "WF", which will be counted as an "F" in calculation of their grade point average.

The only exceptions to these withdrawal regulations will be for instances involving unusual circumstances, which are fully documented. Students may appeal to the academic standing committee for consideration of unusual circumstances.

Students cannot withdraw from their courses and remain in the program; they must carry at least 3 hours of credit. Program staff will not handle course withdrawals. Students must contact their home institutions (where they are registered) and handle the process themselves. They must provide the Faculty Member and Program Director with evidence that they have dropped the course.

### **Academic accommodations**

Any student with a documented disability or medical condition needing academic accommodations of class-related activities or schedules must contact the instructor immediately. Written verification from the [KSU disAbled Student Support Services](#) is required. No requirements exist that accommodations be made prior to completion of this approved University documentation. All discussions will remain confidential."

**\*\*Good Luck\*\***