NSG 315 section 1 Syllabus

Microbiology Lab for the Health Sciences

Course Information

Course Information:

Microbiology Lab for the Health Sciences
NSG 315 1 (1.0 Credits)

Description

This course is designed as a stand-alone lab that can be taken concurrently with any microbiology course such as Microbiology and Application to Health (NSG 309). Learners will study microscopic organisms that range from observing eukaryotic and prokaryotic cell structure to understanding microbial genetics. This distance learning lab provides learners with the knowledge and skills necessary to conduct laboratory experiments, observe and analyze results, and complete laboratory reports in the home setting. Open to nonmatriculated students.

Prerequisite(s): None

Delivery Mode

Correspondence

Department: SON Center for Lifelong Learning
College: School of Nursing

Meeting Days, Times and Locations,:

Fully online. No required in-class sessions. See course outline for anticipated time of completion. Students should plan on a minimum of four weeks to complete this course.

If you need your grade submitted on any other date:

- You are responsible for submitting your labs by a date/time which allows two weeks for grading.
- You will need to contact your instructors ahead of time to let them know that you will need your grade submitted early.

Course Learning Outcomes (CLO):

1. Describe various types of microorganisms.
2. Conduct lab experiments using proper technique.
3. Quantify the number of microorganisms in a given sample.
4. Explain the techniques used to control microbial growth.
5. Analyze how different types of media can be used to grow specific microorganisms.
6. Examine how various nutrient sources and ecological factors impact microbial growth.

Assignments & Assessments

Teaching Methods/Activities:

This course uses a combination of methods to facilitate learning and mastery of content, including:

- Safety guidelines
- Personalized learning
- Virtual presentation
- Instructional videos
- Written materials and diagrams
- Hands-on experiments conducted in the student's home setting
- Digital lab manual for observation, recording, and analysis of laboratory results
- Online tests

Evaluation Measures/Learning Outcomes:

The Center for Lifelong Learning wants to make sure you have the time you need to do your best work in this course. It is your responsibility to reach out to course faculty to ask for more time if you need it, and to sign the contract that is sent to you and return it before the end of the semester. Failure to do so will result in zero points posted for any outstanding work and a final grade being calculated and posted.

Course Requirement	Percent of Total Grade	Alignment with Course Learning Outcome(s)
Exploration Questions	10.5%	1, 2, 3, 4, 5, 6
Lab Experiments, Data Tables and Pictures	52%	1, 2, 3, 4, 5, 6
Evaluation Questions (Tests)	37.5%	1, 2, 3, 4, 5, 6

1. Only one extension will be provided if the student has a reasonable need or extenuating circumstances (as determined by course faculty).
2. All pictures and information on data tables must be your individual work.
3. All answers to open-ended questions must be in your own words.
4. If you use resources to answer open-ended questions, a reference is required.
5. The use of AI resources is prohibited in this course.

The final grade entered is based on School of Nursing grading system. See *Student Handbook* (https://www.son.rochester.edu/assets/pdf/studenthandbook.pdf)

This course is entirely online, so the only way course faculty have to contact you is through the email listed in Blackboard. You should be checking your email at least 3-4 times per week in case course faculty are trying to contact you. This is extremely important. Please feel free to contact course faculty with any questions.

You must submit individually completed pictures demonstrating your own work.
You must submit individually completed lab reports in your own words.

Grading System:

Undergraduate Grading*

A student must earn an overall course average of 73.00%. Grades will not be rounded up.

The following grading scale is used for the undergraduate programs:

Numeric Grade (Blackboard)	**Letter Grade** (URStudent/Transcript)	**Grade Points** (URStudent/Transcript)
93-100	A	4.0
90-92	A-	3.7
87-89	B+	3.3
83-86	B	3.0
80-82	B-	2.7
77-79	C+	2.3
73-76	C	2.0
70-72	C-	1.7
67-69	D+	1.3
63-66	D	1
60-62	D-	.7
Below 60	E	0.0

ABSN only*: A student must earn at least an overall course and exam average of 73.00% exam average in a course and 73.00% overall average in the same course to pass the course. **Grades will not be rounded up.** *Detailed information about grading in ABSN courses can be found in Appendix J.*

Grades that carry no grade points and are not used to compute the cumulative point hour ratio are:

S	Satisfactory
P	Pass
WP	Withdraw passing
WE	Withdraw failiing
I	Incomplete
N	No grade reported
AU	Audit

Required Textbook(s):

No Testbooks needed Students will need to purchase Science Interactive Microbiology Lab kit SKU:SI-10655-MB-01

Required Materials:

Students will be required to take photographs and/or videos of each lab set-up and upload them to Blackboard. Additional household materials (e.g., bleach, food, measuring cups/spoons) to use throughout the experiments as outlined on the eScience Labs website found here: https://esciencelabs.com/student

Course Outline:

Module	Time (Approximate)	
Getting Started with Science Interactive	Getting Started- 3 hours Lab Safety- 2 hours Microbiology Laboratory Prep – 3 hours Using the V-Scope- 3 hours Lab Kit Inventory- 30 minutes	
Hand Washing and Normal Flora	3 hours + 2 days incubation	
Microscopy for Microbiology	3 hours	
Aseptic Technique and Culturing Microbes	3 hours + 4 days incubation	
Bacterial Morphology and Staining Techniques	3 hours	

Minimum Inhibitory Concentration Testing	3 hours + 48 hours incubation	
Salt Tolerance and pH Testing	3 hours + 48 hours incubation	
Serial Dilution and Viable Plate Counts	3 hours + 48 hours incubation	
Biomolecular Techniques	3 hours	
Kirby-Bauer Diffusion Testing	3 hours + 48 hours incubation	
Catalase and Oxidase Testing	3 hours	
Starch Hydrolysis Testing	3 hours + 48 hours incubation	
Selective and Differential Media Testing	2.5 hours + 1-2 days incubation	
Fomite Transmission	3 hours + 48 hours incubation	
Food Safety	5 days, 3 hours + 48 hours incubation	

Academic Policies

Academic Policies:

Disability Statement

If you have a disability for which you may be requesting an academic accommodation, you are encouraged to contact both your instructor and the access coordinator for your school to establish eligibility for academic accommodations.

Academic Honesty Statement

Students are responsible for their own work. Students are expected to have read and to practice principles of academic honesty. See Student Handbook.

Student attestation is completed on Blackboard for each course.

Professional Behavior / Civility Statement

The University of Rochester, School of Nursing (SON) seeks to provide an environment for learning and teaching that is respectful of diverse persons and points of view in all classroom, electronic, and clinical settings. Consistent with this goal, it is expected that diverse perspectives and opinions will be expressed and received in a respectful and professional manner. Incivility, intolerance, hate speech, and abusive behaviors are considered professional misconduct and will be acted upon in accordance with the statement in the Student Handbook. (https://www.son.rochester.edu/assets/pdf/studenthandbook.pdf)

Title IX/Sexual Harassment Policy

All members of the University community have the right to learn and work in a safe environment free from all forms of harassment, including harassment on the basis of sex or gender. Students who have been subjected to sexual harassment, including sexual assault, dating/domestic violence or stalking, have the right to receive academic, housing, transportation or other accommodations, to receive counseling and health services and to make a report about such behavior to the University and to law enforcement. For more information please visit www.rochester.edu/sexualmisconduct.

HIPAA Compliance

Students are to abide by the University of Rochester HIPAA Compliance Guidelines which can be found on the SON website (http://son.rochester.edu/r/HIPAA-Video).

ADA Statement

The University of Rochester welcomes students, faculty, staff and visitors with disabilities to our campus. We strive to meet the needs of all qualified participants in our programs and services by providing reasonable accommodations for individuals with disabilities and connection to resources within the University. Students seeking accommodations on the basis of a disability should follow the steps outlined on the University's Disability Services website. The School of Nursing has designated an access coordinator to assist with implementing approved academic accommodations through an interactive process. Contact information for access coordinators can be found on the Disability Services website.

See Student Handbook (https://www.son.rochester.edu/assets/pdf/studenthandbook.pdf)

Holidays

See the University of Rochester School of Nursing Handbook.

Refund Policy for Dropping a Course

All full-semester courses start the first day of the semester, regardless of when the first actual class session/meeting/zoom is held. After **7 calendar days** from the semester start date, the refund schedule takes effect and students will owe money if they are dropping the course. This policy pertains to all students, regardless of any tuition benefit or scholarship. For additional details about dropping or withdrawing from courses, please see the UR SON Student Handbook

Guidelines for the Use of Artificial Intelligence (AI)

Students at the School of Nursing must comply with faculty directions about using artificial intelligence (AI) and AI-generated text (such as ChatGPT, Duolingo, etc in student assessments, which may include encouragement to use AI, a prohibition from using AI, and various considerations between these two ends. If AI is allowed, students must cite its use (see https://apastyle.apa.org/blog/how-to-cite-chatgpt). In addition, students are responsible for verifying any citations provided by AI due to the known possibility of AI generating fictitious references. In all cases, students are encouraged to speak with course faculty about their intended use of AI. The risk of not adhering to these guidelines raises the risk of breaching academic and professional integrity guidelines as described in the *SON Student Handbook*.

Safe Assign Disclosure

SafeAssign is a plagiarism prevention tool for students and instructors that may be used in your course. This tool is designed to compare your writing with other assignment submissions and published works and report any phrases or passages identical or similar to those in other assignment submissions and published works. If applicable, students are encouraged to submit their papers to a Draft SafeAssign assignment link in the course. If you have questions or are concerned about your report results, please reach out to the course faculty to discuss. Papers submitted to the Draft SafeAssign link will not count towards your grade, and students will not be penalized for any plagiarism detected in a draft. However, students are responsible for handing in final assignments that adhere to the School of Nursing Academic Honesty Policy.

Students are responsible for avoiding plagiarism and need to be attentive to writing in their voice and always cite and/or quote the ideas of others. SafeAssign will not detect all plagiarized content. Students are responsible for any plagiarized materials even if SafeAssign does not detect them.

Please see this guide (https://help.blackboard.com/SafeAssign/Student) and view Assignments: Referencing, Plagiarism and Draft SafeAssign for information on how to use SafeAssign and interpret the results.