UMBC UGC Instructions for New Course Request Form (revised 4/2016)

Course number & title: Enter the number and title of the course at the top of the page. Contact the Registrar's Office to confirm that the desired course number is available.

Date submitted: The date that the form will be submitted to the UGC.

Effective date: The semester the new course is in effect, if approved.

Contact information: Provide the contact information of the Chair or UPD of the department or program housing the course. If the course is not housed in a department or program, then provide the same information for the head of the appropriate academic unit. (See UGC Procedures) If another faculty member should also be contacted for questions about the request and be notified about UGC actions on the request, include that person's contact information on the second line.

Course number: For cross-listed courses, provide all the numbers for the new course.

Transcript title: Limited to 30 characters, including spaces.

Recommended Course Preparation: ***Please note that all 300 and 400 level courses should have either recommended course preparation(s) or prerequisite(s) and that 100 or 200 level courses may have them.***
Here fill in what previous course(s) a student should have taken to succeed in the course. These recommendations will NOT be enforced by the registration system. Please explain your choices in the "rationale" (discussed below).

Prerequisite: ***Please note that all 300 and 400 level courses should have either recommended course preparation(s) or prerequisite(s)*** Here fill in course(s) students need to have taken before they enroll in this course. These prerequisites will be enforced through the registration system. Please explain your choices in the "rationale" (discussed below).

NOTE: Please use the words "AND" and "OR", along with parentheses as appropriate, in the lists of prerequisites and recommended preparation so that the requirements specified will be interpreted unambiguously.

NOTE: Unless otherwise indicated, a prerequisite is assumed to be passed with a "D" or better.

# of credits: To determine the appropriate number of credits to assign to a course please refer to the UMBC Credit Hour Policy which articulates the standards for assignment and application of credit hours to all courses and programs of study at UMBC regardless of degree level, teaching and learning formats, and mode of instruction.

Maximum total credits: This should be equal to the number of credits for courses that cannot be repeated for credit. For courses that may be repeated for credit, enter the maximum total number of credits a student can receive from this course. E.g., enter 6 credits for a 3 credit course that may be taken a second time for credit, but not for a third time. Please note that this does NOT refer to how many times a class may be retaken for a higher grade.

Grading method(s): Please review the grading methods document (this link can be found on the UGC forms page) before selecting a grading option. Please do not select all three grading options by default.

Proposed catalog description: Provide the exact wording of the course description as it will appear in the next undergraduate catalog. Course proposals should be a) no longer than 75 words, b) stated in declarative sentences in language accessible to students, and c) avoid reference to specific details that may not always pertain (e.g., dates, events, etc.). Course descriptions should not repeat information about prerequisites (which are always listed alongside the course description)."

Rationale: Please explain the following:
a) Why is there a need for this course at this time?
b) How often is the course likely to be taught?
c) How does this course fit into your department's curriculum?
d) What primary student population will the course serve?
e) Why is the course offered at the level (ie. 100, 200, 300, or 400 level) chosen?
f) Explain the appropriateness of the recommended course preparation(s) and prerequisite(s).
g) Explain the reasoning behind the P/F or regular grading method.
h) Provide a justification for the repeatability of the course.

Cross-listed courses: Requests to create cross-listed courses must be accompanied by letters of support via email from all involved department chairs. Proposals for new courses or the addition of a cross-listing to an existing course must include as a part of the rationale the specific reason why cross-listing is appropriate. Email from all involved department chairs is also required when cross-listing is removed and when a cross-listed course is discontinued. Please note that Special
Topics courses cannot be cross-listed.

Course Outline: Provide a syllabus with main topics and a weekly assignment schedule which includes complete citations for readings with page numbers as appropriate. Explain how students' knowledge and skills will be assessed.

Note: the UGC form is a Microsoft Word form. You should be able to enter most of the information by tabbing through the fields. The document is protected. In the rare case that you need to unprotect the document, use the password 'ugcform'. Beware that you will lose all the data entered in the form's fields if you unlock and lock the document.

UMBC UGC New Course Request: BIOL 273 – Introductory Microbiology for Allied-Health Students

Date Submitted: 8/28/2019 Proposed Effective Date: Fall 2020

	Name	Email	Phone	Dept
Dept Chair or UPD	Philip Farabaugh	farabaug@umbc.edu	53018	BIOL
Other Contact	David Eisenmann	eisenman@umbc.edu	52256	BIOL
Other Contact	Nichole Zang Do	Zang.do@umbc.edu	58071	BIOL

COURSE INFORMATION:

Course Number(s)	BIOL 273
Formal Title	Microbiology for Allied Health
Transcript Title (≤30c)	Microbiology Allied Health
Recommended Course Preparation	
Prerequisite **NOTE:** Unless otherwise indicated, a prerequisite is assumed to be passed with a "D" or better.	You must have completed BIOL 101 or BIOL 141 or BIOL 141H with a grade of "C" or better.
# of Credits Must adhere to the UMBC Credit Hour Policy	3.0
Repeatable for additional credit?	☐ Yes ☒ No
Max. Total Credits	3.0 This should be equal to the number of credits for courses that cannot be repeated for credit. For courses that may be repeated for credit, enter the maximum total number of credits a student can receive from this course. E.g., enter 6 credits for a 3 credit course that may be taken a second time for credit, but not for a third time. Please note that this does NOT refer to how many times a class may be retaken for a higher grade.
Grading Method(s)	☒ Reg (A-F) ☐ Audit ☐ Pass-Fail

PROPOSED CATALOG DESCRIPTION (Approximately 75 words in length. Please use full sentences.**):**

This course is intended for pre-allied health students and will focus on looking at the microbiological world from a public health perspective. Topics covered will include basic cell structure and replication of microbial cells, microbial genetics, epidemiology and the spread of infectious disease, the immune system, as well as an overview of human bacterial and viral diseases.

RATIONALE FOR NEW COURSE:

In recent years, our department has noticed an increase in pre-allied health students (pre-nursing, pre-physical therapy, etc.) who are required to take microbiology for their intended professional school, but do not necessarily require a majors-level microbiology course. BIOL 275, on its own, does not meet the needs of both student groups: biology majors and pre-allied health students. Because of this, our department would like to move from one course (BIOL 275 Microbiology) taken by both majors and non-majors, to two separate courses. We therefore propose this new 200-level course tailored to the needs and interests of our pre-allied health students. The existing BIOL 275 course will be renumbered to BIOL 375 and will be intended for biology majors, while the new course BIOL 273 will be intended for UMBC's pre-allied health student population. Because of the target audience, the pre-requisites will continue to be the same as they were for BIOL 275, allowing the pre-allied health majors to access this course early in their course sequence (the pre-requisites for BIOL 375 will change, see accompanying form).

This 273/375 numbering is similar to how other 4-year universities order their health-related and major-related microbiology courses. Our naming of the course is also intended to parallel other institutions that have a similar microbiology organization. BIOL 273 will NOT be usable as an elective for the BIOL majors, while BIOL 375 will continued to be acceptable as an elective.

Our department tested student interest by creating a section of BIOL 275 during the Fall 2019 semester for the allied-health student groups; 37 students were enrolled.

BIOL 273 will be offered once per academic year in the will be offered in Fall, with the possibility of Spring as well, consistent with demand. The course (which is non-repeatable) is designed with the standard A-F grading scale, with appropriate emphasis on team and in-class work, problem sets, and presentations. Grading scale is chosen to reflect what most students need for their respective professional programs.

OTHER NOTES/REQUESTS:

BIOL 275 will no longer be offered. To help ease the transition, especially in terms of transfer credits, we will ask that BIOL 375 be made equivalent to BIOL 275 in the SA Catalog. Making these courses equivalent will help as current majors and transfer students move on to complete their degree requirements.

Existing Microbiology courses at community colleges will be re-evaluated to determine if they are more similar to the new BIOL 273 or to BIOL 375 for the purposes of equivalency.

ATTACH COURSE SYLLABUS (mandatory):

Please see attached.

CLASS TIME/LOCATION: TBD

INSTRUCTORS:

Ms. Caitlin Kowalewski
Assistant Director of Undergraduate Academic Initiatives, CNMS
UC 116C
caitkow1@umbc.edu

OFFICE HOURS: TBD

COURSE DESCRIPTION: ***Welcome to Biology 273; Microbiology for Allied Health Lecture!*** This course is intended for pre-allied health students and will focus on looking at the microbiological world from a public health perspective. Topics covered will include basic cell structure and replication of microbial cells, microbial genetics, epidemiology and the spread of infectious disease, the immune system, as well as an overview of human bacterial and viral diseases.

REQUIRED TEXTBOOK: Krasner's Microbial Challenge: A Public Health Perspective. 4th Edition. Jones & Bartlett Learning.

BLACKBOARD: All relevant information, communication and material for the course will be posted to the class Blackboard site. Blackboard will also be used to make course announcements and to give you resources other than the lecture and textbook. Announcements will be emailed from Blackboard for which you will be responsible. Make sure your UMBC email address is working and that you check it frequently!

COURSE LEARNING OBJECTIVES: With the successful completion of this course students will be able to:

- Outline the historical origins of microbiology including its interrelationship with the theory of biogenesis and germ theory of disease.
- Distinguish between the major groups of microorganisms according to their taxonomic classification and describe their main characteristics.
- Compare both the beneficial and detrimental effects of microbes on humans and society.
- Analyze and interpret case studies in order to understand the process of identifying microbial sources of infections and outbreaks.
- Predict the cycle of a given microbial disease using basic epidemiological concepts and formulate a strategy for prevention of disease spread.
- Assess the current societal challenges related to the microbial world and design potential solutions of how to overcome them.
- Differentiate common human bacterial and viral diseases and their associated treatment options.
- Summarize the immune response and how it can be utilized to prevent disease.

WHAT YOU SHOULD ALREADY KNOW: The concepts and information presented in this course should be readily comprehensible since you have fulfilled the pre-requisite as stated in the UMBC catalog (BIOL 101 or equivalent) **and you are expected to be familiar with the following terms and concepts:**

-Atoms, molecules, and elements
-Chemical bonds: Covalent bond, ionic bond, hydrogen bond; pH
-Hydrophobic and hydrophilic interactions, polar and non-polar compounds
-Organic Macromolecules- Structure and Function
-Carbohydrates
-Lipids
-Proteins: Amino acids; primary, secondary, tertiary, and quaternary structure
-Nucleic acids: DNA, RNA (mRNA, tRNA, rRNA)
-Membrane structure: Lipid bilayer, membrane proteins, and fluid mosaic model
-Respiration and photosynthesis
-Enzymes
-Gene expression and Central Dogma: replication, transcription, and translation

Note: If you have trouble with this information, you must learn it on your own; otherwise, it is strongly recommended that you drop the class and return when you have learned these basic concepts.

COURSE INFORMATION AND EXPECTATIONS: The tentative lecture schedule and reading assignments is provided below. You are required to attend each lecture and to read the assigned material. You will not succeed in the course without doing both.

READING ASSIGNMENTS: It is essential to keep up with your reading since it complements and reinforces lecture material. A good guideline is to do 2½ hours of out-of- class work for each lecture hour. No kidding! You will gain much more insight if you've done the reading **before** the lecture pertaining to that material. Use the textbook's index and glossary liberally. We may assign additional reading assignments in class or through Blackboard.

CELL PHONE POLICY: The use of a phone during lecture is not permitted. Please turn cell phones off or set to ***silent*** during lecture.

GRADING: The breakdown for grading of the course is listed below. The final exam will be cumulative, to include material covered on Exams I-IV.

Assignment	Percentage
Exam I	10%
Exam II	10%
Exam III	10%
Exam IV/Final	20%
Quizzes (On Blackboard)	15%
Case Studies	25%
Attendance/Participation	10%
TOTAL	**100%**

Grades for this course will be determined using the following scale:

Percentage	Grade
≥ 90%	A
80-89.9%	B
70-79.9%	C
60-69.9%	D
< 60%	F

*Note: **If your grade falls within the ranges listed above, you are ASSURED of that letter grade**. Depending on class performance at the end of the semester, this range may be adjusted. In other words, if the course average is lower than the middle C range (i.e. 75%), we will adjust the ranges to reflect that.*

EXAMINATIONS: Exams are scheduled well in advance (see the schedule). It is expected that everyone take them as scheduled. If you become ill or a family emergency arises, let me know **BEFORE** the exam. Make-up exams will be given only with a valid written excuse. Scores will be posted in the online grade book in the course Blackboard page.

QUIZZES: Quizzes will be administered online via Blackboard. Due dates will be posted in Blackboard and are also listed on the schedule at the end of the syllabus. **Your lowest QUIZ score will be dropped. Late quizzes will not be accepted.**

CASE STUDIES: For every chapter, students will work in small groups to analyze and solve case studies for microbes related to the chapter topic. These assignments are meant to help develop critical thinking skills related to basic patient diagnostics. Case study related worksheets will be turned in for credit.

ATTENDANCE/PARTICIPATION: Microbiology is a very content heavy course – it is expected (and vital to your success in the course) that you attend class every day. At the end of each class students will fill out an "exit slip" that will serve as their attendance record for the day. This course will also have interactive elements such as

discussions, clicker questions, and in-class activities. It is expected that you participate in these activities and you are highly encouraged to ask questions in class!

ACADEMIC INTEGRITY: Information on the UMBC policy on academic integrity can be found at: https://oue.umbc.edu/ai/

From the UMBC Handbook: "By enrolling in this course, each student assumes the responsibilities of an active participant in UMBC's scholarly community in which everyone's academic work and behavior are held to the highest standards of honesty. Cheating, fabrication, plagiarism, and helping others to commit these acts are all forms of academic dishonesty, and they are wrong. Academic misconduct could result in disciplinary action that may include, but is not limited to, suspension or dismissal. To read the full Student Academic Conduct Policy, consult the UMBC Student Handbook, the Faculty Handbook, or the UMBC Policies section of the UMBC Directory".

Anyone charged with academic misconduct (as defined below) in any aspect of the course that is graded (exams, clicker participation, quizzes, assignments, etc.) will be reported to the UMBC Academic Conduct Committee, and, at minimum, receive a grade of zero for that exam or assignment and a letter grade deduction in the course.

Academic misconduct means cheating, fabrication, facilitating academic misconduct, plagiarism, or dishonesty by an undergraduate student.

See the UMBC Undergraduate Student Academic Conduct Policy with this link: https://oue.umbc.edu/files/2015/09/ACC2011.pdf

STUDENTS WITH DISABILITIES: UMBC is committed to eliminating discriminatory obstacles that may disadvantage students based on disability. If you have a disability and want to request accommodations, contact the Office of Student Disability Services (SDS) in the Math/Psych Building, Room 212 (410-455-2459) (https://sds.umbc.edu/accommodations/registering-with-sds/). SDS will require you to provide appropriate documentation of disability and complete a Request for Services form available at https://umbc-accommodate.symplicity.com/public_accommodation/. When you are approved to receive accommodations for this class, make an appointment to meet with either instructor to discuss your SDS-approved accommodations.

TITLE IX

Any student who has experienced sexual harassment or assault, relationship violence, and/or stalking is encouraged to seek support and resources. There are a number of resources available to you.

With that said, as an instructor, I am considered a *Responsible Employee*, UMBC's Interim Policy on Prohibited Sexual Misconduct, Interpersonal Violence, and Other Related Misconduct. This means that while I am here to listen and support you, I am required to report disclosures of sexual assault, domestic violence, relationship violence, stalking, and/or gender-based harassment to the University's Title IX Coordinator. The purpose of these requirements is for the University to inform you of options, supports, and resources.

You can utilize support and resources even if you do not want to take any further action. You will not be forced to file a police report, but please be aware, depending on the nature of the offense, the University may take action.

If you need to speak with someone in confidence about an incident, UMBC has the following Confidential Resources available to support you:

- The Counseling Center: 410-455-2742 (M-F 8:30 a.m. — 5 p.m.)

- University Health Services: 410-455-2542 (M-F 8:30 a.m. — 5 p.m.)
- For after-hours emergency consultation, call the police at 410-455-5555

Other on-campus supports and resources:

- The Women's Center (available to students of all genders): 410-455-2714 (M-Th 9:30 a.m. — 6 p.m., F 9:30 a.m. — 4 p.m.)
- Title IX Coordinator: 410-455-1606 (9 a.m. — 5 p.m.)

Child Abuse and Neglect

Please note that Maryland law requires that I report all disclosures or suspicions of child abuse or neglect to the Department of Social Service and/or the police.

Course Schedule:

Date	Topic	Chapter	Assignment Due Dates
TBD	Pre-Germ Theory, Microbiology, and Medicine	1	TBD
TBD	Post-Germ Theory, Microbiology, and Medicine	2	TBD
TBD	Controlling the Spread of Disease	3	TBD
TBD	Identifying the Challenge	4	TBD
TBD	The Microbial World	5	TBD
TBD	Beneficial Aspects of Microbes	6	TBD
TBD	Bacteria	7	TBD
TBD	Viruses and Prions	8	TBD
TBD	Bacterial Genetics	9	TBD
TBD	Concepts of Microbial Disease	10	TBD
TBD	Epidemiology and Cycle of Microbial Disease	11	TBD
TBD	Bacterial Diseases	12	TBD
TBD	Viral and Prion Diseases	13	TBD
TBD	The Immune System	15	TBD
TBD	Control of Microbial Diseases	16	TBD
TBD	Harnessing the Power of Microbes: Peril and Promise	17	TBD