From: Vankeerbergen, Bernadette
To: Smith, Randy; Reed, Katie
Cc: Martin, Andrew; Nagar, Ila
Subject: Informational item--Update Microbiology Minor
Date: Friday, September 27, 2024 2:34:43 PM
Attachments: image001.png
Update Microbiology minor.pdf

Dear Randy and Katie,

Please find attached an informational item to share at an upcoming CAA meeting.

Professor Ila Nagar, Chair of ASCC, shared the proposed change as an informational item at the ASC Curriculum Committee meeting on Friday, August 30. The departmental contact for this informational item is Professor Natividad Ruiz.

Best regards,
Bernadette

THE OHIO STATE UNIVERSITY

Bernadette Vankeerbergen, Ph.D.
Assistant Dean, Curriculum
College of Arts and Sciences
114F University Hall, 230 North Oval Mall
Columbus, OH 43210
Phone: 614-688-5679
http://asccas.osu.edu

THE OHIO STATE UNIVERSITY

College of Arts and Sciences
Division of Natural and Mathematical Sciences

Department of Microbiology
105 Biological Sciences Building
484 West 12th Avenue
Columbus, OH 43210

614-292-3426 Phone
614-292-8120 Fax
ruiz.82@osu.edu

July 5, 2024

Dear colleagues,

We propose a change to the pre-requisites of our Microbiology minor. Specifically, we would like to add *Introduction to Biological Chemistry (BIOCHEM 4511)* as a substitute for the current *Organic Chemistry II (CHEM 2520 or 2620 or 2920H)* requirement.

Currently, our Microbiology minor requires that students take CHEM 2520 as a pre-requisite. Most majors in the biological sciences also require CHEM 2520. However, there are some majors (e. g. Environmental Sciences and Food Sciences) that could be complemented with a Microbiology minor but only require *Organic Chemistry I (CHEM 2510)*. Because some students in those programs take BIOCHEM 4511 as an elective for their major, our departmental Curriculum Committee explored and discussed the possibility of adding BIOCHEM 4511 as a substitute for CHEM 2520. Notably, CHEM 2510 is a pre-requisite for BIOCHEM 4511, and biochemistry is foundational in the microbial sciences, as reflected by the fact that BIOCHEM 4511 is one of the core courses in our Microbiology major. Our Curriculum Committee unanimously concluded that BIOCHEM 4511 is a suitable substitute for the CHEM 2520 requirement for our minor. The Committee presented this proposal to the faculty of the Department of Microbiology. The faculty was enthusiastic about the possibility of increasing enrollment in our minor. The proposal was unanimously approved by the faculty.

In this petition, I have included a marked copy of the Microbiology Minor advising sheet reflecting the proposed change. In addition, I made three changes to update the list of electives in the document:

- MICRBIO 3704: updated number of credit hours to 4.
- Added the recently approved course MICRBIO 4145.
- Deleted MICRBIO 5160 because it is set for withdrawal.

If you have any questions, please do not hesitate to contact me.

Thank you for your consideration.

Natividad Ruiz, Ph.D.

Professor
Vice Chair for Teaching & Undergraduate Affairs

The Ohio State University
College of Arts and Sciences

Microbiology Minor (MICRBIO-MN)

Department of Microbiology
105 Biological Sciences Building
484 West 12th Avenue, Columbus, OH 43210-1292 614-292-2301; http://microbiology.osu.edu/

Microbiology, broadly defined as the study of organisms invisible to the naked eye, is a modern science studied in the lab, in the environment and in silico. Our students study microbiology in all its forms: from understanding how the billions of cells in our microbiomes keep us healthy; the role bacteria and phages play in the global carbon cycle and climate change; how genes and their expression are regulated at the molecular level; where antibiotic resistance comes from and how to fight it; to how pathogenic parasites, fungi, viruses and bacteria cause disease and how they can be treated. Microbiology at Ohio State epitomizes a modern interdisciplinary STEM field in every sense.

1. Required prerequisite courses
Biology 1113(H) and 1114(H)
Chemistry 2520 or 2620 or 2920H or Biochemistry 4511

Some courses below have prerequisites. Please consult the course bulletin before enrolling in courses.

2. Required core course (5 credit hours)
Microbiology 4100 General Microbiology (5) ‡

3. Additional required courses (at least 2 of the following) (6 credit hours)
Microbiology 4110 Pathogenesis and Immunobiology (3)
Microbiology 4120 Microbial Physiology and Diversity (3)
Microbiology 4130 Microbial Genetics (3)
Microbiology 4140 Microbial Genetics Lab. (3)

4. Elective courses (4 credit hours)
Electives must be chosen from the list of additional required courses above* and/or the courses below:

Microbiology 2000 Intro to MicrOHbIOlogy Research (1.5)
Microbiology 2100 Wild Yeast: From Isolation to Fermentation (3)
Microbiology 3704 HIV: From Microbiology to Macrohistory (4)
Microbiology 4145 Intro to Industrial Micro & Bioprocessing Lab (3)
Microbiology 4193 Individual Studies (1-3)
Microbiology 4591S DNA Fingerprinting (1)
Microbiology 5122 Immunobiology (3)
Microbiology 5129 Cellular and Molecular Biology of Pathogenic Eukaryotes (3)
Microbiology 5147 Eukaryotic Pathogens (3)
Microbiology 5149 Introductory Virology (3)
Microbiology 5155 Environmental Microbiology (3)
Microbiology 5161 Bioinformatics & Molecular Microbiology (3)
Microbiology 5270 Microbial Natural Products: Discovery, Biosynthesis, and Antibiotic Activity (3)
Microbiology 5536 Food Microbiology Lecture (3)
Microbiology 5546 Food Microbiology Laboratory (3)
Microbiology 4998/4998H Undergraduate Research (1-5)
Microbiology 4999/4999H Undergraduate Research-Thesis (1-5)

*Students may NOT use the same course to fulfill one of the "additional required courses" [Section 3] AND one of the elective courses [Section 4].

‡ Non majors who earn an A or an A- in Microbiology 4000(.01 or .02) can request to enter the Microbiology Minor without taking Microbiology 4100.

Microbiology minor program guidelines

Credit hours required: A minimum of 14 credit hrs. 1000 level courses shall not be counted in the minor. At least 6 credits must be at the 3000 level or above.

Transfer and EM credit hours allowed:
A student is permitted to count up to 6 total hours of transfer credit and/or credit by examination.

Overlap with the GE: A student is permitted to overlap up to 6 credit hours between the GE and the minor.

Overlap with the major and additional minor(s):
• The minor must be in a different subject than the major.

• The minor must contain a minimum of 12 hours distinct from the major and/or additional minor(s).

Grades required:
• Minimum C- for a course to be listed on the minor.
• Minimum 2.00 cumulative GPA for all minor course work.
• Course work graded Pass/Non-Pass cannot count on the minor.
• No more than 3 credit hours of coursework graded Satisfactory/Unsatisfactory may count toward the minor.

X193 credits: No more than 3 credit hours.

Minor approval: The minor program must be approved by the academic unit offering the minor.

Filing the minor program form: The minor program form must be filed at least by the time the graduation application is submitted to a college/school advisor.

Changing the minor: Once the minor program is filed in the college office, any changes must be approved by the academic unit offering the minor.

College of Arts and Sciences
Curriculum and Assessment Services
306 Dulles Hall, 230 Annie & John Glenn Ave
http://artsandsciences.osu.edu

Received 3/6/12 DH
~~Updated 6/26/13 DH~~
BV 7-8-15
DH 3-4-19
DH 6-9-21B
Updated 08-07-2023 RLS

Commented [RN1]: This course was approved to be 4 credits

Deleted: 3

Commented [RN2]: This course was recently approved

Commented [RN3]: This course is set for withdrawal

Deleted: Microbiology 5160 Geomicrobiology (3)

The Ohio State University
College of Arts and Sciences

Microbiology Minor (MICRBIO-MN)

Department of Microbiology
105 Biological Sciences Building
484 West 12th Avenue, Columbus, OH 43210-1292 614-292-2301; http://microbiology.osu.edu/

Microbiology, broadly defined as the study of organisms invisible to the naked eye, is a modern science studied in the lab, in the environment and in silico. Our students study microbiology in all its forms: from understanding how the billions of cells in our microbiomes keep us healthy; the role bacteria and phages play in the global carbon cycle and climate change; how genes and their expression are regulated at the molecular level; where antibiotic resistance comes from and how to fight it; to how pathogenic parasites, fungi, viruses and bacteria cause disease and how they can be treated. Microbiology at Ohio State epitomizes a modern interdisciplinary STEM field in every sense.

1. Required prerequisite courses
Biology 1113(H) and 1114(H)
Chemistry 2520 or 2620 or 2920H or Biochemistry 4511

Some courses below have prerequisites. Please consult the course bulletin before enrolling in courses.

2. Required core course (5 credit hours)
Microbiology 4100 General Microbiology (5) ‡

3. Additional required courses (at least 2 of the following) (6 credit hours)
Microbiology 4110 Pathogenesis and Immunobiology (3)
Microbiology 4120 Microbial Physiology and Diversity (3)
Microbiology 4130 Microbial Genetics (3)
Microbiology 4140 Microbial Genetics Lab. (3)

4. Elective courses (4 credit hours)
Electives must be chosen from the list of additional required courses above* and/or the courses below:

Microbiology 2000 Intro to MicrOHbIOlogy Research (1.5)
Microbiology 2100 Wild Yeast: From Isolation to Fermentation (3)
Microbiology 3704 HIV: From Microbiology to Macrohistory (4)
Microbiology 4145 Intro to Industrial Micro & Bioprocessing Lab (3)
Microbiology 4193 Individual Studies (1-3)
Microbiology 4591S DNA Fingerprinting (1)
Microbiology 5122 Immunobiology (3)
Microbiology 5129 Cellular and Molecular Biology of Pathogenic Eukaryotes (3)
Microbiology 5147 Eukaryotic Pathogens (3)
Microbiology 5149 Introductory Virology (3)
Microbiology 5155 Environmental Microbiology (3)
Microbiology 5161 Bioinformatics & Molecular Microbiology (3)
Microbiology 5270 Microbial Natural Products: Discovery, Biosynthesis, and Antibiotic Activity (3)
Microbiology 5536 Food Microbiology Lecture (3)
Microbiology 5546 Food Microbiology Laboratory (3)
Microbiology 4998/4998H Undergraduate Research (1-5)
Microbiology 4999/4999H Undergraduate Research-Thesis (1-5)

*Students may NOT use the same course to fulfill one of the "additional required courses" [Section 3] AND one of the elective courses [Section 4].

‡ Non majors who earn an A or an A- in Microbiology 4000(.01 or .02) can request to enter the Microbiology Minor without taking Microbiology 4100.

Microbiology minor program guidelines

Credit hours required: A minimum of 14 credit hrs. 1000 level courses shall not be counted in the minor. At least 6 credits must be at the 3000 level or above.

Transfer and EM credit hours allowed:
A student is permitted to count up to 6 total hours of transfer credit and/or credit by examination.

Overlap with the GE: A student is permitted to overlap up to 6 credit hours between the GE and the minor.

Overlap with the major and additional minor(s):
• The minor must be in a different subject than the major.

• The minor must contain a minimum of 12 hours distinct from the major and/or additional minor(s).

Grades required:
• Minimum C- for a course to be listed on the minor.
• Minimum 2.00 cumulative GPA for all minor course work.
• Course work graded Pass/Non-Pass cannot count on the minor.
• No more than 3 credit hours of coursework graded Satisfactory/Unsatisfactory may count toward the minor.

X193 credits: No more than 3 credit hours.

Minor approval: The minor program must be approved by the academic unit offering the minor.

Filing the minor program form: The minor program form must be filed at least by the time the graduation application is submitted to a college/school advisor.

Changing the minor: Once the minor program is filed in the college office, any changes must be approved by the academic unit offering the minor.

College of Arts and Sciences
Curriculum and Assessment Services
306 Dulles Hall, 230 Annie & John Glenn Ave
http://artsandsciences.osu.edu

Received 3/6/12 DH
Updated 6/26/13 DH
BV 7-8-15
DH 3-4-19
DH 6-9-21B
Updated 08-07-2023 RLS