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University of Hawai'i
Code Request Form for Academic Programs
NEW OR MODIFIED SUBJECT CODE

Date: 05/31/16

REQUESTOR CONTACT INFORMATION

Name Terri Ota Campus UH West Oahu
 Title Academic Program/Faculty Affairs Spec Email tota@hawaii.edu
 Office/Dept Academic Affairs Phone 689-2314

- NEW SUBJECT CODE USE AT INSTITUTION**
 MODIFY SUBJECT CODE USE AT INSTITUTION

Institution WOA Effective Term 201310

For reporting purposes subject code is reported with MTVCOMP_EXTERNAL_CODE = Natural Sciences

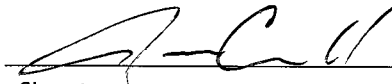
	Code (Max. Characters)	Description (30 characters max)	Check if requesting new code:
College	(2) <u>HM</u>	<u>Humanities</u>	<input type="checkbox"/> See Banner form STV_COLL
Division	(4) <u>HUM</u>	<u>Humanities</u>	<input type="checkbox"/> See Banner form STV_DIVS
Department	(4) <u>HUM</u>	<u>Humanities</u>	<input type="checkbox"/> See Banner form STV_DEPT
Subject	(4) <u>MICR</u>	<u>Microbiology</u>	<input type="checkbox"/> See Banner form STV_SUBJ

ATTACHMENTS

Memo with appropriate campus approval (i.e. Campus Curriculum Committee, Vice Chancellor for Academic Affairs, etc.)

VERIFICATIONS

Registrar:

Robyn Oshiro  6/1/2016
 Print Name Signature Date

Financial Aid Officer:

James Cromwell  6/1/2016
 Print Name Signature Date

For Community Colleges, verification of consultation with OVPC Academic Affairs:

 Print Name Signature Date

University of Hawai'i – West O'ahu
FORM FOR ADDITION OF COURSES

1. Please indicate the following:

- a. Proposed Course Alpha and Number: MICR 130
- b. Proposed Course Title: General Microbiology
- c. Proposed number of credits (if variable, give range): 3
- d. Can the course be repeated for credit to be applied to degree/certificate requirements?
X No Yes (with a different alpha) OR
 Yes (please state reason):
- e. Prerequisite(s)/Co-Requisite(s): Placement in ENG 100 or concurrent enrollment in ENG 100
- f. Proposed Course Description (for catalog):

This introductory course covers the fundamentals of microbiology, and how microorganisms affect people, property, and the environment. Topics covered will include biochemistry, genetics, molecular biology, and physiology of microbes; host-parasite relationships, public health, bacterial, mycotic and viral diseases; epidemiology; ecology of soils and water; environmental pollution; food microbiology; and industrial applications of microbiology.

- g. Has the course previously been taught as a 496 Course?
X No Yes (please indicate alpha and term):

2. Justification or rationale for course action: This course will be required for the proposed programs in secondary education (biology focus), nursing, and environmental science. This course will be comparable to general microbiology courses taught throughout the UH System.
3. Have all relevant personnel been consulted?
 No x Yes

If "yes," please obtain signatures:

Name	Concentration	Appr	Disappr	Signature
Dr. Eric Umemoto	UHM Microbiology	x		See attached email
Dr. Helmut Kae	LCC Math/Science	x		See attached email
Dr. Mary Heller	UWHO Education	x		<i>Mary Heller</i>
Dr. Joseph Bariyanga	UWHO Math/Science	x		<i>J. Bariyanga</i>
Dr. Linda Furuto	UWHO Math/Science	X		<i>L. Furuto</i>

Is this a cross-listed course?

x No Yes

If "yes," please obtain signatures of those who approve:

Course Alpha & Number	Approved by Faculty	Approved by Division Chair

4. Student Learning Outcomes (SLO) and alignment with Concentration Learning Outcomes (CLO), Division learning Outcomes (DLO) and Institutional Learning Outcomes (ILO). Please write the SLO in a measurable format and code the appropriate CLOs, DLOs and ILOs.

Student Learning Outcomes
Understand the different kinds of microorganisms, including similarities and differences in biochemistry, cell structure, growth requirements, and genetics. (ILO 5)
Apply the principles of epidemiology to the etiology of microbial diseases. (ILO 3, 5)
Understand the immune response to pathogens and methods to treat diseases. (ILO 5)
Evaluate genetic engineering and other industrial applications of microbes. (ILO 5)

5. Grading Criteria: Points from Exams, Homework Assignments, and a Group Project.

Approximation distribution of points:

Exams	50%
Homework	25%
Group Project	25%

6. Grading Scale: A: 90%+; B: 80-89%; C: 70-79%; D: 60-69%; F: < 60%

7. Course Outline:

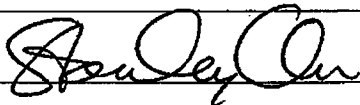
- Week 1: Introduction, the Microbial World and You, Methods for Observing Microorganisms
- Week 2: Anatomy of Prokaryotic and Eukaryotic Cells
- Week 3: Microbial Metabolism and Growth
- Week 4: Control of Microbial Growth
- Week 5: Microbial Genetics and Biotechnology and Recombinant DNA
- Week 6: Classification of Microorganisms
- Week 7: Eukaryotic Microorganisms (Fungi, Algae, Protozoa, Helminths)
- Week 8: Viruses, Viroids, and Prions
- Week 9: Principles of Disease and Epidemiology
- Week 10: Microbial Methods of Pathogenicity
- Week 11: Innate Immunity
- Week 12: Adaptive Immunity
- Week 13: Practical Applications of Immunology and Antimicrobial Drugs
- Week 14: Microbial Diseases (Skin and Eyes, Nervous System, Cardiovascular & Lymphatic Systems)
- Week 15: Microbial Diseases (Respiratory System, Digestive System, Urinary & Reproductive Systems)
- Week 16: Environmental Microbiology and Applied Microbiology

8. Recommended Text(s):

Author	Title	Year
Tortora, Funke and Case	Microbiology: An Introduction	2010

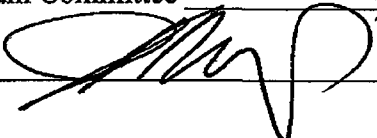
9. Addition requested by:

Faculty Member Signature:  Date 4 Oct 2011

Division/Program Chair Signature  Date 10/4/11

10. Action approved by:

Curriculum Committee  Date 10/18/11

VCAA  Date 10/27/11

Required by the VCAA

11. Course Type (Lecture, Seminar, Fieldwork, Lab): Lecture
12. Effective Term (term course is added to the catalog): Fall 2012
13. Course frequency/rotation (ex. every other semester): once per year
14. Is Course a Core Requirements: Yes
15. Major Restriction:
- No Yes (restricted to):
16. Is this course seeking General Education status?
- No Yes

If "yes," please make certain you have submitted an application to the Gen Ed committee.

17. Course Title (30 character limit): General Microbiology

Course Outline/Syllabus:

MICR 130, General Microbiology (3 credits)

Course Description:

This introductory course covers the fundamentals of microbiology, and how microorganisms affect people, property, and the environment. Topics covered will include biochemistry, genetics, molecular biology, and physiology of microbes; host-parasite relationships, public health, bacterial, mycotic and viral diseases; epidemiology; ecology of soils and water; environmental pollution; food microbiology; and industrial applications of microbiology.

Coursework and Grading:

This course will be taught with a combination of lectures and digital presentations. Attendance is highly recommended as while the text may cover a wealth of material, the instructor will select important highlights that will feature in the preparation of the exams. There will also be a series of homework assignments, available in Laulima, on the readings. Grades for General Microbiology will be based on points earned in the following tasks: 4 exams (50% of the points), homework assignments (25%) and a group project (25%). The final grade will be calculated based on the following Grading Scale: A: 90%+; B: 80-89%; C: 70-79%; D: 60-69%; F: < 60%.

Suggested Textbook:

Microbiology: An Introduction (10th edition), Tortora, Funke and Case

Student Learning Outcomes:

Upon successful completion of this course, a student should be able to:

1. Understand the different kinds of microorganisms, including similarities and differences in biochemistry, cell structure, growth requirements, and genetics.
2. Apply the principles of epidemiology to the etiology of microbial diseases.
3. Understand the immune response to pathogens and methods to treat diseases.
4. Evaluate genetic engineering and other industrial applications of microbes.

Course Outline:

- Week 1: Introduction, the Microbial World and You
Methods for Observing Microorganisms
- Week 2: Anatomy of Prokaryotic and Eukaryotic Cells
- Week 3: Microbial Metabolism and Growth
- Week 4: Control of Microbial Growth
- Week 5: Microbial Genetics and Biotechnology and Recombinant DNA
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- Week 16: Environmental Microbiology and Applied Microbiology