College of Micronesia - FSM

# COURSE MODIFICATION REQUEST

**SC 180 MICROBIOLOGY**-With lab) — Math and Science
Course Number and Title — Department

No Change
New Course Number and Title — Department

**New Course Objectives:**

None

**New Course Description:**

**…….**..... 4 credits
**Prerequisite:-** l. SC 101 and 2. one of the following SC 120, MR 120, SC 122a Emphasizes basic understanding of microbiology arid control ¯of Pathogenic micro-organisms with emphasis on **common infection caused -by- pathogenic micro-organisms** and work of body resistance.

**Justification for Revising the Course:**

Changes are required to make prerequisites consistent with updates in marine science courses and major.

Division Chairperson — Date

**Spensin James** — **5/28/99**
Chairperson, Curriculum Committee — Date

**Susan Moses** — **6/7/99**
President, COM-FSM — Date

COMMUNITY COLLEGE OF MICRONESIA
Kolonia, Pohnpei State 96941

| Microbiology | SC 180 |
|---|---|
| COURSE TITLE | DEPARTMENT & NUMBER |

Course Description:

This is a one semester course designed to provide nursing and other allied health related fields students with understanding of microbiology and control of pathogenic microbes. This course also introduces students to common infections caused by pathogenic microorganisms and stresses the work of the body resistance:

Course Prepared by: Spensin James State: CCM- on Campus

| | Hours per Week | | Number of Weeks | | Total Hours | Semester Credits |
|---|---|---|---|---|---|---|
| Lecture | 3 | x | 16 | = | 48 | = 3 |
| Laboratory | 3 | x | 16 | = | 48 | = 1 |
| Workshop | | x | | = | | = |
| | | | Total Semester Credits | | | = 4 |

Purpose of Course:

| | |
|---|---|
| Degree Requirement | x |
| Degree Elective | x |
| Certificate | |
| Remedial | |
| Other | |

Prerequisite Courses: SC 120

Signature, Chairman Curriculum Committee

Signature, President, CCM

1/29/90
Date approved by Committee

1/30/90
Date approved by President

I. COURSE OBJECTIVES

A. General Objectives

1. To develop basic understanding of Microbiology through exposures to selected learning experiences in classroom.
2. To acquire skills of identifying and classifying microorganisms through laboratory observations.
3. To assist in the control of microorganisms by practicing the good health procedures.

B. Specific Objectives

After completing the course students will be able to:

1. Define and describe practical application of microbiology.
2. Identify and classify the microorganisms.
3. Compare the morphological characteristics of three major groups of bacteria.
4. Describe the reproductive process in bacteria.
5. Compare the metabolic processes between the photosynthetic bacteria and chemosynthetic bacteria.
6. Identify the different organelles of the unicellular organisms.
7. Explain the phases of growth in bacteria.
8. Calculate the increase in bacterial growth at a given amount of time.
9. Prepare bacterial culture and make reliable bacterial count.
10. Manipulate compound microscopes and make accurate observation of the characteristics of different microorganisms.
11. Prepare specimen for observation under compound microscope.
12. Describe methods of purifying water, food, milk, etc.
13. Describe the physical and chemical methods of sterilization.
14. Describe the host resistance to certain diseases.'

15. Explain and practice surgical and medical asepsis.

16. Identify normal flora of various body system.

17. Explain the spread of infectious diseases and transmission of communicable diseases.

18. Identify different kinds of infectious diseases.

19. Use Koch's Postulate in determining the specific disease organism.

20. Explain how pathogens enter and leave the body.

21. Determine the factors that contribute to the pathogen city of organisms.

22. Describe the host resistance and antibody-antigen reactions.

23. Describe the harmful effects of pathogens.

24. Explain the importances of antibiotics

25. Identify the organs of the body which harbor different pathogens.

26. Identify different classes of microorganisms.

II. Textbook: Pomerville, Jeffrey. Fundamentals of Microbiology. 7th (or current) Ed. NY: Jones and Bartlett, 2004. ISBN: 0763700673.

III. Methods of Instruction

A. Lecture
B. Classroom discussions and demonstration
C. Visual Aid
D. Guest Speakers
E. Laboratory Investigations

IV. Course Content

A. Introductions to Microorganisms
B. Laboratory Equipment and Procedures
C.Bacterial Morphology, Nutrition, Metabolism
D. Methods for the Control of Microorganisms.
E. Surgical and Medical Asepsis

F. Antimicrobial Agents in Theraphy
G. Introduction to Pathogens
H. The Normal Flora of Human Body.
I. Microbiology of food, water, and milk. and genetics.

V. Credit by Examination

No Credit by examination is provided.