

CURRICULUM PROPOSAL FORM

***DEADLINES:**

ANNUAL COURSE PROPOSALS: OCTOBER 23, 1998 FOR FALL, 1999 AND FEBRUARY 19, 1999 FOR SPRING, 2000
SHORT-TERM COURSE PROPOSALS: DECEMBER 11, 1998 FOR FALL, 1999 AND MARCH 26, 1998 FOR SPRING 2000

PROPOSAL TITLE: ENVIRONMENTAL MICROBIOLOGY

SPONSOR/S: Drs. P. Mosier and Dr. A. Piller

DEPARTMENT: Biological Sciences x 3570 x 3526 0411.405

CHECK ALL THAT APPLY:
 UNDERGRADUATE GRADUATE

COLLEGE: LAS

If LAS:
 History/Humanities
 Math/Sciences
 Social/Behavioral Sciences

TYPE OF PROPOSAL (Check ALL that Apply)

<input type="checkbox"/> General Education	<input checked="" type="checkbox"/> New Course (NOT Gen. Ed.)
<input type="checkbox"/> New Course in _____ Bank	<input type="checkbox"/> Name Change (Dept., School, Major)
<input type="checkbox"/> Existing course, Add To _____ Bank	<input type="checkbox"/> Changes in Degree Requirements
<input type="checkbox"/> Multicultural/Global Designation	<input type="checkbox"/> Changes Involve Gen. Ed. requirements
<input type="checkbox"/> Writing Intensive Designation	<input type="checkbox"/> Minor Changes to Existing Courses
<input type="checkbox"/> Literature Designation	<input type="checkbox"/> Course is NOT General Education
<input type="checkbox"/> New Minor/Concentration/Specialization	<input type="checkbox"/> Course IS General Education
<input type="checkbox"/> New Major/Degree Program	
<input type="checkbox"/> Short Term Course Proposal	

APR 26 1999

DEPT. OF CURRICULUM AND INSTRUCTION

DEPARTMENT (SIGNATURE INDICATES APPROVAL)

DEPT. CURRICULUM CHAIR / DATE **DEPT. CHAIRPERSON / DATE**

COLLEGE CURRICULUM COMMITTEE
 DATE OF OPEN HEARING (if necessary) _____

APPROVED
 NOT APPROVED

COMMENTS:

SIGNATURE **DATE**

ACADEMIC DEAN (& GRADUATE DEAN, for New Graduate Programs Only)

APPROVED
 NOT APPROVED

COMMENTS:

SIGNATURE (Academic Dean) **DATE**

SIGNATURE (Graduate Dean) **DATE**

UNIVERSITY CURRICULUM COMMITTEE

DATE OF OPEN HEARING (if necessary) 4/27/99 (College level only)

APPROVED

NOT APPROVED

COMMENTS:

Janetta Rivera 5/12/99
SIGNATURE DATE

SENATE

Date announced at Senate 5/12/99

Voted upon at Senate: Approved Not Approved Date:

EXECUTIVE VICE PRESIDENT/PROVOST

APPROVED

NOT APPROVED If no, reasons are as follows:

STUDENT CREDIT HOURS _____ FACULTY LOAD HOURS _____ EQUALIZED CREDIT HOURS _____

OFFICIAL COPY & APPROVAL SHEET FILED (DATE): _____

DATE/SIGNATURE EXECUTIVE VICE PRESIDENT/PROVOST C. M. [Signature] 5/30/99

REGISTRAR

DATE APPROVED COURSE DESCRIPTION RECEIVED _____

HEGIS TAXONOMY & COURSE NUMBER ASSIGNED 0411.405

DATE/SIGNATURE OF REGISTRAR Robert A. Bulvat 6/14/99

NOTIFICATION FORWARD:

SENATE CURRICULUM COMMITTEE CHAIRPERSON

DEPARTMENT CHAIRPERSONS

ACADEMIC DEAN(S)

REGISTRAR

SPONSOR(S)

New Course Proposal

1. Details

- a. Course Title: Environmental Microbiology 0411.405
 - b. Sponsor: Department of Biological Sciences
Dr. P. Mosto, Associate Professor
Dr. A. Prieto, Professor
 - c. Credit Hours: 4 s.h.
 - d. Course level: Undergraduate; 400-level HEGIS number requested.
 - e. Curricular Effect: The 4 s.h. credit will come from 30 s.h. of upper level Biological Sciences electives, in particular for the Environmental Track majors.
 - f. Prerequisites: Biology I and II (0401100 and 0401101). Junior or Senior class standing.
 - g. Suggestive Time and Scale of Implementation: Effective Spring '97. The course will be offered every other year.
 - h. Adequacy of Present Staff, Resources, Library Facilities: Present Faculty are adequate. This course will be offered every other year, and one of the faculty members sponsoring this course have ample expertise to teach it. The Department of Biological Sciences has purchased in the last years a variety of equipment to enhance offering like this with laboratory applications. Library resources are adequate. Over time, we hope that additional materials can be purchased for the Rowan Library.
- I. Short-term Evaluation: N/A

2. Rationale

The current trend in college education is to stress the Environmental related fields. The Biological Science Department is revising their Ecology and Environmental Track. In an effort to strengthen such a track and provide the students at Rowan College with new opportunities in the Environmental fields, this course is proposed.

3. Essence of the Course

- a. Objectives: The Environmental Microbiology course is to serve Biology majors with an environmental track, an understanding of the ecology of microorganisms and their interaction with the environment. It will provide our majors with applied tools in environmental microbiology if they choose to pursue technical positions in this area of work.
- b. Topical Outline/Content
 - Introduction and History of microbiology
 - The microbial cell and its interactions with other cells in the environment
 - Viruses, Bacteria, Algae and Fungi

- Microbial populations and community interactions
- Microbial energetic and metabolism in relationship to environmental issues
- Microbes and the terrestrial environment (i.e. nitrogen cycling)
- Microbes and the aquatic environment (i.e. water pollution, water treatment)
- Microbes and the air environment (i.e. health problems)
- Microbes and the plant/animal environment (i.e. symbioses, pathogenicity)
- Microbial spoilage of food
- Biological control
- Xenobionts and recalcitrance

Books available:

Microorganisms in Action: Concepts and Applications in Microbial Ecology. Lynch, A. and Hobbie, S. 1992. Blackwell Pub.

Environmental Microbiology. R. Mitchell. 1992. Wiley Pub.

c. Evaluation and Grading Procedure: Exams, laboratory reports, field work and paper presentations will be part of the grading system.

d. Course Evaluation: The Biological Sciences Department routinely reviews the Department's courses to assess their success in meeting the goals and objectives of the College, the program and the courses.

4. Results of Consultation

Since this a course offered only to Biological Sciences Majors, no outside consultation was done. No other Rowan College department offers a course with similar content.

5. Additional Information: None

6. Catalogue Description: see attached page.

CATALOG DESCRIPTION

04xx.4xx

Environmental Microbiology

(Prerequisites: 0401100 and 0401101; junior or senior standing)

This course covers topics related to microorganisms in the environment. Deals with the actions of microbes in the terrestrial, aquatic, air and plant/animal environment. Places focus in microbial control and microbial applications.

10/11/95 - ac. sen.

**ROWAN COLLEGE
CURRICULUM COMMITTEE**

PROPOSAL TITLE: ENVIRONMENTAL MICROBIOLOGY

UNDERGRADUATE GRADUATE CREDIT HOURS

SPONSOR(S): DR. P. MOSTO & DR. A. PRIETO

DEPARTMENT & TELEPHONE# Biological Sciences X 3590 X 3588

CHECK ONE: COURSE MINOR PROGRAM CONCENTRATION SPECIALIZATION
 ACHIEVEMENT CERTIFICATE CERTIFICATION PROGRAM MAJOR PROGRAM

<p>STEP #1 (DEPARTMENT)</p> <p><input checked="" type="checkbox"/> APPROVED/DATE: _____</p> <p><input type="checkbox"/> NOT APPROVED/DATE: _____</p> <p><u>J. Scott</u> DEPT. CURRICULUM CHR.</p> <p>REVIEWED/DATE: <u>Spring '95</u></p> <p><u>R. J. Meagher</u> DEPT. CHR.</p>	<p>STEP #2 (RECEIPT)</p> <p>SCC# <u>95-96-06</u></p> <p>DATE RECEIVED: <u>12/18/95</u></p> <p style="text-align: center; font-size: 2em; font-weight: bold;">RECEIVED</p> <p style="text-align: center;">DEC 18 1995</p> <p style="text-align: center;">OFFICE OF THE DEAN, ARTS AND SCIENCES</p> <p><u>Ronald J. Zucker</u> SENATE CURRICULUM CHR.</p>	<p>STEP #3 (SCHOOL)</p> <p>REVIEWED DATE: <u>11/1/95</u></p> <p><input type="checkbox"/> RECOMMEND TO APPROVE</p> <p><input type="checkbox"/> RECOMMEND NOT TO APPROVE</p> <p><input type="checkbox"/> FORWARD FOR OPEN HEARING</p> <p><input checked="" type="checkbox"/> WITHOUT RESERVATIONS</p> <p><input type="checkbox"/> WITH RESERVATIONS</p> <p>COMMENTS: _____</p> <p><u>Ling Hong</u> SCHOOL COMMITTEE CHR.</p>
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STEP #4 (ACADEMIC DEAN)

RECOMMEND

NOT RECOMMEND

CONDITIONALLY RECOMMEND (SEE COMMENTS)

DATE & SIGNATURE, DEAN OF SCHOOL: 12/18/95 Paul Barrett

COMMENTS: _____

STEP #5 (SENATE CURRICULUM COMMITTEE)

DATE OF OPEN HEARING: _____

APPROVED BY SENATE CURRICULUM COMMITTEE (DATE): _____

RETURNED TO SPONSOR(S) FOR THE FOLLOWING REASONS: _____

STEP #6 (SENATE)

DA: PRESENTED TO SENATE APPROVED NOT APPROVED

NOTIFICATION TO EXECUTIVE VICE PRESIDENT/PROVOST (DATE): _____

SENATE CURRICULUM COMMITTEE CHAIR SIGNATURE/DATE: _____