

Approval Form

Proposal Title: General Biology : Human Focus 04151.11F

Sponsor(s) J. Scott, Ph.D. Dept.: Biological Sciences Ext. 4833
M. Tahamant, Ph.D.
G. Hecht, Ph.D.

Check one: Course Specialization Concentration Minor Achievement Certificate
 Certification Program Major Program Minor Change (please name deletion or credit/title/catalog change)

Undergraduate Graduate Credit Hours

Step 1 (Department) <input checked="" type="checkbox"/> Approved <u>10/21/97</u> <small>Date</small> <input type="checkbox"/> Not Approved <u>S. J. Moore</u> <small>Dept. CC Chairperson</small> <input type="checkbox"/> Reviewed <u>10/21/97</u> <small>Date</small> <u>S. J. Moore</u> <small>Dept. Chairperson</small>	Step 2 (Receipt) <input type="checkbox"/> SCC# <u>9798-111</u> Proposal Received <u>10-24-97</u> <small>Date</small> <u>L. Reeves</u> <small>SCC Chairperson</small>	Step 3 (School CC) Reviewed <u>4/1/98</u> <input checked="" type="checkbox"/> Approved <input type="checkbox"/> Not Approved Comments: <u>L. Reeves</u> <small>School Curr Comm Chairperson</small>
---	--	---

Step 4 (Academic Dean) <input checked="" type="checkbox"/> Recommend <input type="checkbox"/> Not Recommend <input type="checkbox"/> Conditionally Recommend (see comments) Reviewed _____ <small>Date</small>	Comments: <u>L. Reeves</u> <small>Signature, Dean of School</small>
--	--

Step 5 (SCC)
 Open Hearing 2/25/98 Approved by Senate Curriculum Committee 2/25/98
Date Date
 Returned to sponsor(s) for the following reasons:

Step 6 (Senate)
 Presented to Senate 2/25/98 Approved Not Approved
Date
 Notification to Executive Vice President/Provost 2/25/98 L. Reeves
Date Signature, SCC Chairperson

Step 7 (Executive V.P./Provost)

Received _____

Date

If no, reasons are as follows

Approved Yes No

Student credit hours _____

Faculty load hours _____

Equalized credit hours _____

2/27/98

Official copy and approval sheet filed _____

Date

C. M. Mason

Signature, Executive Vice-President/Provost

Registrar

Approved course description received _____

Date

Hegis Taxonomy and Course Number assigned 0401-113

S. C. E. J. Jr.

Signature, Registrar

3/2/98

Date

Notification forwarded:

Senate Curriculum Committee Chairperson

Department Chairperson(s)

Academic Dean(s)

Registrar

Sponsor(s)

*Transmittal
3/5/98*

NEW COURSE PROPOSAL
0401.1xx GENERAL BIOLOGY: HUMAN FOCUS

1. Details:

a. Course Title: General Biology: Human Focus

b. Sponsors: Department of Biological Sciences

Joanne Scott, Ph.D., Associate Professor
Maria Tahamont, Ph.D., Associate Professor
Gregory Hecht, Ph.D., Assistant Professor

c. Credit Hours: 4 s.h.

d. Course Level:

Undergraduate; 100-level HEGIS number requested. General Education status has been requested. No credit towards Biology major.

e. Curricular Effect:

This course is designed to offer a General Education laboratory course for students not majoring in the Biological Sciences. Although we assume that some non-majors will still enroll in Biology I and II, we anticipate that the majority of non-majors will opt for this course (or the analogous "General Biology: Environmental Focus", submitted under separate cover). Thus, the curricular effect will be to decrease the number of sections of Biology I and/or Biology II offered each semester, and to fill those sections with mostly Biological Sciences majors.

General Education status is requested for this course, as a science course with laboratory.

f. Prerequisites:

None.

g. Suggested Time and Scale of Implementation:

Effective Fall 1998. Each section of this proposed laboratory course can accommodate a maximum of 24 students.

h. Adequacy of Present Staff, Resources, Library Facilities:

All faculty members in the Department are capable of teaching this course. Since fewer Biology I and Biology II sections will need to be offered, faculty currently teaching Biology I and Biology II can be reassigned to teach the proposed course.

Library sources are adequate.

i. Short-term Evaluation:

The success of this course will be evaluated in the same manner as all other courses in the Department. That evaluation will include, but not be limited to, student evaluations.

2. Rationale:

The current General Education model requires each student to take a 1-semester science course with laboratory. Currently students not majoring in the Biological Sciences can enroll in three such courses offered in the Biological Sciences: Biology I, Biology II, and Human Anatomy and Physiology I. Each of these courses is one-half of a two-semester sequence. The proposed course, General Biology: Human Focus, is a "stand-alone" one-semester course, with the syllabus carefully designed to

- 1) provide an intellectually challenging selection of topics of relevance to non-Biological Sciences majors;
- 2) provide hands-on laboratory experiences in activities more relevant to non-majors than to our majors, and which will help students visualize the concepts discussed in class;
- 3) permit the student to feel that he/she has completed a course in its entirety, rather than 1/2 of a 2-semester sequence.

Note should be made that this proposed course is not similar to the course entitled "Essentials of Biology". "Essentials of Biology" is a required course for Liberal Studies: Math/Science majors. (That course, and its unique syllabus, was approved by the University last year.) The course entitled "Essentials of Biology":

- a) is not a General Education course; it is intended to serve a specialized group of students (Liberal Studies: Math/Science majors);
- b) takes a broad look at the 5 kingdoms of life; it does not emphasize the human organism;
- c) has "Chemistry of Everyday Life" (or its equivalent) as a first prerequisite, and therefore does not include an introduction to the basic chemistry needed to understand biology;
- d) has a significantly different syllabus because it is part of a required two-semester biology sequence within the carefully designed Liberal Studies: Math/Science major; (the second course is "Principles of Ecology");
- e) is carefully integrated with the other science and math courses that all Liberal Studies: Math/Science majors are required to take;
- f) is limited to Liberal Studies: Math/Science majors except on a seat-available basis.

c. Evaluation and Grading Procedure of Students:

Students will be graded on the basis of their performance on several hour exams plus a final exam. In addition, they will be graded on their laboratory reports as well as on their performance in the laboratory. Classroom discussion is encouraged as part of the general learning process. At the discretion of the particular instructor, students may also be assigned papers and/or oral reports.

d. Course Evaluation:

The Biological Sciences Department, as a whole, routinely reviews the Department's courses to assess the courses' success in meeting the goals and objectives of the College and the Program.

4. Results of Consultation:

For many years, informal discussions in the All-University Curriculum Committee, prompted by representatives from many Academic Departments, have occurred with respect to the need for such a course.

This course was designed through consensus of the Biological Sciences faculty. No other Rowan University Department offers a course with similar content.

5. Possible textbooks and laboratory manuals used for the course:

Since courses of this genre are offered in most colleges and universities throughout the country, publishers have many such texts to offer. The Department will work together to select appropriate textbooks and laboratory manuals.

6. Catalog Description:

See next page.

CATALOG DESCRIPTION

General Biology: Human Focus 0401.1XX
(Prerequisite: None.)

4 s.h.

This one-semester laboratory course provides an introduction to the basic concepts of the biological sciences, including, but not limited to, cell biology, the body plan and organ systems of vertebrate animals, genetics and heredity, and vertebrate evolution. Emphasis will be placed on how these topics relate to the human organism. Laboratory exercises enable the student to visualize many of the concepts discussed in class. No credit towards the Biology major.

3. Essence of the Course:

a. Objectives:

This is a laboratory course in Biology for non-Biological Sciences majors. Although many non-human topics will be discussed, the topics will be related to the human organism as much as possible. For example, although Mendelian genetics will be discussed as a part of the historical aspect of the topic, examples of human genetic traits will be emphasized. In like manner, although the mechanisms of evolution (i.e., natural selection) will be discussed, emphasis will be placed on how these mechanisms brought about evolution of humans. Systems of the vertebrate body will be discussed (e.g., circulatory systems, immune systems, digestive systems), but emphasis will be placed on these systems in humans. This is, however, not a course in Human Anatomy and Physiology -- therefore, to provide a broad-based introduction to the basic concepts of the biological sciences, animal systems will often be the topic, with comparisons made between how those systems evolved through lower animal forms to human counterparts.

b. Topical Outline/Content:

Introduction to Basic Chemistry
Cells: Their Properties, Surfaces, & Interconnections;
 Properties of Animal Tissues
Taxonomy: How Organisms are Classified
The Vertebrate Body Plan
Systems of Vertebrates:
 Digestive Systems
 Circulatory Systems
 Immune Systems, with discussion of AIDS
 Nervous Systems and Sense Organs
 Locomotion -- Muscles and Bones
 Animal Reproduction, with discussion of in vitro
 fertilization and cloning
How Cells Divide
The Nature of DNA
Genes and How They Work
Human Genetics
Mechanisms of Evolution: Mutation, Natural Selection
Origin of Life
The Story of Vertebrate Evolution and How Humans Evolved
Major Persons and Events that have Contributed to the
 Development of Biological Knowledge

Laboratory exercises will include microscopy, dissections, and computer-simulated experiments. These exercises will be chosen with non-science majors in mind.