## NEW COURSE PROPOSAL FORM

**TO:** CURRICULUM COMMITTEE

**ACADEMIC AREA:** MATH AND SCIENCES

**PROPOSEd by**: Peggy Romeo

**PRESENTER:** peggy Romeo

**DATE:** 1/14/2011

**COURSE PREFIX, NUMBER AND TITLE:**

### PCB 3043C General Ecology with Lab SECTION I

**COURSE INFORMATION: TYPE iN THE APPROPRIATE INFORMATION FOR EACH ITEM:**

**DEPARTMENT:** Biology

**COURSE PREREQUISITE(S):** BSC1010/1010L (Biological Science I with Lab) and BSC1011/1011L (Biological Science II with Lab) and CHM 2045/2045L (General Chemistry I with Lab) all with a “C” or better

**MINIMUM GRADE OF prereqUISITE(s):** C

**COURSE COREQUISITE(S):** none

**COURSE CREDITS OR CLOCK HOURS:** 3 credits

**credit type:** COLLEGE CREDIT (TRANSFERABLE)

**CONTACT HOURS:** 3 CONTACT

**COURSE DESCRIPTION:**

This course covers the basic concepts of ecology, providing an introduction to living systems at the population, community, ecosystem and landscape levels. Laboratory and field experiences are fully integrated into the course to support an inquiry based study of ecological concepts through active learning strategies. Current technologies for use with ecological experimental design, data management and analysis, computer simulation modeling and GIS applications will be employed.

**GENERAL TOPIC OUTLINE:**

* Overview of ecology, levels of organization and emergent properties
* Natural history and natural selection
* Adaptations to the environment
* Population ecology
* Interactions – individuals and populations
* Communities and ecosystems
* Large-scale ecology

**LEARNING OUTCOMES:**

TYPE IN ALL OF THE LEARNING OUTCOMES, ASSESSMENTS AND GEN ED COMPETENCIES AS THEY SHOULD BE DISPLAYED IN THE SYLLABUS

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| LEARNING OUTCOMES | ASSESSMENTS | GENERAL EDUCATION COMPETENCIES |
| Compare and contrast general ecological concepts, theories and practices. | Successfully complete one or more of the following: exams; quizzes; writing assignments; debates; oral, written or electronic presentations; discussion forums; or data interpretation and analysis exercises. |  |
| Interpret basic ecological models to explore the effects of small-scale interactions on large-scale ecological patterns. | Successfully complete one or more of the following: exams; quizzes; writing assignments; debates; case studies; oral, written or electronic presentations; discussion forums; or data interpretation and analysis exercises. | TIM, COM, CT, QR |
| Analyze and graph scientific data, using computer-based modeling, mapping, data-management and presentation applications. | Successfully complete one or more of the following: exams; quizzes; writing assignments; debates; case studies; oral, written or electronic presentations; discussion forums; or data interpretation and analysis exercises. | TIM, QR |
| Evaluate and analyze the relationship between evolution and ecology. | Successfully complete one or more of the following: exams; quizzes; writing assignments; debates; oral, written or electronic presentations; discussion forums; or data interpretation and analysis exercises. | CT |
| Distinguish among the costs and benefits of different behavioral ecology strategies (i.e. territorial defense, symbiosis, foraging, migration, group living) | Successfully complete one or more of the following: exams; quizzes; writing assignments; debates; oral, written or electronic presentations; discussion forums; or data interpretation and analysis exercises. | COM |
| Compare and contrast patterns of geographic species distribution and abundance. | Successfully complete one or more of the following: exams; quizzes; writing assignments; debates; case studies; oral, written or electronic presentations; discussion forums; or data interpretation and analysis exercises. |  |
| Discuss factors that govern population growth (i.e. dispersal, colonization, disease, density, extinction). | Successfully complete one or more of the following: exams; quizzes; writing assignments; debates; case studies; oral, written or electronic presentations; discussion forums; or data interpretation and analysis exercises. |  |
| Design and conduct an experiment to investigate factors that affect population growth, using proper scientific method protocols | Successfully complete one or more of the following: oral, written or electronic presentations; discussion forums; data interpretation and analysis exercises; or a well-organized lab notebook. |  |
| Compare and contrast factors that affect community-level structure and function (i.e. succession, disturbance, biodiversity, productivity, food webs, nutrient cycles). | Successfully complete one or more of the following: exams; quizzes; writing assignments; debates; case studies; oral, written or electronic presentations; discussion forums; or data interpretation and analysis exercises. |  |
| Defend the role of conservation biology as it relates to the impact of human populations on the environment. | Successfully complete one or more of the following: exams; quizzes; writing assignments; debates; case studies; oral, written or electronic presentations; discussion forums; or data interpretation and analysis exercises. |  |

### SECTION II

**ICS CODE FOR THIS COURSE:** ADVANCED AND PROFESSIONAL - 1.11.04 - BIOLOGICAL SCIENCE

**IF YOU INTEND TO RESTRICT STUDENT REGISTRATION BASED ON THE STUDENTS’ MAJOR(S), ENTER ALL APPLICABLE MAJOR RESTRICTION CODE(S):** Click here to enter text.

**GRADE MODE:** STANDARD GRADING

**IS THIS A GENERAL EDUCATION COURSE?** NO

**IS THIS A WRITING INTENSIVE COURSE?** NO

**iS THIS AN HONORS COURSE?** NO

**IS THIS A REPEATABLE COURSE?** NO

**IF SO, WHAT IS THE MAXIMUM NUMBER OF CREDITS A STUDENT CAN EARN FOR THIS COURSE?** ENTER NUMBER

**DO YOU EXPECT TO OFFER THIS COURSE THREE TIMES OR LESS?** NO

**WILL THIS NEW COURSE HAVE AN IMPACT ON OTHER COURSES, PROGRAMS OR DEPARTMENTS?** NO

**eXPLAIN:**

CLICK HERE TO ENTER TEXT.

**IF YES, HAVE YOU DISCUSSED THIS PROPOSAL WITH ANYONE (FROM OTHER DEPARTMENTS AND/OR PROGRAMS) REGARDING THE IMPACT? WERE ANY AGREEMENTS REACHED?**

CLICK HERE TO ENTER TEXT.

**DO YOU ANTICIPATE THAT STUDENTS WILL BE TAKING ANY OF THE PREREQUISITES LISTED FOR THIS COURSE IN DIFFERENT PARTS OF THE SAME TERM?** NO

**IS ANY COREQUISITE LISTED ON THIS COURSE ALSO LISTED AS A COREQUISITE ON ITS PAIRED COURSE?** NO

eXAMPLE: CHM 2032 IS A COREQUISITE FOR CHM 2032L AND CHM 2032L IS A COREQUISITE FOR CHM 2032.

### SECTION III

**PROVIDE JUSTIFICATION FOR CURRICULUM ACTION (OTHER EXPLANATORY INFORMATION):**

PCB3043C IS ALREADY A REQUIRED COURSE IN OUR SECONDARY SCIENCE EDUCATION PORGRAM. IT IS CURRENTLY ONLY TAUGHT AT FGCU. WE ARE IN THE PROCESS OF MOVING THIS COURSE TO OUR OWN CAMPUS SO OUR STUDENTS DO NOT HAVE TO TRAVEL TO FGCU. WE ARE ALSO IN THE PROCESS OF DEVELOPING A FOUR-YEAR BIOLOGY DEGREE AND THIS COURSE WILL BE A REQUIRED COURSE IN THAT PROGRAM.

**NOTE:**

CHANGES FOR THE UPCOMING FALL TERM MUST BE SUBMITTED AND APPROVED NO LATER THAN THE FEBRUARY CURRICULUM COMMITTEE MEETING PRIOR TO THE START OF THE NEXT ACADEMIC YEAR. CHANGES DURING MID-SCHOOL YEAR ARE NOT ALLOWED. EXTREME CIRCUMSTANCES WILL REQUIRE APPROVAL FROM THE VICE PRESIDENT OF ACADEMIC AND STUDENT AFFAIRS TO BEGIN IN THE SPRING TERM. THE PROPOSED CHANGES MUST BE PRESENTED AND APPROVED BY THE SEPTEMBER CURRICULUM COMMITTEE PRIOR TO THE SPRING SEMESTER.

**TERM IN WHICH PROPOSED ACTION WILL TAKE PLACE:** FALL 2011

VPASA SIGNATURE (IF NECESSARY) TO APPROVE CURRICULUM ACTION MID-YEAR: APPROVED EFFECTIVE TERM



**FACULTY ENDORSEMENTS:**PLEASE SEPARATE FACULTY MEMBERS WITH A COMMA (,)

Peggy A. Romeo, Erin Harrel. PCB3043C is currently a required course in our Secondary Science and the transition of the course from FGCU to our own campus is fully supported by Dr. Peggy Romeo, Chair, Science Division and Dr. Erin Harrel, Dean, School of Education and Charter Schools.

**DEPARTMENT CHAIR / PROGRAM COORDINATOR ENDORSEMENT:**

 2/17/2011

**ASSOCIATE / ACADEMIC DEAN ENDORSEMENT:**

 2/18/2011

**STUDENT ASSESSMENT COMMITTEE CHAIR ENDORSMENT:**

 2/18/2011

**DISTRICT DEAN OF INSTRUCTION ENDORSEMENT:**

 2/18/2011

AFTER REVIEWING AND SIGNING THIS PROPOSAL, THE DISTRICT DEAN WILL RETURN THE PROPOSAL TO THE DEPARTMENT CHAIR OR PROGRAM COORDINATOR WILL SUBMIT THE PROPOSAL TO THE VPASA OFFICE.

THE DEPARTMENT CHAIR/PROGRAM COORDINATOR WILL SEND THIS PROPOSAL ALONG WITH ANY OTHER PROPOSALS FROM HIS/HER DEPARTMENT BEING SUBMITTED FOR REVIEW BY THE CURRICULUM COMMITTEE TO THE STUDENT ASSESSMENT COMMITTEE FOR REVIEW. ONCE APPROVED BY THE STUDENT ASSESSMENT COMMITTEE, SUBMIT THE PROPOSAL(S) TO THE OFFICE OF THE VICE PRESIDENT OF ACADEMIC AND STUDENT AFFAIRS AT LEAST TWO FRIDAYS PRIOR TO THE NEXT SCHEDULED CURRICULUM COMMITTEE MEETING.

FOR MORE DETAILS, PLEASE REFER TO THE CURRICULUM COMMITTEE GUIDELINES, CURRICULUM PROCESS FLOW CHART AND THE CRITICAL DATES TABLE BY CLICKING CURRICULUM COMIITTEE ON THE FACULTY/STAFF LINK FROM THE EDISON HOMEPAGE (CLICK ON THE CURRICULUM PROCESS LINK).

REVISED: 8/25/10