CALIFORNIA STATE UNIVERSITY CHANNEL ISLANDS

NEW COURSE PROPOSAL

DATE 12/17/06
PROGRAM AREA ENVIRONMENTAL SCIENCE AND RESOURCE MANAGEMENT

1. Catalog Description of the Course. *[Follow accepted catalog format.]*

Prefix ESRM Course# 351 Title FIELD METHODS: MONITORING AND ASSESSMENT Units (4)
2 hours lecture per week
6 hours laboratory per week
☒ Prerequisites ESRM 313
☐ Corequisites
Description Examines a wide range of field assessment methods useful for a variety of environmental characterization efforts such as range of transect, time constraint, traping, and continuous sampling methodologies. Emphasizes practical skills development with students collecting field data and conducting subsequent analyses and assessment.

Graded
☐ Gen Ed ☐ CR/NC ☐ Repeatable for up to units
Categories
☒ Lab Fee Required ☒ A - F Total Completions Allowed
☐ Optional (Student's choice) ☐ Multiple Enrollment in same semester
☐ Mission Based Learning Objectives: ☐Interdisciplinary ☐ International ☐Multicultural ☐Service Learning
☐ Title V Section 40404: ☐Government ☐US Constitution ☐US History

2. Mode of Instruction.

	Units	**Hours per Unit**	**Benchmark Enrollment**	**Graded Component**	**CS #** (filled in by Dean)
Lecture	2	1	20	☒	
Seminar				☐	
Laboratory	2	3	20	☒	
Activity				☐	

3. Justification and Learning Objectives for the Course. (Indicate whether required or elective, and whether it meets University Writing, and/or Language requirements) *[Use as much space as necessary]*
This is a requirement for the Environmental Science emphasis of the ESRM major.
Learning Objectives. By the end of this course, students will be able to:

- conduct a variety of field surveys
- discuss the implication of various spatial distribution patterns for sampling methods
- describe the evolution of BACIPS assessment designs and the limitations of BACI and earlier incarnations
- calculate a variety of IBI and other indicies from multiple field data sets
- demonstrate the value of well-designed monitoring protocols
- present quantitative data in a form readily interpreted by decision makers

This course does not meet the University Writing and/or Language Requirement.

4. Is this a General Education Course YES ☐ NO ☒
If Yes, indicate GE category and attach GE Criteria Form:

A (English Language, Communication, Critical Thinking)
A-1 Oral Communication ☐
A-2 English Writing ☐
A-3 Critical Thinking ☐
B (Mathematics, Sciences & Technology)
B-1 Physical Sciences ☐
B-2 Life Sciences – Biology ☐

B-3 Mathematics – Mathematics and Applications ☐
B-4 Computers and Information Technology ☐
C (Fine Arts, Literature, Languages & Cultures)
C-1 Art ☐
C-2 Literature Courses ☐
C-3a Language ☐
C-3b Multicultural ☐
D (Social Perspectives) ☐
E (Human Psychological and Physiological Perspectives) ☐
UD Interdisciplinary ☐

5. Course Content in Outline Form. *[Be as brief as possible, but use as much space as necessary]*

I. Sampling procedures
II. Sample design, sample size, and quadrat size and shape
III. Spatial patterns
IV. Mark-recapture methods
V. Similarity indicies
VI. Combinatorial indicies and metrics
VII. Presenting data for ease of interpretation

Does this course overlap a course offered in your academic program? YES ☐ NO ☒
If YES, what course(s) and provide a justification of the overlap?

Does this course overlap a course offered in another academic area? YES ☐ NO ☒
If YES, what course(s) and provide a justification of the overlap?
Signature of Academic Chair(s) of the other academic area(s) is required on the signature sheet below.

6. Cross-listed Courses (Please fill out separate form for each PREFIX)
List Cross-listed Courses

Signature of Academic Chair(s) of the other academic area(s) is required on the signature sheet below.

Department responsible for staffing:

7. References. *[Provide 3 - 5 references on which this course is based and/or support it.]*

Ecological Methodology. 1995. Charles Krebs. Benjamin Cummings Publishing. 624pp.
Ecological Methods. 2000. Richard Southwood and P.A. Henderson. Blackwell Publishing. 592pp.
Detecting Ecological Impacts: Concepts and Applications in Coastal Habitats. 1996. edited by Russell J. Schmitt and Craig W. Osenberg. Academic Press. 401pp.

8. List Faculty Qualified to Teach This Course.

Dr. Sean Anderson
Dr. Don Rodriguez
other ESRM Faculty

9. Frequency.
a. Projected semesters to be offered: Fall ☐ Spring ☒ Summer ☐

10. New Resources Required. YES ☒ NO ☐
If YES, list the resources needed and obtain signatures from the appropriate programs/units on the sheet below.

a. Computer (data processing), audio visual, broadcasting needs, other equipment)

b. Library needs

c. Facility/space needs

While much of the initial sampling efforts will take place in the field we will need an ESRM Teaching Laboratory to process plant, soil, and water samples fully.

11. Will this new course alter any degree, credential, certificate, or minor in your program? YES ☒ NO ☐

If, YES attach a program modification form for all programs affected.

Dr. Sean Anderson	10/12/2006
Proposer of Course	Date

Approval Sheet

Program/Course: ESRM 349

Program Chair(s)	Date
General Education Chair(s)	Date
Curriculum Committee Chair(s)	Date
Dean of Faculty	Date