

OHIO STATE COURSE CHANGE REQUEST

College MAPS

Department Statistics
(e.g., Portuguese)

Book 3 Listing: STAT

Proposed Effective Qtr/Yr: SU AU WI SP YEAR: 2009
(See OAA Academic Organization and Curriculum Handbook for Deadlines)

A. Course Offerings Bulletin Information. Follow instructions in the *OAA Academic Organization and Curriculum Handbook*. Before you fill out the "Present Course" information, be sure to check the latest edition of the Course Offerings Bulletin and subsequent Circulating Forms. You may find that the changes you need have already been made or that additional changes are needed.

* If the course offered is less than quarter, term, or semester, please also complete the Flexibly Scheduled/Off Campus/Workshop Request form.

COMPLETE ALL ITEMS THIS COLUMN

Present Course

1. Book 3 Listing: STAT
2. Number: 662
3. Full Title: Environmental Statistics
4. 18-Char. Transcript Title: Environmental Stat
5. Level and Credit Hours U G 3
6. Description: Environmental statistical methodologies applied to case studies; topics include the role of ecology, bioassay, risk, censoring, spatial statistics and hierarchical statistics.
(25 words or less)
7. Qtrs. Offered : SU AU WI SP
1st SEM 2nd SEM
8. Distribution of Contact Time: 2 1.5-hr cl, 3 labs am/qtr.
(e.g., 3 cl, 1 3-hr lab)
9. Prerequisite(s): 530 or equiv.
10. Exclusion:
(Not open to...)
11. Repeatable to a maximum of _____ credits.
12. Off-Campus Field Experience:
13. Cross-listed with:
14. Check the curricular requirement this course fulfills:
BER LAR GEC 3rd writing course
15. Grade option (circle): Ltr S/U P
If P graded, what is the last course in the series?
16. Is an honors version of this course available? Y N
Is an Embedded Honors version of this course available? Y N

17. Other general course information:

COMPLETE ONLY THOSE ITEMS THAT CHANGE Changes Requested

6. Description: Survey of statistical methods for environmental data, with a focus on applications. Topics include sampling, regression, censoring, risk analysis, bioassay, time series, and spatial statistics.

SU AU WI SP
1st SEM 2nd SEM

8. Distribution of Contact Time: 2 1.5-hr cl

9. Prerequisite(s): graduate standing in Statistics, or STAT 529, or GEOG 663, or GEOG 883.01, or equiv.

Repeatable to a maximum of _____
credits.

Cross listed with:

Check the curricular requirement this course fulfills:
BER LAR GEC 3rd writing course

Grade option (circle): Ltr S/U P

Last course in Progress series:

Y N

B. General Information:

- 1. Do you want prerequisites enforced electronically? YES NO
(See OAA Academic Organization and Curriculum Handbook for what can be enforced.)
- 2. Does this course currently satisfy any GEC requirement? YES NO
- 3. What other units require this course? NONE
Have these changes been discussed with those units? YES NO
- 4. Have these changes been discussed with academic units that might have a jurisdictional interest in the subject matter? YES NO
[Attach relevant letters.]
- 5. Is the request contingent upon other requests? YES NO

List:

6. Purpose of the proposed change. (If the proposed change affects the content of the course, attach a revised syllabus and course objectives.)

The course description has been slightly modified to more accurately reflect the material covered.

STAT 662 is now being taken by graduate students from outside of Statistics to fulfill the requirements of the new Graduate Interdisciplinary Specialization in Geospatial Data and Analysis (GSDA). In order to give GSDA students a better sense of the statistical background needed prior to enrolling in STAT 662, we propose broadening the list of suitable prerequisites to quantitative courses in the Department of Geography. In addition, STAT 529 is a more appropriate prerequisite than the currently listed STAT 530 prerequisite.

Since the freely available R statistical software is used in the course, computer demonstrations can be incorporated into the lecture and students can complete computing assignments independently on their personal machines or in departmental/university computer labs. By eliminating the computer lab sessions, statistical computing can be better integrated into the curriculum.

7. Describe any changes in library, equipment or other teaching aids needed as a result of the proposed change:

8. If the proposed change involves budgetary adjustments, describe the method of funding:

APPROVAL SIGNATURES (As needed. All signatures on lines in ALL CAPS (e.g. ACADEMIC UNIT) must be completed

Academic Unit Undergraduate Studies Committee Chair (Undergrad course)	Printed Name	Date
<i>Elizabeth A. Stasny</i>	ELIZABETH A. STASNY	5-27-08
Academic Unit Graduate Studies Committee Chair (Undergrad/Graduate course)	Printed Name	Date

School /College Undergrad Curriculum Committee (Undergrad/Grad course)	Printed Name	Date
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School /College Graduate Curriculum Committee (Undergrad/Grad course)	Printed Name	Date
<i>Douglas A. Wolfe</i>	Douglas A. Wolfe	5/28/08
ACADEMIC UNIT CHAIR/SCHOOL DIRECTOR	Printed Name	Date

COLLEGE DEAN	Printed Name	Date
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Graduate School (If Appropriate)	Printed Name	Date
ASC Curriculum Committee Chair (If Appropriate)	Printed Name	Date
University Honors Center (If Appropriate)	Printed Name	Date
Office of International Education (study tour only)	Printed Name	Date
ACADEMIC AFFAIRS	Printed Name	Date

Statistics 662: Environmental Statistics

SYLLABUS

Instructor

Dr. Catherine Calder
Office: 408A Cockins Hall
E-mail: calder@stat.osu.edu

Office Hours: TBA
Office Phone #: 688-0004

Grader

TBA

Course Description

This course aims to provide an introduction to the types of statistical analyses used in environmental studies. Topics include sampling, censoring, risk analysis, bioassay, time series, and spatial statistics. The course focuses on applications in a variety of different areas including ecology, environmental health, environmental monitoring, and remote sensing of the environment.

Prerequisites

STAT 529, or GEOG 683, or GEOG 883.01, or equivalent

Website TBA

Important announcements, lecture notes, homework problems and solutions, computing references, and other information about the class are posted on the course website.

Lectures TBA

Lecture notes will be posted on the course website before class. Please read the sections of the textbook that will be covered, and print out a copy of the lecture notes before each class. There may be parts of the notes that you should fill in during lecture, and you may need to take separate notes on examples that are not in the lecture notes. Unless instructed otherwise, you are responsible for all of the material in the sections of the book that are covered in lecture even if some of the material in the book section is not covered in class. If you are unsure if you are responsible for a particular topic, be sure to ask the instructor.

Required Textbook

Environmental Statistics: Methods and Applications (2004), by Vic Barnett

Article Presentation and Final Project

Each student is required to present a journal article on a topic in environmental statistics during the quarter and to complete a final project which will involve both an oral and written component. More information on these assignments will be distributed in class.

Homework Assignments

There will be four homework assignments for the course. You are encouraged to work together on the problems, but each student must hand in his or her own work. **DO NOT COPY** any part of another student's homework including computer output.

Solutions to the homework problems will be posted on the course website. Late homework assignments will be accepted until the solutions have been posted on the website. Once the solutions have been posted, late homework will not be accepted. If you are unable to come to class the day a homework assignment is due, please contact the instructor. Re-grade requests on the homework problems must be submitted in writing to the course grader within one week of the day the solutions are posted.

Grading

The following is a breakdown of your final course grade:

Final Project	30 %
Homework	40 %
Article Presentation	20 %
Class Participation	10 %

Computing

We will be using the R statistical computing package, which is freely available. No prior knowledge of R is required, although some experience with R (or S-plus) will be helpful. R is available in the Department of Statistics computing laboratory, although this facility is only available to Statistics students. Links to the R website (where you can download R) and other computing resources are available on the course website. Most homework assignments will require some computing. Please cut and paste your computer output and graphs into your homework solutions.

Special Accommodations

If you need any accommodations based on the impact of a documented disability contact the instructor privately to discuss your specific needs. You should also contact the Office of Disability Services to coordinate special accommodations.

Academic Misconduct

Academic misconduct will not be tolerated and will be dealt with procedurally in accordance with university policy.