

**The Ohio State University**  
**Colleges of the Arts and Sciences New Course Request**

Department of Statistics

Academic Unit

Stat

Book 3 Listing (e.g., Portuguese)

420 Introduction to Mathematical Statistics I

Number Title

INTRO MATH STAT I

U

5

18-Character Title Abbreviation

Level

Credit Hours

Summer

Autumn

Winter X

Spring

Year 2006

Proposed effective date, choose one quarter and put an "X" after it; and fill in the year. See the OAA curriculum manual for deadlines.

**A. Course Offerings Bulletin Information**

Follow the instructions in the OAA curriculum manual. If this is a course with decimal subdivisions, then use one New Course Request form for the generic information that will apply to all subdivisions; and use separate forms for each new decimal subdivision, including on each form the information that is unique to that subdivision. If the course offered is less than a quarter or a term, please complete the Flexibly Scheduled/Off Campus/Workshop Request form.

Description (*not to exceed 25 words*): Introduction to the basic concepts in mathematical statistics, including probability, discrete and continuous distributions and densities, mathematical expectation, functions of random variables, transformation techniques, sampling distributions, and order statistics.

Quarter offered: Winter Distribution of class time/contact hours: 4 1-hr lectures; 1-hr recitation

Quarter and contact/class time hours information should be omitted from Book 3 publication (yes or no): Y

Prerequisite(s): Math 254 or permission of instructor

Exclusion or limiting clause: Not open to students with credit for 520, 610, or 620.

Repeatable to a maximum of \_\_\_N/A\_\_\_ credit hours.

Cross-listed with: N/A

Grade Option (Please check): Letter  S/U  Progress  What is course is last in the series? \_\_\_\_\_

Honors Statement:

Yes  No

GEC:

Yes  No

Admission Condition

Off-Campus:

Yes  No

EM:

Yes  No

Course: Yes  No

Other General Course Information:

(e.g. "Taught in English." "Credit does not count toward BSBA degree.")

**B. General Information**

Subject Code \_\_\_\_\_ Subsidy Level (V, G, T, B, M, D, or P) \_\_\_\_\_

If you have questions, please email Jed Dickhaut at [dickhaut.1@osu.edu](mailto:dickhaut.1@osu.edu).

1. Provide the rationale for proposing this course:

The department of statistics is redesigning the statistics minor to be more undergraduate oriented. The minor currently requires Stat 520-521 as the foundational courses in mathematical statistics. The audience in Stat 520-521 has grown to be too diverse, including both graduate and undergraduate students in a variety of majors. We propose to add 420-421 to better serve the undergraduate population minoring in statistics, as well as those undergraduates who comprise the largest group currently taking 520-521 who are not statistics minors: students who major in actuarial science in the math department.

2. Please list Majors/Minors affected by the creation of this new course. Attach revisions of all affected programs. This course is (check one):  Required on major(s)/minor(s)  A choice on major(s)/minors(s)  
 An elective within major(s)/minor(s)  A general elective:

This course replaces the current requirement of Stat 520 for actuarial science majors and will serve as the primary option for the mathematical statistics I requirement in the statistics minor. See attached letter of support.

3. Indicate the nature of the program adjustments, new funding, and/or withdrawals that make possible the implementation of this new course.

4. Is the approval of this request contingent upon the approval of other course requests or curricular requests?

Yes  No  List:

5. If this course is part of a sequence, list the number of the other course(s) in the sequence: Stat 421

6. Expected section size: 50 Proposed number of sections per year: 1

7. Do you want prerequisites enforced electronically (see OAA manual for what can be enforced)? Yes

8. This course has been discussed with and has the concurrence of the following academic units needing this course or with academic units having directly related interests (*List units and attach letters and/or forms*): This course has been designed in cooperation with the directors of the actuarial science program in mathematics: Bostwick Wyman and Chunsheng Ban. See attached letter of support.

9. Attach a course syllabus that includes a topical outline of the course, student learning outcomes and/or course objectives, off-campus field experience, methods of evaluation, and other items as stated in the OAA curriculum manual and e-mail to [ascurofc@osu.edu](mailto:ascurofc@osu.edu).

**Approval Process** The signatures on the lines in ALL CAPS ( e.g. ACADEMIC UNIT) are required.

- |   |   |                                |
|---|---|--------------------------------|
| <p>1. Academic Unit Undergraduate Studies Committee Chair</p>   | <p><i>Michael Fligner</i><br/>MICHAEL FLIGNER</p>   | <p><i>1/17/06</i><br/>Date</p> |
| <p>2. Academic Unit Graduate Studies Committee Chair</p>  | <p>Printed Name</p>                                 | <p>Date</p>                    |
| <p>3. ACADEMIC UNIT CHAIR/DIRECTOR</p>  | <p><i>Douglas A. Wolfe</i><br/>Douglas A. Wolfe</p> | <p><i>1/17/06</i><br/>Date</p> |
| <p>4. After the Academic Unit Chair/Director signs the request, forward the form to the ASC Curriculum Office, 105 Brown Hall, 190 West 17<sup>th</sup> Ave. or fax it to 688-5678. Attach the syllabus and any supporting documentation in an e-mail to <a href="mailto:ascurofc@osu.edu">ascurofc@osu.edu</a>. The ASC Curriculum Office will forward the request to the appropriate committee.</p> | <p>Printed Name</p>                                 | <p>Date</p>                    |
| <p>5. COLLEGE CURRICULUM COMMITTEE</p>  | <p><i>John Parson</i><br/>John Parson</p>           | <p><i>1-26-06</i><br/>Date</p> |
| <p>6. ARTS AND SCIENCES EXECUTIVE DEAN</p>  | <p><i>Edward Adelman</i><br/>Edward Adelman</p>     | <p><i>2-1-06</i><br/>Date</p>  |
| <p>7. Graduate School (if appropriate)</p>  | <p>Printed Name</p>                                 | <p>Date</p>                    |
| <p>8. University Honors Center (if appropriate)</p>   | <p>Printed Name</p>                                 | <p>Date</p>                    |
| <p>9. Office of International Education (if appropriate)</p>  | <p>Printed Name</p>                                 | <p>Date</p>                    |
| <p>10. ACADEMIC AFFAIRS</p>   | <p>Printed Name</p>                                 | <p>Date</p>                    |