

CURRICULUM PROPOSAL COVER SHEET  
University-Wide Undergraduate Curriculum Committee

LSC Use Only
Number <u>LS-62</u>
Action <u>W</u>
Date <u>1-19-89</u>

UWUCC Use Only
Number _____
Action _____
Date _____

I. TITLE/AUTHOR OF CHANGE

COURSE/PROGRAM TITLE MATH 417 STATISTICAL Applications

DEPARTMENT \_\_\_\_\_

CONTACT PERSON \_\_\_\_\_

II. THIS COURSE IS BEING PROPOSED FOR:

       Course Approval Only

COURSE NUMBER:      New - MA 417                      Old - MA 462

COURSE TITLE:        Statistical Applications

CREDITS:                3 Semester hours

Using computer programs a wide array of statistical procedures for educational research workers will be explored. Basic concepts of statistical inference and prediction will be reviewed, including regression analysis and prediction, hypothesis testing, analysis of variance and covariance, and partial and multiple correlation. Emphasis is on use of computer and interpretation of computer print-outs along with understanding techniques employed. No use

V. Test analysis

- A. Item analysis
- B. Reliability

VI. Non-parametric tests

- A. Chi-square
- B. Contingency coefficient
- C. Man Whitney U-test
- D. Kendall coefficient of concordance
- E. Friedman two-way analysis of variance

VII. Use of canned computer programs

All of the above statistical procedures are available at the IUP

# LIBERAL STUDIES COURSE APPROVAL FORM

**About this form:** Use this form only if you wish to have a course included for Liberal Studies

credit. The form is intended to assist you in developing your course to meet the university's Criteria for Liberal Studies, and to arrange your proposal in a standard order for consideration by the LSC and the UWUCC. If you have questions, contact the Liberal Studies Office, 353 Sutton Hall; telephone, 357-5715.

**Do not** use this form for technical, professional, or pre-professional courses or for remedial courses, none of which is eligible for Liberal Studies. **Do not** use this form for sections of the synthesis course or for writing-intensive sections; different forms will be available for those.

## PART I. BASIC INFORMATION

**A. For which category(ies) are you proposing the course? Check all that apply.**

### LEARNING SKILLS

- First English Composition Course
- Second English Composition Course
- Mathematics

### KNOWLEDGE AREAS

Humanities: History

**PART II. WHICH LIBERAL STUDIES GOALS WILL YOUR COURSE**

**MEET?** Check all that apply and attach an explanation

All Liberal Studies courses must contribute to at least one of these goals; most will meet more than one. As you check them off, please indicate whether you consider them to be primary or secondary goals of the course. [For example, a history course might assume "historical consciousness" and "acquiring a body of knowledge" as its primary goals, but it might also enhance inquiry skills or literacy or library skills.] Keep in mind that no single course is expected to shoulder all by itself the responsibility for meeting these goals; our work is expected and enhanced by that

**PART III. DOES YOUR COURSE MEET THE GENERAL CRITERIA FOR LIBERAL STUDIES?** Please attach answers to these questions

- A. If this is a multiple-section, multiple-instructor course, there should be a basic equivalency (though not necessarily uniformity) among the sections in such things as objectives, content, assignments, and evaluation. Note: this should not be interpreted to mean that all professors must make the same assignments or teach the same way; departments are encouraged to develop their courses to allow the flexibility which contributes to imaginative, committed teaching and

What are the strategies that your department will use to assure that basic equivalency exists? Examples might be the establishment of departmental guidelines, assignment of responsibility to a coordinating committee, exchange and discussion of individual instructor syllabi, periodic meetings among instructors, etc.

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E. The Liberal Studies Criteria indicate six ways in which all courses should contribute to students' abilities. To which of the six will your course contribute? Check all that apply and attach an explanation.

1. Confront the major ethical issues which pertain to the subject matter; realize that although "suspended judgment" is a necessity of intellectual inquiry, one cannot live forever in suspension; and make

2. Define and analyze problems, frame questions, evaluate available solutions, and make choices

3. Communicate knowledge and exchange ideas by various forms of expression, in most cases writing and speaking.

PART III (MA 417)

A. There will be a common syllabi of topics that should be covered by each instructor teaching this course. Such common syllabi should include but not be limited to topics which introduce the student to deductive reasoning, develop in the student problem solving skills, and enable the

student not only to understand the underlying principles of formulas but

also to have the ability to use and interpret numerical data.

B. Whenever appropriate, information will be introduced into the



principles of mathematics for proper interpretation. Skills mastered in this course can last one a life time.

**CHECK LIST -- MATHEMATICS**  
**(Learning Skills Area)**

**Mathematics Criteria which the Course must meet:**

- \_\_\_\_\_ Introduce students to deductive reasoning
- \_\_\_\_\_ Develop in the student problem solving techniques appropriate for the course.
- \_\_\_\_\_ Enable the student to understand the underlying principles of formulas.
- \_\_\_\_\_ Enable the student to use and interpret numerical information

**Courses appropriate to the Mathematics Learning Skills Area must be either:**

- \_\_\_\_\_ A. Mathematics courses that develop significant mathematical skills required by a major discipline.
- \_\_\_\_\_ B. Mathematics courses designed for Liberal Studies.

**Additional criteria which courses in Category B must meet:**

- \_\_\_\_\_ Develop the student's confidence in handling numerical problems and data.

Be sensitive to the diverse backgrounds and characteristics of the

student.

- \_\_\_\_\_ Include elements on the history or appreciation of mathematics.
- \_\_\_\_\_ Introduce the hand-held calculator or the computer as a tool.