

## GE CRITERIA APPROVAL FORM

*Course Number and Title:* **MATH 430 Research Design and Data analysis (3)**

*Faculty member(s) proposing Course:* Ivona Grzegorzcyk, Prof. of Mathematics, Nikolaos Diamantis, Assistant Prof. of Mathematics

**Indicate which of the following GE would be satisfied by this course by marking an “X” on the appropriate lines.** Courses may be placed in up to *two* GE categories as appropriate. Upper Division Interdisciplinary GE courses (UDIGE) may be placed in two GE categories in addition to the UDIGE category.

<b>GE Category</b>	
<input type="checkbox"/>	A1: Oral Communication
<input type="checkbox"/>	A2: English Writing
<input checked="" type="checkbox"/>	A3: Critical Thinking
<input type="checkbox"/>	B1: Physical Sciences—Chemistry, Physics, Geology, and Earth Sciences
<input type="checkbox"/>	B2: Life Sciences—Biology
<input checked="" type="checkbox"/>	B3: Mathematics—Mathematics and Applications
<input type="checkbox"/>	B4: Computers and Information Technology
<input type="checkbox"/>	C1: Art
<input type="checkbox"/>	C2: Literature
<input type="checkbox"/>	C3a: Language
<input type="checkbox"/>	C3b: Multicultural
<input type="checkbox"/>	D: Social Perspectives
<input type="checkbox"/>	E: Human Physiological and Psychological Perspectives
<input checked="" type="checkbox"/>	Upper Division Interdisciplinary GE
Lab Included?    Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>	

A3: in this course student will

1. use reasoning to select, apply and interpret descriptive statistics in sciences;
2. recognize and analyze common fallacies in reasoning
3. reason both inductively and deductively with quantitative information and data;
4. use statistical software, various graphical representations, rhetorical perspectives and logical arguments to conduct analysis of real-world and simulated data; and,
5. organize and express ideas clearly and convincingly in oral and written forms.

B3: in this course student will

1. use mathematical/statistical methods to conduct complex statistical analysis scientific data;
2. select, apply and interpret hypothesis testing methods in an appropriate fashion;
3. use statistical modeling, regression analysis, and forecasting methods in scientific context.

Interdisciplinary course

1. Integrates contents, ideas and approaches used in sciences.
2. Examination the statistical methods used in sciences.
3. Includes written scientific essays.