**GE CRITERIA APPROVAL FORM**

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

*Faculty member(s) proposing Course:* Ivona Grzegorczyk, 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.

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**Lab Included?** Yes _x_ No ______

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.