GE CRITERIA APPROVAL FORM

Course Number and Title: BIOL 431. Bioinformatics

Faculty Member(s) Proposing Course: Louise Lutze-Mann

Indicate which of the following categories 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 may be placed in two categories plus the UDIGE category.

A1: Oral Communication

A2: English Writing

A3: Critical Thinking

B1: Physical Sciences

B2: Life Sciences **X**

B3: Mathematics

B4: Computers and Technology **X**

C1: Fine Arts

C2: Literature

C3: Languages & Cultures

D: Social Perspectives

E: Human Psychological & Physiological Perspectives

Upper Division Interdisciplinary GE

Lab Included? Yes _____ No ___X___

Please provide a brief explanation of how the proposed course meets <u>each</u> of the criteria for the selected General Education categories.

This is an elective course for Biology majors. An understanding of the methodoligies used to acquire, store and analyse these data bases is of great value for students choosing to pursue careers in molecular biology, genetics and biotechnology.

Students completing this class should be equipped with the knowledge and skills to:

- Explain the flow and regulation of biological information
- Describe the techniques used to collect sequence and expression data
- Identify appropriate biological data bases for specific analyses
- Manipulate on-line resources appropriately
- Analyse gene expression and interpret its significance
- Manage bioinformatics computational tools
- Apply appropriate statistical methods to determine sequence similarities

Given the above course outline, we feel that this course meets each of the criteria in GE categories B2 and B4.