GE CRITERIA APPROVAL FORM

Course Number and Title: **BIOL 334. Natural History of Ventura County (3)**
Faculty Member(s) Proposing Course: Amy Denton and Steven Norris

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
X	B2: Life Sciences
	B3: Mathematics
	B4: Computers and Technology
	C1: Fine Arts
	C2: Literature
	C3: Languages & Cultures
	D: Social Perspectives
	E: Human Psychological & Physiological Perspectives
X	Upper Division Interdisciplinary GE

Lab Included? Yes __X____ No _____

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

All category B courses shall:

- **promote the understanding and appreciation of the methodologies of math or science as investigative tools and the limitations of mathematical or scientific endeavors.**

This course will give students the skills to identify many of the plant and animal species found in the Ventura County region. The ecological and evolutionary underpinnings of biological classification will be presented to give students a deeper appreciation of taxonomy: students will learn that botanical and zoological names are more than information retrieval devices. The methods of plant and animal identification, including field (macroscopic) and microscopic characters, keying, collection and archiving will be introduced. Students will experience firsthand the difficulties and frustrations often involved in field identification.

- **present mathematical or scientific knowledge in a historical perspective and the influences of math or science on the development of world civilizations, both past and present**

This course will provide students with several historical perspectives relevant to field biology and natural history: regional geologic history, the history of land use by early settlers, indigenous cultures, and their impact on current distribution of biota, and a brief look at the history of nomenclature and taxonomy, one of the oldest branches of biology and one practiced by both western and non-western cultures.

- **apply inductive and deductive reasoning processes and explore fallacies and misconceptions in the mathematical or scientific areas.**

The use of top-down dichotomous keys for species identification will give students direct exposure to deductive reasoning.

Category B-2 Life Sciences – Biology courses shall:

- **present the principles and concepts that form the foundation of living systems.**

This course will explore regional biota and ecosystems and several important biological methods for investigating ecosystem diversity. Employing examples of regional plants and animals, this course will introduce students to the evolution, ecology, life history and physiology of resident organisms, as well as their physical environments. Students will also be exposed to specialized biological topics such as pre-modern use of natural resources, history of scientific exploration of the region, conservation and preservation issues, and restoration of natural areas. Students will also gain an appreciation of the wonderful biodiversity of Ventura County.

Lab Component criteria:
1. meet for a minimum of 2 hours per week
2. involve practical applications and problems related to the foundations of either living systems or the physical universe
3. involve the analysis of data, either acquired or simulated
4. provide students with practice in the use of scientific methodologies
5. include both individual and collaborative learning

Through extensive field trip experience, as well as microscopic analysis, all of the lab criteria will be met in this course.

In addition to meeting Category A-E criteria as appropriate all Upper Division Interdisciplinary GE courses shall:

- **Emphasize interdisciplinarity by integrating content, ideas, and approaches from two or more disciplines.**

This course will integrate content, ideas and approaches from two or more disciplines at several levels. First, it will introduce students to two distinct branches of life science: botany and zoology. In addition to the obvious difference in content (organisms), these disciplines differ substantially in their histories, rules of nomenclature and taxonomy, identification techniques, and methods of specimen archiving. Beyond the biological disciplines, this course will include a detailed section on the geologic history of California during the Paleogene (65 to 24 MYA), Neogene (42 to 1.6 MYA), and Quaternary (1.6 MYA to recent) periods, which has had a profound impact on the current distribution of southern California's flora and fauna. Similarly, several concepts from physical geography will be introduced (*e.g.*, climatic zones, land forms) with emphasis on the role of physical factors in the adaptations and distribution patterns of modern biota. Economic and cultural uses, if any, of all organisms surveyed will be discussed. Finally, the influence of human activity on the region's biology will be presented, both from an historical perspective (impacts of past uses of land and biologic resources) and to explore current issues of rarity, endangerment, conservation and restoration.

- **Include substantive written work consisting of in-class writing as well as outside class writing of revised prose.**

In addition to lecture exams and lab quizzes, a substantial portion of assessment for this course will be in various writing projects. These include short lab reports, specimen documentation, and one term paper. This term paper would be on a relevant instructor-approved topic of the students' choosing and would require several iterations and revisions.