BACKGROUND AND REQUEST

Miami University

Recommendation

The proposed program clearly meets the Chancellor's standards for graduate degree programs. There were no serious concerns raised in the review. The Regents' Advisory Committee on Graduate Study voted unanimous approval for the program.

Request: Miami University requests approval for a Doctor of Philosophy in Ecology, Evolution and Environmental Biology (EEEB) degree program.

Program Background and Purpose: The program, built upon multiple disciplines currently offered at the university (mathematics and statistics, biological and physical sciences), combines these fields to create a quantitative, interdisciplinary field of study that focuses on understanding how organisms interact with the environment (ecology); the mechanisms that allow them to adapt to the environment (evolution); and the ways in which research in ecology and evolution can be applied to human interactions with nature (environmental biology).

Although the university's current ecology program has been successful, students in the proposed EEEB program will have more exposure to evolutionary biology and be better prepared to address environmental problems. Students currently being trained to become EEEB scholars will now have an opportunity to earn a formal degree in the field.

Enrollments: The initial cohort is projected to have an enrollment of 6-8 new students, plus additional students that may transfer into the program. Enrollment is projected to grow to 25-30 students by year five, and 30-40 students by year ten.

Curriculum: The curriculum is rigorous but flexible. Students will be able to concentrate in a particular area of EEEB such as Behavioral Ecology; Ecosystem Ecology; Evolutionary Ecology; Systematics; Conservation Genetics; Environmental Toxicology; Soil Ecology; and Biogeochemistry. A comprehensive exam, consisting of both written and oral components, will be given no later than the end of the student's fifth semester. In addition, each student will write and defend a dissertation proposal, which includes a public presentation of research, no later than the end of the third year of the program.

Faculty, Facilities and Resources: The Botany, Geography, Geology, Microbiology, and Zoology departments will all initially participate in the program; others such as Statistics and Chemistry may participate in the future. All five departments currently participate in the non-degree granting Ecology Program and four of the five offer Ph.D. degrees (Geography offers a master's degree).

Forty-five faculty associates spanning seven academic departments will participate in the program. This group of faculty have been extremely successful in procuring funding, publishing papers, and training graduate students.

Student assistantships will be provided via several mechanisms. Participating departments have collectively agreed to commit nine assistantships to students in EEEB, and additional departments may allocate assistantships to EEEB students on an individual basis. Additionally, it is anticipated that several EEEB students will be supported annually with externally-funded research assistantships.

The university's laboratories and Ecology Research Center provide the necessary facilities to support the program. The net costs of the proposed program will be minimal. The faculty lines and graduate assistantship positions are likely to be derived from a reallocation of sources within the university. No specific funds are needed for office staff.

Evidence of Need: The EEEB program separates itself from other environmental science Ph.D. programs offered in Ohio in that it emphasizes the application of ecological and evolutionary principles to solve environmental problems. Graduates of the program may find employment opportunities as biological scientists specializing in zoology or microbiology; teaching positions in evolutionary and environmental genomics; field ecologists; environmental consultants and analysts; and environmental and conservation managers.

End of Comment Period: September 9, 2009
No Comments Received: Recommend Approval

Eric D. Fingerhut, Chancellor	9/16/09 **Date**

mlc