WASHINGTON HIGHER EDUCATION COORDINATING BOARD

July 2008

Master of Science in Primate Behavior, Central Washington University

Introduction

Central Washington University seeks approval to establish a Master of Science in Primate Behavior degree program. Housed within the College of the Sciences, this interdisciplinary program would complement CWU's existing Bachelor of Science in Primate Behavior and Ecology program; and it would capitalize on both CWU's internationally recognized Chimpanzee and Human Communication Institute and CWU's institutional ties in Asia[1].

The proposed program would enroll 6 FTE students at Ellensburg in fall 2008, 11 FTE in 2009, and 10 FTE from 2010 onward. At full enrollment of 10 FTE, the proposed program would graduate five students per year, who would be prepared for further graduate study in anthropology, psychology, biology, linguistics or animal law; or careers in zoos, sanctuaries, animal advocacy, research[2], fieldwork, and education.

Relationship to Institutional Role and Mission and the Strategic Master Plan for Higher Education

Through its emphasis on conservation and the interconnectedness of humans and nature, the proposed program would support CWU's mission to prepare students for responsible citizenship, responsible stewardship of the earth, and enlightened and productive lives. In addition, it would support the *2008 Strategic Master Plan for Higher Education* by expanding opportunities to complete postsecondary degrees and by expanding the state's research capacity.

[1]Program faculty teach a Conservation and Biodiversity Field School at CWU's sister university in Hefei, China.
[2]Faculty would emphasize humane research and would teach noninvasive behavioral research methods applicable to nonhuman primates in zoo, sanctuary and free-living situations, rather than laboratory situations.

Diversity

In addition to university-wide diversity initiatives, departmental diversity efforts would include:

- Review of the proposed program's Web page by CWU's Diversity Education Center staff;
- Inclusion of faculty from underrepresented groups on each faculty search committee;
- Faculty presentations to student groups that serve underrepresented students (e.g., Tiin-Ma, a Native American student group);
- Faculty presentations at Yakima Valley Community College (YVCC);
- Faculty attendance at conferences and workshops devoted to increasing minority representation in science (e.g., Biomedical Research Conference for Minority Students);
- Increasing undergraduate program diversity through activities and materials funded by a 2006 National Institutes of Health Bridges to the Baccalaureate grant;[3]
- Faculty participation in a Bridges advisory board consisting of diverse faculty and administrators from CWU and YVCC;
- Using contacts at YVCC, including College Assistance Migrant Program, GEAR UP, Native American and Hispanic/Latino student groups, to reach underrepresented audiences;
- Current Bridges students, who are successful role models, accompanying faculty on recruitment visits; and
- Hosting students from China.

Program Need

Although the HECB *State and Regional Needs Assessment* notes a demand-supply gap in research and science occupations, available data indicate only very limited employer need for primatologists; however, the proposed program would respond to the needs of students and community stakeholders. Furthermore, it would not duplicate any existing programs at public or private institutions in the state. Although the University of Washington offers a Ph.D. in Psychology with a specialization in animal behavior, that program has a broader focus than primate behavior and does not offer a terminal master's degree.

Several measures indicate strong student demand for the proposed program. A 2004 survey of CWU primatology undergraduates found that 10 of 12 respondents were interested in earning a Master of Science degree in primatology at CWU and would have chosen the option over existing biology, resource management, or experimental psychology master's programs.

[3]The Bridges program is intended to increase the number of underrepresented students who transfer from two-year to four-year institutions and major in biomedical sciences, including primatology. This would tend to increase diversity within the proposed program because CWU undergraduates would be its largest single source of applicants. As part of Bridges, students are mentored through the research process, beginning in community college, continuing as research apprentices at the CHCI, and designing and carrying out a project. Program planners plan to reapply for Bridges funds and to continue all of the Bridges strategies and activities after the current grant ends in 2009.

Because no Master of Science in Primate Behavior existed at the time, eight of the respondents subsequently enrolled in the experimental psychology program. The proposed program would serve such students better than the experimental psychology program because it would feature a more focused curriculum and fewer prerequisites. In short, the proposed program would offer such students a direct route to graduate primatology.

Student interest in the existing Chimpanzee and Human Communication Institute (CHCI) provides another measure of student demand for the proposed program. In 2005, 10 out of 19 students enrolled in the experimental psychology program studied at the Institute.

Perhaps the best indicator of student demand for the proposed program is the number of students who have already applied for it although aware it has not received HECB approval. Eleven students, including seven from other campuses, have applied and been accepted, despite the lack of program advertisement. Students decided to enter as independent studies or experimental psychology MS students, hoping to switch to the proposed program once it is approved.

The proposed program would meet community needs by enhancing the work of the Chimpanzee and Communication Institute, which was among the first "Spheres of Distinction" recognized by CWU President McIntyre in her 2005 State of the University Address. Through public education programs such as Chimposiums, the Institute has reached out to the community and has become an important tourist attraction in Ellensburg.[4] The Institute would benefit from a pool of well-qualified, highly motivated students who would increase the Institute's capacity for scholarly output, which is vital to fund-raising activities that sustain the facility.

Finally, the proposed program would benefit the community through its focus on conservation. Students would be able to apply its conservation concepts and techniques to other species, including species inhabiting the Northwest. For example, census techniques used for tree-dwelling primates are similar to those used for birds and environmental factors leading to extinction may share some similarities across continents and species.

Program Description

The proposed program would serve part- and full-time students with a variety of undergraduate backgrounds, including anthropology, biology, psychology, linguistics, and CWU's Bachelor of Science in Primate Behavior and Ecology program. To be admitted, students must meet the general regulations for admission to master's programs at CWU; hold an undergraduate anthropology, psychology, or biology degree from an accredited university; submit GRE and, if applicable, TOEFL scores; and arrange for a graduate faculty advisor in the program to serve as major advisor.

[4]The Institute was home of a famous chimpanzee named Washoe, the first nonhuman to acquire a human language (American Sign Language). Washoe died at the age of 42 in 2007.

Once admitted, students would take coursework that would ground them in ecology, animal behavior, biological anthropology, evolutionary biology, and cognitive and comparative psychology. Nonhuman primates would be the focus of these topics, but other species would be addressed, as would the broader applicability of the principles that form the foundation of each of these disciplines. Students would learn to conduct collaborative and independent scientific research, have non-invasive research and husbandry experiences with a wide variety of captive species, and become skilled in field research techniques. Research venues would include the Chimpanzee and Human Communication Institute, internships at the Woodland Park Zoo, and a Conservation and Biodiversity Field School in China. Students conducting advanced research at the CHCI would complete courses in American Sign Language.

Each student's program would be subject to approval by the program's director and would include 21 credits of core courses and 18 credits of electives in fields such as anthropology, biology, and psychology. Students would also complete six required thesis credits.[5] Except for temporary substitutions during core faculty teaching releases, the proposed program would be taught entirely by full-time, tenure-track faculty. This would include a new hire to be shared between the proposed program and CWU's anthropology, psychology, or biology programs.

Students would normally complete the program in two years and would achieve the following learning outcomes:

- Exhibit mastery in depth and breadth of knowledge of concepts, terminology, and theories relevant to primate ecology and evolution;
- Be skillful in designing, carrying out, and presenting a master's level research project;
- Be able to apply and integrate interdisciplinary approaches in primatology;
- Value the humane treatment of nonhuman animals;
- Be familiar with the causes of nonhuman primate decline;
- Value biodiversity;
- Demonstrate expert knowledge of human views and uses of nonhuman primates; and
- Demonstrate knowledge of current issues and topics in primatology.

To measure how well students have mastered the learning outcomes, course-level assessments have been identified and aligned with the program-level learning outcomes listed above. Assessment methods would include exams, in-class research exercises and papers, a review paper, and exit interviews. In addition, students would complete a thesis and receive feedback at several points of the process from their thesis committee chair and other committee members.

Program assessment would be overseen by the program director and would include online student entry and exit surveys, alumni surveys, student evaluation of instruction (SEOI) data from core courses, and other data such as students' time to degree completion and publication track records. Program faculty would meet each fall quarter to discuss the assessment results of the previous year. The results would gauge whether students were gaining skills necessary to

[5] The program would require a thesis and would not offer a non-thesis option.

transition to the workforce and could help guide curriculum changes and/or alterations in pedagogical approaches. Every two years, community partners who have worked with students during research projects would participate in a program review that would provide input to help the proposed program develop a list of skills and experiences necessary or useful for primatologists and to help hone the proposed program's conservation focus.

Program Costs

The proposed program would enroll 6 FTE students in the first year, growing to a steady-state full enrollment of 10 FTE students by the third year. To implement the program, its planners budgeted 0.67 FTE for administrative staff and 1.15 FTE for faculty, including 0.38 FTE for a new faculty hire. The proposed program would use existing office space and library resources, so the budget excludes those items. It would be funded by general fund, tuition, and endowment[6] money. Some of the general fund money would be from a "Spheres of Distinction" internal reallocation.

At full enrollment of 10 student FTE, the total cost of instruction would be $158,608[7] – or $15,861 per FTE. This is higher than the range of average annual cost per FTE for graduate students majoring in social sciences at comprehensive institutions. According to the HECB's *2005-06 Education Cost Study (July 2007*), the direct cost of instruction per average annual social sciences graduate student FTE at comprehensive institutions ranged from $3,833 to $7,735. However, it should be noted that the proposed program's student/faculty ratio of 5.8 is very low relative to the range of social sciences graduate program student/faculty ratios at comprehensive institutions, which ranged from 11.6 to 24.5. Furthermore, because of the proposed program's emphasis on research experience for its students, the cost per FTE at research institutions, ranging from $8,696 to $28,807, may be a more appropriate benchmark.

External Review

Two external reviewers who met formal HECB qualifications reviewed the program: Dr. Craig Stanford, Co-Director, Jane Goodall Research Center and Professor of Anthropology (Chair) and Biological Sciences, University of Southern California; and Dr. Kimberley Phillips, Associate Professor of Psychology (Chair) and Biology, Hiram College. A third reviewer, Mr. Alan Mootnick, while not meeting formal HECB qualifications, is internationally recognized as an authority in gibbon primatology. In addition, HECB received a favorable public comment from Dr. Joann Otto, Chair, Department of Biology, Western Washington University.

All three reviewers supported the proposal. Dr. Stanford called it innovative and exciting, and noted it would be an academic coup for CWU to offer the first program of its kind. Dr. Phillips called it exciting and excellent. Mr. Mootnick felt that expanding the existing undergraduate degree into a MS would greatly enhance the program at CWU.

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[6] From Friends of Washoe, a not-for-profit organization.
[7] $191,360 proposed total cost less $32,752 TA/RA salaries.

All three reviewers noted the excellent qualifications of the proposed program's faculty, and each noted other strengths. Dr. Stanford noted that the program's strong field component would be a major draw for students and that the ethical component would be the first of its kind and a model for other programs to follow. Dr. Phillips noted that the proposed program responded to current trends in the field and that its core courses would provide the necessary breadth and depth for students. She also noted that the proposed program's learning objectives were clearly stated and comprehensive.

Reviewer Mootnick noted that the program would give students an opportunity to earn an Master of Science degree in primate conservation in the United States rather than England. Dr. Phillips asked whether goals, objectives, requirements and coursework would be modified for graduates entering from CWU's existing undergraduate program, and program planners responded that the program's core courses would be new to such students. Furthermore, although there would be some overlap in electives, such students would take different electives in the graduate program.

Staff Analysis

The proposed program would support CWU's mission by emphasizing conservation and the interconnectedness of humans and nature. Furthermore, its importance to CWU is indicated by the fact that the CHCI was recognized by CWU's president as a "Sphere of Distinction." In addition, the proposed program would support the *2008 Strategic Master Plan for Higher Education* by expanding opportunities to complete postsecondary degrees and by expanding the state's research capacity. Furthermore, it would feature multiple diversity efforts.

Although employer demand for the proposed program would be limited, several measures indicate strong student demand. Moreover, the community would benefit from the program's focus on conservation and from the presence of a pool of well-qualified, highly motivated students who would increase the CHCI's capacity for scholarly output.

The proposed program's interdisciplinary conservation-related training, including opportunities for both field and captive studies, would provide students with necessary skills and knowledge to address pressing issues in primate behavior and increasingly important conservation issues. The program's emphasis on ethics also would benefit students.

Students would be taught primarily by full-time tenure track faculty, acknowledged as outstanding by all three external reviewers. Because of the low student/faculty ratio, students would receive a lot of individual attention. Given this and the level of research experience students would receive, the cost of the program would be reasonable.

Students would be assessed in multiple ways allowing them to demonstrate content knowledge, and design and implement a formal research project and present their scientific results in both oral and written formats. Likewise, program assessment would occur in a variety of ways.

The program would not duplicate any existing programs in Washington, and would in fact be one of only a handful of such programs in the world. It would build on several of CWU's strengths, including internationally recognized faculty, the Chimpanzee and Human Communication Institute, and connections with a field school in China.

Staff Recommendation

After careful review of the proposal and supporting materials, staff recommends approval of the Master of Science Primate Behavior degree at Central Washington University. The HECB education committee discussed the proposal during its June 23, 2008 meeting and recommended approval by the full board.

RESOLUTION 08-20

WHEREAS, Central Washington University proposes to offer a Master of Science Primate in Behavior degree; and

WHEREAS, The program would support the institution's mission by emphasizing conservation and the interconnectedness of humans and nature; and

WHEREAS, The program would support the *2008 Strategic Master Plan for Higher Educatio*n by expanding opportunities to complete postsecondary degrees and by expanding the state's research capacity; and

WHEREAS, Students would benefit from the program's interdisciplinary conservation-related training, including opportunities for both field and captive studies; and

WHEREAS, Student learning outcomes are clearly identified and would be assessed in multiple ways, including a formal research project; and

WHEREAS, The program would not unnecessarily duplicate existing programs in Washington and would be one of only a handful of such programs in the world; and

WHEREAS, The program would build on several of the institution's strengths, including internationally recognized faculty, the Chimpanzee and Human Communication Institute, and connections with a field school in China;

THEREFORE, BE IT RESOLVED, That the Higher Education Coordinating Board approves the Master of Science in Primate Behavior degree at Central Washington University, effective July 21, 2008.

Adopted:

July 21, 2008

Attest:

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Bill Grinstein, Chair

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Roberta Greene, Secretary