Educational Policies Committee Program Proposal, College of Agriculture and Applied Sciences, June 8, 2007 - Consolidation of Existing Bachelor of Science Degrees

Utah State University

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AGENDA

MEETING OF THE
UTAH STATE BOARD OF REGENTS
TO BE HELD AT
UNIVERSITY OF UTAH, SALT LAKE CITY, UTAH
OLPIN STUDENT UNION

June 8, 2007
However, growth in this new program will be controlled to assure that it does not outstrip capacity in the new specialization and in the program as a whole.

**Finances:** This Speech-Language Pathology specialization program will not require new finances. Two new faculty members who specialize in language disorders in children have joined the COMD faculty this year. Much of the core coursework already exists and is being offered regularly under the current organization of the Disability Disciplines program. In addition, many of the specialization courses are currently offered in the Department of Communicative Disorders and Deaf Education. The two new faculty positions in COMD enable the department to expand their doctoral level course offerings.

### ii. Consolidation of Existing Bachelor of Science Degrees

**Request:** Utah State University requests approval to consolidate all BS degrees offered by the Department of Animal, Dairy and Veterinary Sciences into a single degree with the name: Bachelors of Science in Animal, Dairy and Veterinary Sciences, with emphases in (1) Animal & Dairy Science; (2) Bioveterinary Science; (3) Biotechnology, and (4) Equine Science and Management, effective Fall 2007.

**Need:** As part of its periodic internal review of undergraduate programs, the ADVS Department Curriculum Committee identified potential efficiencies by consolidation of the three existing BS degrees. These efficiencies include flexibility for students, particularly those who choose to make changes in their program preference within the department. A similar conclusion was reached by the Cooperative States Research, Education and Extension Services (CSREES) Review Team that conducted a Comprehensive Review of the ADVS Department in November 2004.

**Institutional Impact:** There is no significant institutional impact expected as a result of the proposed consolidation of existing BS degree programs in the ADVS Department contained in this submission, on instructional programs, in affiliated departments, or existing administrative structures. Resource requirements related to faculty, physical facilities or equipment will remain unchanged. Students in the current programs of student will be allowed to complete their degrees whereas courses have not been altered or eliminated, merely sequenced differently.

**Finances:** There is no significant impact envisioned as a result of the proposed consolidation of existing BS degree programs in the ADVS Department contained in this submission on budgets, other programs or units within Utah State University.

1) **Emphasis in Animal and Dairy Science**

**Request:** Utah State University requests approval to create an emphasis in Animal and Dairy Science within the requested combined Bachelor of Science degree, effective Fall 2007. The emphasis in Animal and Dairy Science has the same core and depth as the currently offered Bachelors Degree in Animal Science (science option) and the Bachelors Degree in Dairy Science (science option).

Students enrolled in the Animal and Dairy Science emphasis will complete 14 credits common to all four of the emphases recommended in this proposal. These common 14 credits included foundation coursework in animal anatomy, physiology, health, feeding systems, and the professional orientation and research
seminars. With a common set of courses for all four emphases, students will be better able to transfer between emphasis areas without falling behind or out of course sequence.

The balance of course work for the Animal and Dairy Science emphasis will include biology, chemistry, math, statistics, and animal breeding, reproductive physiology. An internship or Undergraduate Research/Creative Opportunity (URCO) is also required. With these changes students will also be better prepared for graduate studies if they elect to pursue an MS or PhD.

**Need:** The emphasis is designed to meet the needs of those students with a primary focus on production agriculture for food producing species including beef, dairy, sheep and swine. The faculty believe that the successful animal producer in the future will need a solid science foundation as well as practical livestock skill to be successful. The curriculum for the animal and dairy science emphasis reflects a strong science base.

**Institutional Impact:** No new courses will be created as a result of this emphasis and no new faculty, facilities or equipment will be required. The proposal will have no significant institutional impact upon Utah State University or other undergraduate programs within the Utah System of Higher Education.

**Finances:** There is no anticipated budget impact of these proposed changes.

2) **Emphasis in Bioveterinary Science**

**Request:** Utah State University requests approval to create an emphasis in Bioveterinary Science within the combined Bachelor of Science degree in Animal, Dairy and Veterinary Sciences, effective Fall 2007. The emphasis in Bioveterinary Science has the same core and depth as the current Bachelor of Science Degree in Bioveterinary Science.

**Need:** The Bioveterinary Science emphasis is for those students whose primary goal is to become veterinarians. Students take those classes required for admission into professional Schools of Veterinary Medicine. The emphasis includes the same 14 common credits and an internship or URCO as described under the Animal and Dairy Science emphasis. Since competition for admission is so keen, these students often concurrently apply for admission into various life science graduate education programs. For the Bioveterinary Science emphasis, students complete courses in chemistry (organic, inorganic, and biochemistry), biology (genetics and microbiology), math, statistics, and physics. The Utah State University program has been highly successful in advancing students to veterinary schools in the past and we have confidence that it will continue.

**Institutional Impact:** No new courses will be created as a result of this emphasis and no new faculty, facilities or equipment will be required. The proposal should have no significant institutional impact upon Utah State University or other undergraduate programs within the Utah System of Higher Education.

**Finances:** There is no anticipated budget impact of these proposed changes.

3) **Emphasis in Biotechnology**

**Request:** Utah State University requests approval to create an emphasis in Biotechnology within the requested combined Bachelor of Science degree in Animal, Dairy and Veterinary Sciences, effective Fall
2007. The emphasis in Biotechnology has the same core and depth as the currently offered Bachelor of Science Degree in Animal Science (biotechnology option), Bachelors of Science degree in Dairy Science (biotechnology option), and Bachelors of Science Degree in Bioveterinary Science (biotechnology option).

**Need:** The emphasis will prepare students for employment in the rapidly advancing and expanding field of animal biotechnology. We envision students completing this emphasis will go on for advance graduate degrees and become researchers in the field. Others will find employment in the animal health industry with their BS degree. The emphasis includes the same 14 common credits and an internship or URCO as described under the Animal and Dairy Science emphasis. The emphasis requires math, statistics, genetics, chemistry (organic, inorganic and biochemistry) plus specialization in biotechnology methodologies, applications, and ethics. Directed electives give the students options to strengthen their advance biological science knowledge.

**Institutional Impact:** No new courses will be created as a result of this emphasis and no new faculty, facilities or equipment will be required. The proposal will have no significant institutional impact upon Utah State University or other undergraduate programs within the Utah System of Higher Education.

**Finances:** There is no anticipated budget impact of these proposed changes.

4) **Emphasis in Equine Science and Management**

**Request:** Utah State University requests approval to create an emphasis in Equine Science and Management within the requested combined Bachelor of Science degree in Animal, Dairy and Veterinary Sciences, effective Fall 2007.

**Need:** The American Horse Council reported that the impact of the equine industry in the United States is rapidly increasing. There were an estimated 6.9 million horses in the US in 1996. By 2005 that number had increased to 9.2 million head. In 2005, approximately 4.6 million Americans were involved in the industry and 2 million owned horses. Using the Utah 4-H Horse Program as an indicator of equine interest in Utah’s youth and future, 2,937 youth involved in horse projects 2000 while this number jumped to 3,880 by 2004.

Current students in the Animal, Dairy and Veterinary Sciences Department express an overwhelming interest in the equine program. These students are currently served in the Animal Science BS degree program (animal industries emphasis). The Equine Science and Management emphasis includes the same 14 common credits and an internship or URCO as the previous three emphases (Animal and Dairy Science, Bioveterinary Science, and Biotechnology). The Equine Science and Management emphasis requires math, statistics, biology and chemistry (general and inorganic). Specialization is achieved in the Equine Science and Management emphasis as students complete equine courses focusing on nutrition, reproductive physiology, breeding practices, training, riding techniques, and stable management.

**Institutional Impact:** The Equine Science and Management emphasis will require ten new courses, basic and advanced, in such areas as evaluation, riding fundamentals, behavior and training, stable management, and the internships. The courses have been approved and are scheduled to be taught by existing faculty and staff.

The Department of Animal, Dairy and Veterinary Sciences has designated equine studies as a priority in their undergraduate program. Plans for a new facility are nearing completion. The facility will permit
breeding instruction to be offered that will allow students to gain very useful skills in modern equine breeding techniques. A large indoor arena will allow more than one riding class or labs to be taught simultaneously. The facility and program will give students experience and understanding of the day-to-day operations of a facility. There are no similar or equivalent programs currently approved and functioning in the USHE.

**Finances:** With planning for the construction of a new equine facility well underway, the teaching program will have additional expense. The program is designed so that most of the additional labor required to maintain the facility and program will come from students. As part of two courses, students will work at the horse facility during their sophomore and senior years. Additionally, the facility may need to provide a handful of paid student positions to overseeing the students and the daily operation of the facility in conjunction with the manager. The focus on student involvement allows students to develop and apply skills learned through courses in equine science, management, and handling. Such a focus will yield students who are confident and capable of securing and maintaining a rewarding career in the equine industry.

Additional student labor will cost approximately $32K a year. As the horses used by this program will be maintained in stalls with limited turnout in pastures, there will be additional bedding costs (approximately $7K/year) associated with this management system. This expense will be revisited as the development of pastures and the rotation of horses between stalls and turnout is developed at the new facility.

Critical faculty have been hired in support of the Equine Science and Management emphasis. The College of Agriculture has internally reallocated funds to support this emphasis. Additional operating funds for student labor and supplies will required further internal reallocation from the within the department and the college.

### iii. Western Region SARE Program to be changed to the Western Region SARE Center

**Request:** Utah State University operates the USDA-CSREES SARE (Sustainable Agriculture Research and Education) competitive grants program for the eleven contiguous Western states, Alaska, Hawaii and four island protectorates that have land-grant status (Guam, Micronesia, Northern Mariana Islands, and American Samoa). In January 1994, Utah State University and Professor V. Philip Rasmussen competitively won the program, which has since brought more than $40 million to Utah State University. It currently brings in approximately $3.7 million a year. SARE is a line item in the USDA-CSREES budget, **not** an earmark, and has been institutionalized in the USDA budget. Hence, it has attained ongoing status within USDA programs.

During its 12 years at USU, SARE has undergone USDA and CSREES audits, receiving numerous accolades for fair and equitable administration. The administrative funds to operate the program come from the annual SARE appropriations, so there is no ongoing budgetary burden on the Plants, Soils, and Climate Department, where it resides within the College of Agriculture.

Regional SARE programs are governed by congressionally mandated Administrative Councils (boards of directors), which include deans, agricultural experiment station directors, and extension directors as well as farmers and ranchers from across the West. A recent administrative review by the Western SARE