3-1-2012

Educational Policies Committee Agenda, March 1, 2012

Utah State University

Follow this and additional works at: https://digitalcommons.usu.edu/fs_edpol

Recommended Citation
https://digitalcommons.usu.edu/fs_edpol/68

This Educational Policies Committee Agenda is brought to you for free and open access by the Faculty Senate at DigitalCommons@USU. It has been accepted for inclusion in Educational Policies Committee by an authorized administrator of DigitalCommons@USU. For more information, please contact digitalcommons@usu.edu.
EDUCATIONAL POLICIES COMMITTEE AGENDA

1 March 2012

A meeting of the Educational Policies Committee will be held on 1 March 2012 at 3 p.m. in Old Main 136 (Champ Hall Conference Room)

I. Approval of the minutes of the 2 February 2012 meeting (see below)

II. Subcommittee Reports

A. Curriculum Subcommittee (Ed Reeve)
   1. Course Approvals
   2. Request from the College of Agriculture and the College of Natural Resources to create a Sustainable Systems Minor (see below)

B. Academic Standards Subcommittee (Richard Mueller)

   February 23, 2012
   2:00 p.m. – 3:00 p.m.
   Champ Hall Conference Room

   Present: Stephanie Hamblin, Scott Bates, Richard Mueller, Michele Hillard, Stacey Hills, Roland Squire, John Barton

   Absent: Tanner Wright, Eddy Berry

   Call to Order - Richard Mueller

   Approval of Minutes

   Business

   Pre-Requisite Enforcement – APPROVED.
   Motion carried by Roland Squire; seconded by Scott Bates.
A draft policy to enforce prerequisites will be written and distributed to the committee for wording approval.

**Adjourned:** 2:45 pm

**Next Meeting**
Thursday, March 22, 2012 Champ Hall Conference Room  
2:00 pm

C. General Education Subcommittee (Norm Jones)

III. Other Business

Request from the College of Engineering to create a Center for Engineering Education Research (CEER) (see below)
I. Approval of the minutes of the 12 January 2012 meeting
Keith Grant-Davie moved to approve the minutes of the 12 January 2012 meeting. Brian Warnick seconded; motion approved.

II. Subcommittee Reports

A. Curriculum Subcommittee

Ed Reeve reviewed the Curriculum Subcommittee business.

All courses were approved with the following changes:
MIS 3200 will retain the CI designation and be effective Summer 2012
COMD 3010 will retain the CI designation and be effective Summer 2012
MATH 1050, prerequisite change effective Summer 2012
MATH 1060, prerequisite change effective Summer 2012
The request from the Department of Art and Design to offer the interior design specialization (as a Plan B option) within the Master of Fine Arts degree was withdrawn.

The request from the Departments of Landscape Architecture and Environmental Planning (College of Agriculture) and Environment and Society (College of Natural Resources) to create a Sustainable Systems Minor was withdrawn.

The request from Utah State University to establish a university-wide STE²M center was an EPC item and was not discussed at the Curriculum Subcommittee meeting.

**Electronic Course Approval Form**

Work continues on producing a form and a workflow approval process. The workflow approval process will be similar to the travel authorizations.

Milestones and dates:
- Development complete by the first of April
- Testing with Cathy complete by first of May
- Pre-production testing with several volunteers complete by July 31st
- Go-live in production on August 1st
- Demonstration to the Curriculum Subcommittee on September 6th, 2012

Nancy Mesner moved to approve the business of the Curriculum Subcommittee. Stacey Hills seconded; motion approved.

### B. Academic Standards Subcommittee (Richard Mueller)

**ACADEMIC STANDARDS SUBCOMMITTEE MINUTES**

January 13, 2012
4:00 p.m. – 5:00 p.m.
Champ Hall Conference Room

**Present:** Deborah Reece (Stephanie Hamblin); Richard Mueller; Michele Hillard; Eddy Berry; Stacey Hills; Roland Squire

**Absent:** John Barton; Scott Bates; Tanner Wright

---

**Call to Order** - Richard Mueller
**Approval of Minutes**
**Business**

*Awarding an Associate’s Degree after a Bachelor’s Degree (Registrar’s Update) – APPROVED.* Motion carried by Deborah Reece; seconded by Roland Squire.
Students who have already received a bachelor’s degree may not later apply for or receive an Associate of Science or an Associate of Arts degree.

Students who have already received an Association of Science (AS) degree, Associate of Arts (AA) degree, or a bachelor’s degree may later apply for an Associate of Applied Science Degree.

Applicants must file an application with the Admissions Office and obtain the recommendation of their academic dean prior to being admitted. This AAS degree is only available to those on whom the previous degree was conferred by a regionally-accredited institution. Students must complete all of the degree requirements not covered or satisfied by previous degrees. In addition, students must complete a minimum of 15 USU credits beyond those applied toward the previous degree. USU credits must be earned in courses completed at USU’s Logan campus or other designated centers, or through classes offered by Regional Campuses and Distance Education through USU.

_Earned F Grade – (Registrar’s Update) – APPROVED._

Motion carried by Eddy Berry; seconded by Stacey Hills.

To comply with Federal regulations the University needs to do a better job of tracking student participation in classes. The two paragraphs below should be inserted into the electronic catalog to help the Financial Aid office easily identify registered students who never participated. It is hoped that information can be pulled from Canvas to help with the last day of participation for all graded students to also assist with compliance.

Two grading options are available for instructors when posting grades for students who are to receive an _F_ grade for a course. Students who attended or participated in a course at least one time will be given the traditional _F_ grade, and the instructor is responsible for reporting the last day of attendance or participation. The grade of _NF_ (Non Participation) is given when a student’s name appears on a final grade report, but there is no record of attendance or other evidence of participation in the course. The _NF_ grade is treated as an _F_ grad in calculating grade point averages.

Participation includes most documented forms of academic activity: attendance in class or labs, graded quizzes, tests, assignments, and participation in online discussions. However, simply logging into a system like Canvas does not constitute participation.

**Adjourned:** 4:50 pm

**Next Meeting**
Friday, February 10, 2012 Champ Hall Conference Room
4:00 pm

Brian Warnick moved to approve the business of the Academic Standards Subcommittee. Keith Grant-Davie seconded; motion approved.
GENERAL EDUCATION SUBCOMMITTEE MINUTES
January 17, 2012 8:30 A.M.
Champ Hall Conference Room

Present: Christie Fox, Honors; Larry Smith, Provost’s Office; Dick Mueller, Science; Kathy Chudoba, Business; Norm Jones, Chair; Travis Peterson, RCDE; Susan Neel, USU Eastern; Michele Hillard, Secretary; Dan Coster, Quantitative Intensive; Carolyn Cárdenas, Creative Arts; Wendy Holliday, Library; Nancy Mesner, Natural Resources; Janet Anderson, Agriculture; Charlie Huenemann, CHaSS; Brock Dethier, CHaSS; Rhonda Miller, Communications; John Mortensen, Registrar’s Office; Roberta Herzberg, Social Sciences; Erik Mikkelsen, ASUSU President; Ryan Dupont, Life & Physical Sciences Literacy/Intensive

Absent: Brian McCuskey, English; Stephanie Hamblin, University Advising; Wynn Walker, Engineering; Craig Petersen, American Institutions

Call to Order - Norm Jones

Approval of Minutes - December 13, 2011 – APPROVED.
Motion carried made by Carolyn Cárdenas, seconded by Dan Coster.

Course Approvals
ARTH 3840 (CI) - PENDING ................................................................. Rhonda Miller
ARTH 4520 (CI) - PENDING ................................................................. Rhonda Miller

Course Removals
N/A

Syllabi Approvals
USU 1320 (BHU) - PENDING .............................................................. Brian McCuskey
USU 1350 (BLS) - APPROVED ............................................................ Ryan Dupont
Motion carried made by Ryan Dupont, seconded by Nancy Mesner.

Business
Update on proposed USU 1370/3070 ..................................................... Christie Fox
The committee was tasked with writing the catalog copy for this proposal (see below). The first section is what would actually go on the website. The committee decided that this course should not be offered for anything fewer than 5 credits. In order to fulfill 2 depth categories it must be 5-6 credits. The classes will typically be team taught and will require depth breadth requirements regardless of major. Any exception to team teaching needs to be approved or justified. Quantitative and communicative Communication Intensive skills must be integrated and the course should be designated as a DHS/DHI combo instead of making it a DI. It is anticipated that these courses have a higher learning outcome because they must meet rigorous requirements. It
It was recommended that the committee look at the proposals/syllabus before anything moves forward. The committee will come back next month with a model to show the Gen Ed committee. A student must have completed their Gen Ed requirements before they can take the interdisciplinary course.

It was debated whether these courses should have a new, Depth Integration [DI], designation, or should be listed as fulfilling at least two of the three depth areas e.g. DSS/DSC. Concern was expressed that a DI designation would make it possible for students to avoid some of the desired breadth by taking a DI that allowed them for escape another course outside their area of interest. This concern was countered by those who feel that linking other disciplines to the major field will make the courses more relevant.

A meeting with the faculty who teach USU 1360 Faculty will be scheduled in February. Need to see if there is a common core. They will be discussing the common goals of the course.

Next Meeting
Tuesday, February 21, 2012 Champ Hall Conference Room
8:30 a.m.

USU/HONR 3070 Interdisciplinary Depth (DI)

Catalog copy:
USU/HONR 3070 (variable credit, 5-6 credits)
DI (interdisciplinary depth)

The DI (Interdisciplinary depth) course will combine at least two of the existing depth categories (DHA, DSS, DSC) in a longer format course of at least 5 credits. The class is traditionally team taught. This class will fulfill the student’s depth requirements, regardless of major. Students will integrate quantitative and communication skills.

Pre-requisite:
Repeatable for credit.

Semester traditionally offered: fall, spring

Approval requirements:
The application must specify which depth categories the class will integrate. The course should be rooted in more than one disciplinary convention and should explore the epistemology or ways of knowing in more than one discipline. In order to be approved, a DI course must ask students to utilize quantitative reasoning and communication skills (oral, visual, written, etc.). There is a strong expectation that the class will be team-taught and exceptions to that must be justified in the application.

One of the main goals of the DI course is to help students achieve the citizen scholar objectives. To that end, each DI course must meet these objectives:
understand processes of acquiring knowledge and information;
reason logically, critically, creatively, and independently, and be able to address
problems in a broad context;

recognize different ways of thinking, creating, expressing, and communicating through a
variety of media;

understand diversity in value systems and cultures in an interdependent world.

A successful DI course will:
be problem-based
be team-taught
be at least 5 credits
include two existing depth categories
require students to demonstrate quantitative and communication skills

The review committee will look favorably upon applications that incorporate service learning,
dergraduate research, field-based learning, and other creative pedagogical approaches

Scott Bates moved to approve the business of the General Education Subcommittee. Ed Reeve
seconded; motion approved.

### III. Other Business

Ed Reeve moved to approve the request from Utah State University to establish a university-
wide STE²M center. Scott Bates seconded; motion approved. Michelle Larson presented the
request. (see below)

Meeting adjourned 3:30 p.m.
Larry Smith conducted the meeting.
Cathy Gerber recorded the minutes.
Institution Submitting Proposal: Utah State University

Colleges in Which Program/Administrative Unit Will Be Located: College of Agriculture and College of Natural Resources

Lead Departments in Which Program/Administrative Unit Will Be Located: Department of Landscape Architecture and Environmental Planning (LAEP) in the College of Agriculture and Department of Environment and Society (ENVS) in the College of Natural Resources

Program/Administrative Unit Title: Sustainable Systems Minor

Proposed Beginning Date: Fall Semester, 2012

Institutional Signatures:

Raymond T. Coward, Chief Academic Officer: ____________________________

Noelle Cockett, Dean, College of Agriculture: ____________________________

Sean Michael, Head, Department of LAEP: ______________________________

Chris Luecke, Interim Dean, College of Natural Resources: ________________

Mark Brunson, Head, Department of ENVS: ______________________________
Section I: Request

The six departments in the College of Agriculture (ADVS, APEC, ASTE, LAEP, NDFS and PSC) and the three departments in the College of Natural Resources (ENVS, WILD, and WATS) request the creation of a Sustainable Systems Minor. A committee of nine faculty members developed the concept and requirements of the minor outlined herein. These requirements were then reviewed and agreed to by the faculty of the nine departments. Students in any University major can declare the Sustainable Systems Minor at any point in their undergraduate program or (more likely) when they submit their graduation paperwork. Diplomas of students meeting the requirements of the minor will include the title of their degree and “Sustainable Systems Minor”.

Students completing the minor will take 18 credits in six different areas (see Figure 1). Six of the credits are required of all students and covered in two 3-credit courses, specifically Foundations of Sustainable Systems, a lecture course, and Communicating Sustainability, a capstone course. A list of existing classes appropriate for the remaining four areas (Agriculture, Food and Environmental Systems; Energy and Earth Systems; Water Systems; Social Systems) is provided as Appendix A. Students must take at least one course from each of the four areas. Additional courses appropriate for the four system areas may be developed, identified or adapted after establishment of the minor.

Landscape Architecture and Environmental Planning (LAEP) in COA and Environment and Society (ENVS) in CNR will serve as the lead departments. As lead departments, LAEP and ENVS will ensure that the required courses are available for students wishing to complete the minor or develop a plan for viable course substitutes that ensure that the goals of the minor are being met in any given year. In addition, LAEP and ENVS will be responsible for offering the required Foundations and Capstones courses, respectively (see below). Departments within COA or CNR will certify on the graduation application that a student within their department has successfully completed the requirements of the minor whereas LAEP and ENVS will handle the graduation applications for students outside COA and CNR.

Section II: Need

For purposes of this minor, sustainability is defined according to the spirit of stewardship and inclusivity of the 1987 Brundtland Commission findings, which held that "sustainable development is development that meets the needs of the present without compromising the ability of future generations to meet their own needs." Thus, the Sustainable Systems minor will present concepts in sustainability that can be applied in a system approach, leading to resilience in society’s use of the earth’s land, water and air. In addition, the minor will prepare students to understand how to address the challenge of sustainability in ways that account for the interconnectedness of biological, physical, social and economic systems.

While five land-grant institutions in the western U.S. have established sustainability degrees, only three (Arizona State University, University of New Mexico and University of Wyoming) offer minors in sustainability and only the latter two reside in a College of Agriculture and/or College of Natural Resources. Within Utah, the University of Utah markets two undergraduate degrees as “sustainability-related”: Civil and Environmental Engineering; and Environmental and Sustainability Studies. The latter is somewhat similar in structure to the USU Sustainability
Systems minor but emphasizes policy decisions on the environment and it is a degree program, not a minor. Westminster University and Weber State University have bachelor’s degrees in Environmental Studies, both of which are marketed as “undergraduate degrees in sustainability.” None of these degrees specifically links sustainability to water, agricultural, or natural resource management systems – all of which are specific strengths of Utah State University.

Here at USU, the Environmental Studies degree in ENVS is also marketed as a sustainability degree but the Environmental Studies degree is designed to offer a broad introduction to human-environmental interactions and is not specifically directed toward sustainability. USU also offers a minor in Climate Change and Energy administered by the Plants, Soils and Climate Department in COA. While both minors include some of the same classes, the Sustainable Systems minor will incorporate sustainability into agricultural and water systems, and specifically require students to understand how sustainability can be applied to biological, physical, and social systems.

During the 2011 USU Spring Career Fair, 15 employers at the Career Fair were asked to respond on the desirability of students who graduated with a sustainability minor. All employers indicated their interest in graduates with this emphasis. In 2010-11, the College of Agriculture had 67 students enrolled in the Interdisciplinary Studies (ITDS) degree. Of those 67 students, 11% designed a program focused on sustainability. Students in several traditional programs in agriculture have also expressed their desire for stronger focus on sustainability to their academic advisors. A survey of 42 students enrolled in an introductory course entitled Professional Orientation for Environment and Society (ENVS 1990), in Fall 2011 found that 22 (52%) hoped to pursue careers related to sustainability in ways that link human and natural systems. This represents a significant shift from past years when most ENVS majors sought careers in land management or environmental protection.

In sum, Utah State University is providing an educational opportunity not currently available to undergraduate students in Utah and in the greater Mountain West. We estimate 20 to 25 students will graduate with the minor each year, with enrollment growing over time.

**Section III: Institutional Impact**

The addition of this minor to USU’s educational offering requires no change in administrative structure, no additional faculty, no new physical facilities, no modification or purchase of equipment, and no additional library support. Existing advisors in the Student Services offices of the Colleges of Agriculture and Natural Resources will handle the paperwork for students requesting the minor. The two required courses (Foundations of Sustainable Systems and Communicating Sustainability) have been added to faculty assignments as part of the instructors’ teaching load.

**Section IV: Finances**

The availability of the minor is likely to have no to minimal impact on enrollment in the existing classes. Required courses are assigned as part of load within COA and CNR, with teaching assignments of the faculty involved in the courses adjusted appropriately. Elective courses have been designated because of their availability and appropriateness for inclusion in the minor. Thus, no new funding for this minor is requested.
Figure 1. Overview of the Proposed Sustainable Systems Minor

Sustainable Systems Minor
(18 credits)

LAEP 2309: Common Intro. Course = 3 cr.

Foundations of Sustainability
Common Intro. Course
(Ecology, Planning, Systems Thinking)

Agriculture, Food & Environmental Systems

Energy and Earth Systems

Water Systems

Social Systems

Communicating Sustainability
Common Capstone Course
(Education, Communication, & Society)

Overview courses = 12 credits from currently existing courses (3 credits from each category)

ENVS 4700: Common Capstone course = 3 credits. A project experience will be included.
APPENDIX 1
Sustainable Systems Minor Requirements

Required Courses (6 credits)
- LAEP 2039 – Foundations of Sustainability (3 credits)
- ENVS 4700 – Communicating Sustainability (3 credits)

Agriculture, Food and Environmental Systems: Select 3 credits from the following:
- ADVS 5030 – Sustainable Agriculture Production Systems with Animals 3*
- ASTE 2900 – Humanity in the Food Web (BSS) 3
- ASTE 5260 – Environmental Impacts of Agricultural Systems (CI) 3
- NDFS 1240 – Food Literacy 3
- PSC 2800 – Fundamentals of Organic Agriculture 3
- PSC 4400 – Modern Vegetable Production 3*
- PSC 5200 – Site-Specific Agriculture and Landscape/Horticulture Management 3
- WATS 1200 – Biodiversity and Sustainability (BLS) 3
- WILD 2200 – Ecology of our Changing World (BLS) 3

Energy and Earth Systems: Select 3 credits from the following:
- GEO/PHYS 3150 – Energy in the 21st Century (DSC/QI) 3*
- LAEP 1030 – Introduction to Landscape Architecture (BCA) 3
- PHYS 1020 – Energy (BPS) 3
- PSC 3820 – Climate Change (DSC/QI) 3*
- PSC 4820 – Challenges in Climate Change and Energy 3*

Water Systems: Select 3 credits from the following:
- PSC 2010 – Soils, Water, and the Environment (BPS) 3
- PSC 4000 – Soil and Water Conservation 4
- PSC 4100 – Landscape Water Conservation 2
- WATS 3700 – Fundamentals of Watershed Science (CI) 3
- WATS 4490 – Small Watershed Hydrology 4*
- WATS 4530 – Water Quality and Pollution 3

Social Systems: Select 3 credits from the following:
- APEC 3012 – Introduction to Natural Resource and Regional Economics (DSS) 3
- ENVS 3010 – Fundamentals of Natural Resource and Environmental Policy 3
- ENVS 3330 – Environment and Society 3
- ENVS 5550 – Sustainability: Concepts and Measurement 3
- ENVS 5570 – Sustainable Living 3
- PHIL 3510 – Environmental Ethics (DHA) 3
- SOC 4620 – Sociology of the Environment and Natural Resources (DSS) 3
- SOC/ENVS 5640/6640 – Conflict Management in Natural Resources (CI) 3

* Prerequisite or Course Restriction

<table>
<thead>
<tr>
<th>Courses</th>
<th>Credit Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>Required Courses</td>
<td>Sub-Total</td>
</tr>
<tr>
<td></td>
<td>6</td>
</tr>
<tr>
<td>Elective Courses</td>
<td>Sub-Total</td>
</tr>
<tr>
<td></td>
<td>12</td>
</tr>
<tr>
<td>Total Number of Credits</td>
<td></td>
</tr>
<tr>
<td></td>
<td>18</td>
</tr>
</tbody>
</table>
Cover/Signature Page

Institution Submitting Request: Utah State University

Proposed Title: Center for Engineering Education Research (CEER)

School or Division or Location: College of Engineering

Recommended Classification of Instructional Programs (CIP) Code¹ (for new programs): 00.0000

Proposed Beginning Date (for new programs): 08/01/2012

Institutional Board of Trustees’ Approval Date: 04/06/2012

Proposal Type (check all that apply):

<table>
<thead>
<tr>
<th>Section #</th>
<th>Item</th>
<th>Section #</th>
<th>Item</th>
</tr>
</thead>
<tbody>
<tr>
<td>4.1.5.2</td>
<td>Minor*</td>
<td>6.1.1</td>
<td>Reinstatement of Previously Suspended Program</td>
</tr>
<tr>
<td>5.1.1.1</td>
<td>New Emphasis on an Existing Degree*</td>
<td>6.1.5</td>
<td>Reinstatement of Previously Suspended Unit</td>
</tr>
<tr>
<td>5.1.2</td>
<td>Certificate of Proficiency Not Eligible for Financial Aid</td>
<td></td>
<td></td>
</tr>
<tr>
<td>5.1.3</td>
<td>Out-of-Service Area Delivery of Programs</td>
<td></td>
<td></td>
</tr>
<tr>
<td>5.1.4</td>
<td>Name Change of Existing Programs</td>
<td></td>
<td></td>
</tr>
<tr>
<td>5.1.5</td>
<td>Program Transfer</td>
<td></td>
<td></td>
</tr>
<tr>
<td>5.1.6</td>
<td>Program Restructure</td>
<td></td>
<td></td>
</tr>
<tr>
<td>5.1.7</td>
<td>Program Consolidation</td>
<td></td>
<td></td>
</tr>
<tr>
<td>5.1.8</td>
<td>Administrative Unit Creation</td>
<td></td>
<td></td>
</tr>
<tr>
<td>5.1.9</td>
<td>Administrative Unit Transfer</td>
<td></td>
<td></td>
</tr>
<tr>
<td>5.1.10</td>
<td>Administrative Unit Consolidation</td>
<td></td>
<td></td>
</tr>
<tr>
<td>5.1.11</td>
<td>Administrative Discontinuation</td>
<td></td>
<td></td>
</tr>
<tr>
<td>5.1.12</td>
<td>Administrative Unit Suspension</td>
<td></td>
<td></td>
</tr>
<tr>
<td>5.1.13</td>
<td>Administrative Unit Change</td>
<td></td>
<td></td>
</tr>
<tr>
<td>5.1.14</td>
<td>Administrative Unit Transfer</td>
<td></td>
<td></td>
</tr>
<tr>
<td>X</td>
<td>New Center</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>New Institute</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>New Bureau</td>
<td></td>
<td></td>
</tr>
<tr>
<td>5.1.9</td>
<td>Graduate Certificate</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

*Requires “Section VI: Program Curriculum” of Abbreviated Template

Chief Academic Officer (or Designee) Signature:
I certify that all required institutional approvals have been obtained prior to submitting this request to the Office of the Commissioner.

______________________________
Signature

Date: 02/10/12

Printed Name: Raymond T. Coward

¹ CIP codes must be recommended by the submitting institution. For CIP code classifications, please see http://nces.ed.gov/ipeds/cipcode/Default.aspx?y=55.
Section I: Request

Utah State University proposes to establish a center that builds on the College of Engineering’s strength in engineering education. The Center for Engineering Education Research (CEER) will conduct research examining innovative and effective engineering education practices as well as examining classroom technologies that advance learning and teaching in engineering. CEER represents the evolution of the successful National Center for Engineering and Technology Education (NCETE), a center funded by the National Science Foundation over the past eight years in excess of $10M.

Section II: Need

In 2004, the National Academy of Engineering (NAE) completed a study which envisioned the future for engineers and engineering in 2020 and identified the attributes and skills engineers might need to maintain America's technological and economic competitiveness in 2020. The results of the study were published in “Educating the Engineer of 2020: Adapting Engineering Education to a New Center,” in which the NAE urged engineering deans to "endorse research in engineering education as a valued and rewarded activity as a means to enhance and personalize the connections to undergraduate students, to understand how they learn, and to appreciate the pedagogical approaches that excite them." In the same time frame, the Carnegie Foundation for the Advancement of Teaching completed a study of the engineering profession and urged engineering educators to transform their programs so that students' learning experience will more effectively prepare them to meet the ever changing demands of the profession. In response to the call from NAE and the Carnegie Foundation, the USU College of Engineering began development of an engineering education department with an affiliated PhD program. Approved by the Utah System of Higher Education Trustees in 2008, USU is one of three programs in the country offering a doctoral degree program housed within a College of Engineering in the emerging discipline of engineering education. The creation of CEER will bring further distinction to USU as a leader in engineering education research. Within the state of Utah, as well as across the intermountain west, CEER is unique in its focused effort to conduct research into how engineering is learned, taught, and assessed. The long-term outcomes of CEER research will enable USU engineering programs, as well as engineering programs across the country, to maintain global leadership. This will be accomplished through the development of responsive engineering degree programs that can rapidly adjust to the changing needs of the economies and technologies of Utah and the nation, and that are equally open and available to all citizens.

Section III: Institutional Impact

CEER represents the evolution of the successful National Center for Engineering and Technology Education (NCETE), a center funded by the National Science Foundation over the past eight years in excess of $10M. NCETE research efforts will be refocused on engineering education research in the post-secondary arena. CEER will support collaboration and increase cohesion across engineering disciplines with a goal of improving research in and best practices of undergraduate engineering education. Since CEER is housed within the College of Engineering, CEER researchers have opportunities to translate their research findings into practice within the engineering classrooms, especially within the pre-professional
engineering programs on the Logan and regional campuses. The long-term impact of incorporating CEER research findings into the undergraduate classroom will be improved advising, teaching, and learning experiences for students leading to better retention of students and to well-prepared engineering graduates from the USU College of Engineering.

Section IV: Finances

There is no additional funding required to establish CEER. Costs anticipated for the Center activities will come from support through contracts and grants provided by state and federal agencies and from foundations. The CEER Director will be Professor Kurt Becker in the Department of Engineering Education. Professor Becker is Co-Principal Investigator of NCETE and has considerable experience in securing funding from the National Science Foundation and will use his expertise to establish a funding base for CEER. No new physical facilities will be required.