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EDUCATIONAL POLICIES COMMITTEE MINUTES
5 April 2012

A meeting of the Educational Policies Committee was held on 5 April 2012 at 3 p.m. in Old Main 136 (Champ Hall Conference Room)

Present: Larry Smith, Chair
 Ed Reeve, Curriculum Subcommittee Chair, Engineering
 Richard Mueller, Academic Standards Subcommittee Chair, Science
 Norm Jones, General Education Subcommittee Chair
 Brian Warnick, College of Agriculture
 Cory Evans, Caine College of the Arts
 Stacey Hills, Huntsman School of Business
 Eddy Berry, College of Humanities and Social Sciences
 Nancy Mesner, College of Natural Resources
 Keith Grant-Davie, Graduate Council
 Wendy Holliday, Libraries
 Vince Lafferty, Regional Campuses and Distance Education (representing
 Travis Peterson)
 Susan Neel, USU-Eastern
 Jessica Hansen, Registrar's Office (representing Roland Squire)
 Cathy Gerber, Registrar's Office

Absent: Scott Bates, Emma Eccles Jones College of Education and Human
 Services
 Erik Mikkelson, ASUSU President
 Tanner Wright, Academic Senate President
 Cami Jones, Graduate Studies Vice-President

Visitors: Leon Anderson, SSWA, Department Head
 Richard Krannich, SSWA, Professor
 Byard Wood, MAE, Department Head
 Wenbin Yu, MAE, Associate Professor
 Alan Savitzky, Biology, Department Head
 Michelle Baker, Biology, Professor
 Alvan Hengge, Chemistry, Department Head
 David Liddell, Geology, Department Head
 Jan Sojka, Physics, Department Head
 Paul Jakus, Applied Economics, Department Head
 Mark Brunson, ENVS, Department Head
 Kurt Becker, Engineering Education, Department Head
 Michele Hillard, Provost Office

I. Approval of the minutes of the 1 March 2012 meeting

Richard Mueller moved to approve the minutes of the 1 March 2012 meeting. Nancy Mesner seconded; motion approved.

II. Subcommittee Reports

A. Curriculum Subcommittee

Ed Reeve reviewed the Curriculum Subcommittee business.

All courses were approved.

The request from the Sociology, Social Work and Anthropology Department, in partnership with USU-Eastern, to offer a minor in Criminal Justice was approved revisions. Revisions will be sent to Larry Smith. (see below)

The request from the Mechanical and Aerospace Engineering Department to reduce the number of PhD dissertation credits was approved.(see below)

The request from the College of Science, (the Departments of Biology, Chemistry and Biochemistry, Geology and Physics), to reduce the number of credits required for the following PhD programs: Biology, Ecology, Chemistry, Biochemistry, Geology and Physics was approved with revisions to the Biology and Ecology request. Revisions will be sent to Larry Smith. (see below)

The request from the Departments of Geology and Watershed Sciences to add a “Geomorphology and Earth Surface Processes specialization to their respective MS and PhD degree in Geology and Watershed Science was approved. (see below)

Ed Reeve was elected as chair for the Curriculum Subcommittee 2012-2013.

EPC and Curriculum Subcommittee Schedule for 2012-2013

Agenda Items Due

August 23, 2012
September 20, 2012
October 18, 2012
November 22, 2012
December 13, 2012
January 24, 2013
February 21, 2013
March 21, 2013

EPC and Curriculum Subcommittee Meetings

September 6, 2012
October 4, 2012
November 1, 2012
December 6, 2012
January 10, 2013
February 7, 2013
March 7, 2013
April 4, 2013

Richard Mueller moved to approve the business of the Curriculum Subcommittee. Norm Jones seconded; motion approved.

B. Academic Standards Subcommittee

Richard Mueller reviewed the Academic Standards Subcommittee business.

The ASC proposes the following change to the Prerequisite policy. The Registrar's Office will work with individual departments that wish to be informed of Incomplete (I) grades or situations where no grade is recorded (NGR) on prerequisite courses or wish to warn students in advance of the purge.

Prerequisites, Approval and Enforcement

New prerequisites, as well as changes to established prerequisites, must be approved through the Educational Policies Committee (EPC). Prerequisites will be enforced by the student information system only if they have been approved by EPC. There are some prerequisites that are not currently possible for direct enforcement by the student information system. In these cases, the department will be notified and advised regarding available options. Enforcement of prerequisites for a multiple-listed course (i.e., a course jointly offered by two or more departments) will be determined by the department having administrative responsibility for the course.

Until prerequisites and prerequisite changes have been officially approved by EPC, they cannot be included in the online version of the General Catalog. Approved prerequisites will not be added to the online catalog until after the last day to add classes for the semester preceding the semester for which the prerequisites are effective.

The prerequisite enforcement assumes that a student will successfully pass the classes they are registered for. Students are therefore allowed to register for the next course before grades have been posted for the prerequisite course. Once grades have been posted, the prerequisites will be re-evaluated based on the grades received and if the student no longer meets the prerequisite the student will be dropped from the course. The affected students will be notified by the Registrar's Office of classes that have been dropped due to lack of the required prerequisites.

Eddy Berry moved to approve the business of Academic Standards Subcommittee. Brian Warnick seconded; motion approved.

C. General Education Subcommittee

Norm Jones reviewed the General Education Subcommittee business.

GENERAL EDUCATION SUBCOMMITTEE MINUTES

March 20, 2012 8:30 A.M.

Champ Hall Conference Room

Present: Christie Fox, Honors; Dick Mueller, Science; Kathy Chudoba, Business; Norm Jones, Chair; Michele Hillard, Secretary; Carolyn Cárdenas, Creative Arts; Wendy Holliday, Library; Nancy Mesner, Natural Resources; Charlie Huenemann, CHaSS; Brock Dethier, CHaSS; Rhonda Miller, Communications; John Mortensen, Registrar’s Office; Roberta Herzberg, Social Sciences; Christian Thrapp/Erik Mikkelsen, ASUSU President; Stephanie Hamblin, University Advising; Mary Leavitt, Advising; Vince Lafferty, Regional Campuses; Janet Anderson, Agriculture; Craig Petersen, American Institutions; Dan Coster, Quantitative Intensive;

Absent: Susan Neel, USU Eastern; Brian McCuskey, English; Ryan Dupont, Life & Physical Sciences; Cindy Dewey, Music; Larry Smith, Provost’s Office; Travis Peterson, RCDE; Wynn Walker, Engineering

Call to Order - Norm Jones

Approval of Minutes - February 21, 2012 - APPROVED

Motion made by Erik Mikkelsen, seconded by Charlie Huenemann

Course Approvals

AV 3720 (CI) **PENDING REVISIONS**.....Rhonda Miller

HIST 4711 (DHA) **APPROVED**Brian McCuskey

Motion made by Charlie Huenemann, seconded by Dan Coster

LANG 2100 (BHU) **PENDING** per Brad Hall.....Brian McCuskey

Course Removals

N/A

Syllabi Approvals

N/A

Business

Review of Depth CoursesNancy Mesner

Nancy stated that we need two things to happen: 1) language from committee saying that they intend to review the courses every 3-5 years and 2) should we consider doing this with all courses, not just depth. A process needs to be developed and we need to begin tracking. The process would be approved by the Gen Ed Committee and then move on to EPC to be added to

policy. The AAA department has a website that goes back to 2005 that will provide us the information on what is being taught. Subcommittees should get together and draft a process and policy wording before the next meeting so that this process can be moved forward at next fall's meeting.

USU 3070..... Christie Fox
It was moved that the Committee should proceed to seek course approval for USU 3070. Christie and Norm will do the Course Approval Forms.
Motion made by Dick Mueller, seconded by Rhonda Miller. Motion Approved

Core Curriculum in CHaSS Charlie Huenemann
CHaSS is working on core curriculum and they are looking for advice/suggestions. They will not change any gen ed requirements, but will provide an advising mechanism to help students maneuver through gen ed and get them on the path to their major. They are considering creating two new courses: CHSS1320 and CHSS 1340 modeled after Honors 1320 and 1340. Committee is currently looking for college specific versions that meet the criteria for USU 1320 and 1340. These courses will operate at a higher level than USU 1320 and 1340. There was a discussion of whether these courses could replace the USU prefix 1320/1340 courses. Or should they use the USU prefix with a special topics indicator? There is a concern about staffing the courses. It is assumed a number of instructors would switch over from USU to CHaSS, but that the same number of seats would remain available. The question was asked why we keep adding designations and models, and are all the changes really helping the students? Charlie responded that it would be great if the majors would come to gen ed and let them know what is needed so that student demand could be taken into consideration for these courses. The proposal for the new courses should come before the Gen Ed Committee and then be sent to the Curriculum Committee and the EPC.

Next Meeting

Tuesday, April 17, 2012 Champ Hall Conference Room
8:30 a.m.

Vince Lafferty moved to approve the business of the General Education Subcommittee. Nancy Mesner seconded; motion approved.

III. Other Business

Keith Grant-Davie moved to approve the request from the College of Engineering to establish a Center for Engineering Education Research (CEER). Richard Mueller seconded; motion approved. (see below)

Eddy Berry moved to approve the request from the Departments of Applied Economics, Sociology, Social Work and Anthropology and Environment and Society to establish a Center for Society, Economics and the Environment (CSEE). Nancy Mesner seconded; motion approved. (see below)

Meeting adjourned 3:30 p.m.

Larry Smith conducted the meeting.

Cathy Gerber recorded the minutes.

Institution Submitting Proposal:

Utah State University

School or Division in Which Program/Administrative Unit Will Be Located:

College of Humanities and Social Sciences

Department(s) or Area(s) in Which Program/Administrative Unit Will Be Located:

Department of Sociology, Social Work, and Anthropology

Program/Administrative Unit Title:

Department of Sociology, Social Work, and Anthropology

Recommended Classification of Instructional Programs (CIP) Code: 43.0107

Certificate, and/or Degree(s) to Be Awarded: Minor in Criminal Justice

Proposed Beginning Date:

January 1, 2013

Institutional Signatures (*as appropriate*):

Department Chair

Dean or Division Chair

Career and Technical Education Director Graduate School Dean

Council on Teacher Education

Date:

**Criminal Justice Minor Sociology, Social Work and Anthropology Department College of
Humanities and Social Sciences and the USU Eastern campus**

Section I: Request

The Sociology, Social Work and Anthropology (SSWA) department in the College of Humanities and Social Sciences in partnership with USU Eastern would like to create a minor in Criminal Justice (CJ) to be offered on the Utah State University Campus, at all Regional Campuses of Distance Education and the USU Eastern campus. There would be a five-course requirement (described below) which will give students a back ground to pursue a major in several disciplines as well as basic marketable skills for a wide range of employment in the criminal justice arena.

Section II describes the need and current interest in the criminal justice discipline. There is also a description of the course sequence to be taken for this minor.

Section III will outline the minimal impact this minor will have on the staff and institution while attracting more students to the University through various sites. Criminal Justice has been rated in the top 10 popular areas of study at Universities across the nation for several years. The current USU Criminal Justice program, located on the Eastern campus, is one of the top USU Eastern top programs, comprising 5-10% of graduates at USU Eastern annually.

Section II: Need

The Criminal Justice field across the United States employs over 2.4 million individuals spending over \$2.5 billion each year (2007 US Bureau of Justice Statistics). With the exception of the past few years during the economic recession in the U.S., there has consistently been a demand for individuals to work in the various criminal justice fields, including, Courts, Corrections, and Police. There is a strong demand for employees, for example in the Corrections field, where employment has grown over 500% in the last two decades. Average starting wage for corrections officers across the nation is approximately \$40,000 There are several CJ programs throughout the state of Utah, all of which focus on face-to-face instruction. USU Eastern (formerly College of Eastern Utah) has offered a two year associates degree program for a little over 10 years and has found this to be a very popular program. It has grown to be one of the largest programs on the Eastern campus. The CJ program now serves USU Eastern students with face-to-face instruction and students on other USU campuses through interactive broadcast. In spring 2012 semester the first CJ course was broadcast to the USU Logan campus. With strong distance education technology and support, the USU Criminal Justice program has the ability to expand instruction in this field. In addition to the CJ Associate Degree now offered across the USU campuses, we well positioned to offer a Criminal Justice minor that will provide criminal justice emphasis for students across a wide range of majors. Students in many undergraduate majors, including Social Work, Family Life, Psychology, Journalism, and Political Science, among others, would find focused criminal justice training valuable both academically and in terms of employment opportunities after graduation.

One difference between the current programs in Utah and the Criminal Justice minor proposed here is that this program is located in the Department of Sociology, Social Work and Anthropology and includes several criminal justice related Sociology courses in its curriculum, including Criminology, Social Deviance, Juvenile Delinquency, and Criminal Law and Justice. This offers additional educational opportunities in theoretical and research-related topics central to Sociological Criminology beyond the more applied courses in the Criminal Justice curriculum

Below is a listing of the existing criminal justice programs in Utah and any emphasis they have in their degree:

University of Utah

No criminal justice degree

Utah Valley University

A.A., A.S. Pre-Major in Criminal Justice and in Forensic Science

These degree programs focus largely on training individuals to move into the criminal justice field of law enforcement. The program degree description includes a job opportunities list **all** of which are law enforcement oriented. All courses are on campus delivery of instruction.

Dixie State College of Utah

A.S. in Criminal Justice B.A., B.S. in Criminology Emphasis (new program in 2011) B.A., B.S. in Digital Forensics Emphasis (new program in 2011)

All courses are on campus delivery of instruction. Their emphasis is strongly towards the digital forensics.

Southern Utah University

AAS in Criminal Justice B.A., B.S. in Criminal Justice B.A, B.S. in Criminal Justice Forensic Science Emphasis

This B.S. degree program has a strong focus on Forensic Science, specifically criminal laboratory work. It is associated with the Political Science & Criminal Justice department.

Snow College

A.A., A.S. in Criminal Justice. This program may be discontinued.

Salt Lake Community College

Associate of Applied Science Degree in Criminal Justice

Sal Lake Community college (SLCC) has a strong connection between their two year program and the four year degrees available at Weber State. Weber even has a distance campus on the SLCC campus. They have not set a focus for emphasis in their program and appear to allow the student to set their emphasis once they reach Weber.

Weber State University

AS/AA Criminal Justice BS/BA Criminal Justice with one of the following concentrations:

- Corrections
- Forensic Science
- Law and Justice
- Law Enforcement

Weber State University does offer an AS/AA in Criminal Justice, however they do rely heavily on the two year program from SLCC for the base of their 4 year CJ degree. They have recently altered their program to have four concentrations where the only had two prior. The minor in CJ requires a similar course work to USU with 18 hours total credits hours required, 12 of which are required from four classes. The entire 18 hours comes from the CJ discipline.

Utah State University Eastern Proposed CJ Minor

The proposed requirements for a minor in Criminal Justice include five courses totaling 15 credit hours. Two courses are required, with one additional course selected from a set of three courses on different aspects of the criminal justice system, and two courses chosen as electives from a set of

courses in the Criminal Justice and the Sociology curricula.

The first required course is CJ 1010: Introduction to Criminal Justice. It is designed to give students a broad understanding of the criminal justice system in the United States. It reviews the current practices of law enforcement, the courts, and corrections. The second required course is SOC 3420: Criminology. This is an upper division Sociology course focused on analysis of theories of crime causation, different types of crime, and methods of research in the field. The third required course will be a choice by the students of one of three CJ courses focused specifically on law enforcement ("Police and Society" course currently being developed), corrections (CJ 1300: Introduction to Corrections) or criminal law and the court system (CJ 1330: Criminal Law).

The student will then have the choice of two more elective courses from the list below, including a second upper division Sociology course and a Criminal Justice course.

CJ 1010 Introduction to Criminal Justice (8SS)

Designed for all students. Introduces students to the history, processes and functions of the American criminal justice system and its primary components, namely law enforcement, courts, and corrections. Students will generally understand the history, process, and functions of the police, courts, and corrections as they relate to the operation of our criminal justice system and key constitutional provisions.

CJ 1300 Introduction to Corrections

Examines the history and the administration of corrections in America. Emphasis will be placed on the philosophies of punishment, sentencing strategies, prison community, alternatives to incarceration, and various reform efforts. Critical issues facing corrections will also be examined. Students will generally understand the evolution and administration of corrections in America.

CJ 1330 Criminal Law (prerequisite CJ 1010)

Designed mainly for, but not limited to the student majoring in Criminal Justice. It surveys the American criminal justice system. Elements of crime, defenses, historical foundation, limits, purposes and functions of criminal law are discussed. Students will understand the key general principles that relate to criminal law, criminal liability, complicity, uncompleted crimes, defenses to criminal liability and the various crimes in our legal systems. They will also learn how to read and use statutes and analyze fact situations in light of the law.

CJ 1340 Criminal Investigations (Prerequisite CJ 1010) Introduces students to the criminal, investigation process. Legal, scientific, and administrative aspects of this process will be explored and students will come to appreciate the complexity of conducting a thorough investigation and be able to deal with potential obstacles that are commonly encountered. Course is a valuable precursor to taking Criminalistics. Objective is to acquaint the student with the fundamentals of criminal investigations.

CJ 1350 Introduction for Forensic Science (Prerequisite CJ 1010)

Mainly designed for the student majoring in Criminal Justice. Includes interrogation and interview, sources of information (electronic/traditional), crime scene procedure, introduction to identification, collection and preservation of evidence, laboratory techniques and case preparation. Students will understand the functions and duties of the forensic scientist and learn basic skills that related to evidence collection, preservation and analysis.

CJ 1355 Crime Scene Processing (Prerequisite CJ 1010 -USU Eastern Campus only) Covers the duties and responsibilities of a crime scene technician at the scene of a crime. Includes instruction on the proper collection, handling and storage of evidence. Report writing, proper requests for examination as

well as laboratory methods are an integral part of this course.

CJ 2110 Security

Designed as a requirement mainly for the student majoring in Criminal Justice. Examines the diverse components which make up the security function, as well as principles and concepts in physical security, loss control and crime prevention. Students will know and understand the historical and professional principles of public and private security and crime prevention, as well as risk management and loss control principles.

CJ 2330 Juvenile Justice

Designed mainly for the student majoring in Criminal Justice. Studies the origin, philosophy, and development of the juvenile justice system, particularly the juvenile court. Emphasis is placed upon laws, detention, adjudication, probation, after-care, foster homes, and other alternative correctional practices. Students will understand the nature and origins of juvenile law and the guiding principles that drive the system.

CJ 2340 Survey of Criminal Procedure (Prerequisite CJ 1010)

Introduces students to the following concepts; historical development of laws and crime causation, historical development of the Justice System, the arrest, the initial appearance, pretrial proceedings, place and time of trial, the trial, confrontation and assistance of counsel, pretrial motions, hearings and plea negotiations, the trial and the roles of major participants, the jury, trial procedure, the jury instructions and deliberation, the verdict, appeals and appellate citations, the sentence and correctional procedures, sentencing philosophy and clemency, extradition process, juvenile system focus and victims' rights.

CJ 2350 Laws of Evidence (Prerequisite CJ 1010)

Designed mainly for the student majoring in Criminal Justice. Deals with the principles and rules of law emphasizing evidentiary problems related to criminal cases. An introduction and overview of the court process and problems related to the fact finding process of juries. Explores the courtroom procedures as they relate to evidence and its uses in the courtroom, with emphasis upon the introduction of evidence and the rules pertaining thereto. Students will understand the value of the rules of evidence in the law and be able to understand and apply them to fact scenarios.

CJ 2360 Juvenile Law and Procedure

Designed mainly for the student majoring in Criminal Justice. Covers the juvenile justice system emphasizing Utah law and procedure. Studies differences between juvenile and adult systems, delinquent acts, juvenile treatment as adults and role and function of probation, youth corrections, family services and the community. Students will generally understand the nature and origins of juvenile law, the principles and laws that pertain to juvenile delinquency; neglect, abuse and dependency proceedings; and status offenses. They will also learn how to read and use statutes and analyze fact situations in light of the law.

CJ 2370 Child Abuse and Neglect

Overview of causes, identification, reporting, and legal issues pertaining to children who are abused and/or neglected. Cycle of domestic violence and its effects on children will be discussed. Primary objectives are to assist students in gaining an insight of what constitutes child maltreatment and domestic violence, assess underlying causes of abuse and neglect, and how it is addressed within the criminal justice system.

CJ XXXX: Police Operations In proposal process

SOC 3410 Juvenile Delinquency

Focuses on nature, extent, and causes of delinquent behavior, Examines workings of juvenile justice system and programs for delinquency prevention,

SOC 3420 Criminology

Examines theoretical explanations for crime in the U.S. Describes characteristics of major forms of criminal behavior.

SOC 3430 Social Deviance

Examination of sociological perspectives on deviance as they apply to lifestyles, commitment, and social control in American society.

SOC 4420 Criminal Law and Justice

Sociological analysis of relationship between law and social control and social change, especially regarding law enforcement, courts, and corrections.

Section III: Institutional Impact

The proposed minor will offer the first focused education and training program in the field of criminal justice across the entire USU set of campuses, Building largely on existing resources, including instructional capacity and distance learning technology, the program will provide excellent training of both academic and professional career value to students across a wide range of majors in the social and behavioral sciences, education, law, and social services, It will enable students to tap largely existing courses and educational experiences to develop a clear criminal justice emphasis in their undergraduate training and credentials,

Section IV: Finances

Funding for the Criminal Justice Minor will come from a combination of USU Eastern and the RCDE Program, The cost for delivery of the program will be labor. The technology, infrastructure, and structure to deliver the program are in place. The chart below makes several assumptions: (1) All courses are either taught as part of load or USU Eastern, or the SSWA department are reimbursed by RCDE for faculty instructional costs; (2) Each course will have a total of 60 students (25 at Eastern with 35 at other USU Campuses; (3) all courses are 3 credits each.

Estimated RCDE Funding			
Instructional Support	Salary	Benefits	Total
Eastern Faculty	\$18,585	\$8,190	\$27,775
SSWA Logan Faculty	\$9,000	\$3,960	\$12,960
Subtotal	\$27,585	\$12,150	\$40,735
Development and Delivery Expense			
FACT Course Development (\$600/cr x 9cr)			\$5,400
Delivery and Center Support (\$67/sch)			\$28,140
Initial Marketing			\$10,000
Travel (estimate)			\$4,000
Professional Development (estimate)			\$3,000
Subtotal			\$50,540
Total	\$27,585	\$62,690	\$90,275

Cover/Signature Page - Abbreviated Template

Institution Submitting Request: Utah State University
Proposed Title: Mechanical Engineering, PhD
Currently Approved Title: Mechanical Engineering, PhD
School or Division or Location: College of Engineering
Department(s) or Area(s) Location: Mechanical & Aerospace Engineering
Recommended Classification of Instructional Programs (CIP) Code¹ (for new programs): 14.1901
Current Classification of Instructional Programs (CIP) Code (for existing programs): 14.1901
Proposed Beginning Date (for new programs): 08/27/2012
Institutional Board of Trustees' Approval Date: *MM/DD/YEAR*

Proposal Type (check all that apply):

R401-5			R401-6		
<i>Items submitted will be reviewed by OCHE. If there are any issues, the proposal will be returned for clarification/correction. If no issues, the proposal will be returned with a note of approval and the request will be placed on the General Consent Calendar of the next Regents' agenda.</i>			<i>Items submitted will be reviewed by OCHE. If there are any issues, the proposal will be returned for clarification/correction. If no issues, the proposal will be returned with a note of approval and the request will be placed on the General Consent Calendar of the next Regents' agenda.</i>		
Section #		Item	Section #		Item
4.1.5.2	<input type="checkbox"/>	Minor*	6.1.1	<input type="checkbox"/>	Reinstatement of Previously Suspended Program
5.1.1.1	<input type="checkbox"/>	New Emphasis on an Existing Degree*	6.1.5	<input type="checkbox"/>	Reinstatement of Previously Suspended Unit
5.1.2	<input type="checkbox"/>	Certificate of Proficiency Not Eligible for Financial Aid			
5.1.3	<input type="checkbox"/>	Out-of-Service Area Delivery of Programs			
5.1.4	<input type="checkbox"/>	Name Change of Existing Programs			
5.1.5	<input type="checkbox"/>	Program Transfer			
	<input checked="" type="checkbox"/>	Program Restructure			Reduce required number of PhD dissertation credits.
	<input type="checkbox"/>	Program Consolidation			
in5.1.6	<input type="checkbox"/>	Program Discontinuation			
5.1.7	<input type="checkbox"/>	Program Suspension			
	<input type="checkbox"/>	Administrative Unit Creation			
	<input type="checkbox"/>	Administrative Unit Transfer			
5.1.8	<input type="checkbox"/>	Administrative Unit Consolidation			
	<input type="checkbox"/>	New Center			
	<input type="checkbox"/>	New Institute			
5.1.9	<input type="checkbox"/>	New Bureau			
	<input type="checkbox"/>	Graduate Certificate			

*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: *MM/DD/YEAR*

Printed Name: *Name of CAO or Designee*

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>.

Institution Submitting Proposal: Utah State University

College, School or Division in Which Program/Administrative Unit Will Be Located: College of Engineering

Department(s) or Area(s) in Which Program/Administrative Unit Will Be Located: Mechanical & Aerospace Engineering

Program/Administrative Unit Title: Mechanical Engineering, PhD

Recommended Classification of Instructional Programs (CIP) Code: 14.1901

Certificate, and/or Degree(s) to Be Awarded: Mechanical Engineering, PhD

Proposed Beginning Date: 08/27/2012

Institutional Signatures (*as appropriate*):
Department Chair

Dean or Division Chair

Career and Technical Education Director

Graduate School Dean

Council on Teacher Education

Date:

Program Request - Abbreviated Template
Utah State University
PhD, Mechanical Engineering
08/27/2012

Section I: Request

To reduce the number of PhD dissertation credits from 39 to 21, while maintaining the same level of required coursework. This will reduce the minimum credits required for the PhD degree in Mechanical Engineering from 90 to 72 for students with a BS degree, and from 60 to 42 for students with a MS degree. Itemized credit requirements are listed in the table at the bottom of this document. Course requirements will remain the same.

Section II: Need

Many peer western land grant institutions (Washington State, Reno, Wyoming, Colorado State University, University of Arizona, Montana State University, Idaho, and New Mexico State University) require a minimum of 72 credits for a Mechanical Engineering PhD degree. In order for USU's Mechanical Engineering PhD program to remain competitive the minimum number of required credits must be reduced.

Section III: Institutional Impact

This change will have no institutional impact as the required coursework will not change, and the expectation for the dissertation will remain the same.

Section IV: Finances

This change will have no effect on finances because costs with neither increase nor decrease. No additional courses will need to be taught.

Current Credit Requirements and Proposed Credit Requirement for PhD
(Course requirements remain the same)

	Current Credit Hour Requirements PhD beyond MS: 60 PhD beyond BS: 90		Proposed Credit Hour Requirements PhD beyond MS: 42 PhD beyond BS: 72	
	PhD beyond MS	PhD beyond BS	PhD beyond MS	PhD beyond BS
6000	12	24	12	24
Math	3	6	3	6
Dissertation credits	39	39	21	21
5000, 6000, or 7000 level Classes	6	21	6	21
Total Credits	60	90	42	72

Cover/Signature Page - Abbreviated Template

Institution Submitting Request: *Utah State University*
 Proposed Title: *PhD in Biology*
 Currently Approved Title: *PhD in Biology*
 School or Division or Location: *College of Science*
 Department(s) or Area(s) Location: *Biology*
 Recommended Classification of Instructional Programs (CIP) Code¹ (for new programs): *26.0101 (Biology)*
 Current Classification of Instructional Programs (CIP) Code (for existing programs): *26.0101 (Biology)*
 Proposed Beginning Date (for new programs): *08/27/2012*
 Institutional Board of Trustees' Approval Date:

Proposal Type (check all that apply):

R401-5			R401-6		
<i>Items submitted will be reviewed by OCHE. If there are any issues, the proposal will be returned for clarification/correction. If no issues, the proposal will be returned with a note of approval and the request will be placed on the General Consent Calendar of the next Regents' agenda.</i>			<i>Items submitted will be reviewed by OCHE. If there are any issues, the proposal will be returned for clarification/correction. If no issues, the proposal will be returned with a note of approval and the request will be placed on the General Consent Calendar of the next Regents' agenda.</i>		
Section #		Item	Section #		Item
4.1.5.2	<input type="checkbox"/>	Minor*	6.1.1	<input type="checkbox"/>	Reinstatement of Previously Suspended Program
5.1.1.1	<input type="checkbox"/>	New Emphasis on an Existing Degree*	6.1.5	<input type="checkbox"/>	Reinstatement of Previously Suspended Unit
5.1.2	<input type="checkbox"/>	Certificate of Proficiency Not Eligible for Financial Aid			
5.1.3	<input type="checkbox"/>	Out-of-Service Area Delivery of Programs			
5.1.4	<input type="checkbox"/>	Name Change of Existing Programs			
	<input type="checkbox"/>	Program Transfer			
5.1.5	<input checked="" type="checkbox"/>	Program Restructure			
	<input type="checkbox"/>	Program Consolidation			
5.1.6	<input type="checkbox"/>	Program Discontinuation			
	<input type="checkbox"/>	Program Suspension			
	<input type="checkbox"/>	Administrative Unit Creation			
5.1.7	<input type="checkbox"/>	Administrative Unit Transfer			
	<input type="checkbox"/>	Administrative Unit Consolidation			
	<input type="checkbox"/>	New Center			
5.1.8	<input type="checkbox"/>	New Institute			
	<input type="checkbox"/>	New Bureau			
5.1.9	<input type="checkbox"/>	Graduate Certificate			

*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:

Printed Name:

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>.

Institution Submitting Proposal: *Utah State University*

College, School or Division in Which Program/Administrative Unit Will Be Located: *Science*

Department(s) or Area(s) in Which Program/Administrative Unit Will Be Located: *Biology*

Program/Administrative Unit Title: *Biology*

Recommended Classification of Instructional Programs (CIP) Code: *26.1010 (Biology*

Certificate, and/or Degree(s) to Be Awarded: *PhD in Biology*

Proposed Beginning Date: *August 27, 2012 (fall semester)*

Institutional Signatures (*as appropriate*):



Alan H. Savitzky, Department Head, Biology

James A. MacMahon, Dean, College of Science

*Mark R. McLellan, Vice President for Research
and Dean of Graduate Studies*

Date:

R401.5.1.5- Program Restructure
 Utah State University
 Ph.D. in Biology
 03/12/2012

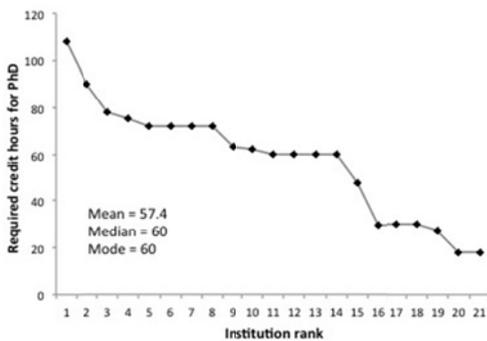
Section I: Request

The Department of Biology proposes to restructure its PhD in Biology. For this degree program the current credit hour requirements are 60 credits for incoming students with a MS degree and 90 credits for students without a MS degree. We propose reducing required credit hours for both programs to 60 credit hours for the PhD degree, regardless of whether or not a student has a MS.

Section II: Need

Flexibility in designing a program of study is a core strength of the PhD programs offered through the Biology Department. In terms of formal coursework, the Department only requires students to complete a 1-credit orientation course; the remainder of coursework is aimed at building core competencies and skills specific to a student's research interests. Indeed, the PhD degrees offered through the Biology Department are awarded on the basis of the student's ability to conduct cutting-edge, original research. Most PhD students in our programs finish their degree within 5-6 years. Assuming full-time status is 6 credits/semester, a student could complete 60 credit hours in 5 years. Thus, reduction of credit hours to 60 credits would impact only the number of hours of dissertation research (BIOL 7970) for which students typically register. Furthermore, the minimum number of credit hours of BIOL 7970 remains unchanged (12 credits for students with a master's degree and 18 credits for students without a master's degree). The proposed credit change will fully maintain the academic rigor of the Biology PhD program because there is no change in coursework requirements, or in expectations for research productivity. At the same time we expect this change will enhance competitiveness for recruiting graduate students.

We see no need to require fewer credit hours for students who already have a MS degree. While students with a MS might be more mature and better prepared to complete the PhD than a post-baccalaureate student, they typically do not complete their research at a faster pace. Completion time more frequently reflects the nature of the dissertation project than the number of classes taken. Limiting the coursework requirement to 60 credit hours for both groups of PhD students would put them on an even playing field; if their research can be completed more quickly than 5 years, 60 credits could be taken over a shorter time frame, such as 9 credits per semester and/or enrolling in coursework over the summer. If a student requires more than 5 years to complete the research, they can enroll in Continued Graduate Advisement for up to 9 credits.



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Analysis of 21 other land-grant universities (see appendix) shows that 60 credit hours for a PhD in the biological sciences is a very reasonable proposal. The range of credit hours among these institutions is 18-108, with a mean value of 57.4; the median and modal values are 60 credits (Figure 1). Currently our requirement of 90 credits for the PhD without the MS is tied with Virginia Tech for the highest rank outside of Oregon State University, which is on the quarter system and requires 108

credit hours toward the PhD. More than half (11 of 21) of these institutions require 60 or fewer credit hours (Figure 1).

Section III: Institutional Impact

We anticipate that reduction of required credit hours toward the PhD will increase our ability to recruit and retain top graduate students from around the country, because competing programs require fewer credits. Thus we expect this change will help the Department of Biology meet institutional goals of increasing graduate student enrollments over the next several years. The proposed change will not affect existing administrative structures. We do not anticipate that any changes in faculty or staff will be necessary as a consequence of this restructuring.

Section IV: Finances

No additional costs are anticipated as a result of this change. The Department of Biology already receives more applications from highly qualified students than we can support. By reducing the number of required credit hours from 90 to 60, we anticipate that we will be able to grow our PhD program while replacing students who cycle out more rapidly with their degrees.

Appendix

Land-grant institutions included in analysis

Auburn

Clemson

Colorado State University

Iowa State University

Kansas State University

Mississippi State University

Montana State University

New Mexico State University

North Carolina State University

Oregon State University

Pennsylvania State University

University of Alaska

University of Arizona

University of Idaho

University of Massachusetts-Amherst

University of Nevada-Reno

University of Vermont

University of Wyoming

Virginia Tech

Washington State University

West Virginia University

Cover/Signature Page - Abbreviated Template

Institution Submitting Request: *Utah State University*
 Proposed Title: *PhD in Ecology*
 Currently Approved Title: *PhD in Ecology*
 School or Division or Location: *College of Science*
 Department(s) or Area(s) Location: *Biology*
 Recommended Classification of Instructional Programs (CIP) Code¹ (for new programs): *26.1301 (Ecology)*
 Current Classification of Instructional Programs (CIP) Code (for existing programs): *26.1301 (Ecology)*
 Proposed Beginning Date (for new programs): *08/27/2012*
 Institutional Board of Trustees' Approval Date:

Proposal Type (check all that apply):

R401-5			R401-6		
<i>Items submitted will be reviewed by OCHE. If there are any issues, the proposal will be returned for clarification/correction. If no issues, the proposal will be returned with a note of approval and the request will be placed on the General Consent Calendar of the next Regents' agenda.</i>			<i>Items submitted will be reviewed by OCHE. If there are any issues, the proposal will be returned for clarification/correction. If no issues, the proposal will be returned with a note of approval and the request will be placed on the General Consent Calendar of the next Regents' agenda.</i>		
Section #		Item	Section #		Item
4.1.5.2	<input type="checkbox"/>	Minor*	6.1.1	<input type="checkbox"/>	Reinstatement of Previously Suspended Program
5.1.1.1	<input type="checkbox"/>	New Emphasis on an Existing Degree*	6.1.5	<input type="checkbox"/>	Reinstatement of Previously Suspended Unit
5.1.2	<input type="checkbox"/>	Certificate of Proficiency Not Eligible for Financial Aid			
5.1.3	<input type="checkbox"/>	Out-of-Service Area Delivery of Programs			
5.1.4	<input type="checkbox"/>	Name Change of Existing Programs			
	<input type="checkbox"/>	Program Transfer			
5.1.5	<input checked="" type="checkbox"/>	Program Restructure			
	<input type="checkbox"/>	Program Consolidation			
5.1.6	<input type="checkbox"/>	Program Discontinuation			
	<input type="checkbox"/>	Program Suspension			
	<input type="checkbox"/>	Administrative Unit Creation			
5.1.7	<input type="checkbox"/>	Administrative Unit Transfer			
	<input type="checkbox"/>	Administrative Unit Consolidation			
	<input type="checkbox"/>	New Center			
5.1.8	<input type="checkbox"/>	New Institute			
	<input type="checkbox"/>	New Bureau			
5.1.9	<input type="checkbox"/>	Graduate Certificate			

*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:

Printed Name:

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>.

Institution Submitting Proposal: *Utah State University*

College, School or Division in Which Program/Administrative Unit Will Be Located: *Science*

Department(s) or Area(s) in Which Program/Administrative Unit Will Be Located: *Biology*

Program/Administrative Unit Title: *Biology/Ecology*

Recommended Classification of Instructional Programs (CIP) Code: *26.1301 (Ecology)*

Certificate, and/or Degree(s) to Be Awarded: *PhD in Ecology*

Proposed Beginning Date: *August 27, 2012 (fall semester)*

Institutional Signatures (*as appropriate*):



Alan H. Savitzky, Department Head, Biology

James A. MacMahon, Dean, College of Science

*Mark R. McLellan, Vice President for Research
and Dean of Graduate Studies*

Date:

R401.5.1.5- Program Restructure
 Utah State University
 Ph.D. in Ecology
 03/12/2012

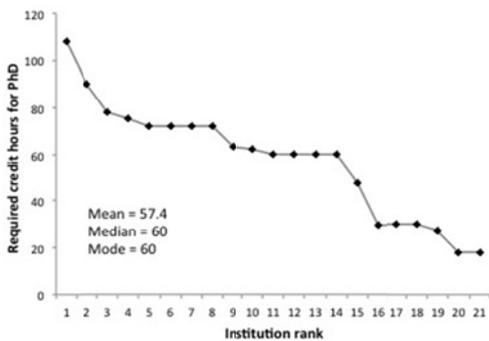
Section I: Request

The Department of Biology proposes to restructure its PhD in Ecology. For this degree program the current credit hour requirements are 60 credits for incoming students with a MS degree and 90 credits for students without a MS degree. We propose reducing required credit hours for this program to 60 credit hours for the PhD degree, regardless of whether or not a student has a MS.

Section II: Need

Flexibility in designing a program of study is a core strength of the PhD programs offered through the Biology Department. In terms of formal coursework, the Department only requires students to complete a 1-credit orientation course; the remainder of coursework is aimed at building core competencies and skills specific to a student's research interests. Indeed, the PhD degrees offered through the Biology Department are awarded on the basis of the student's ability to conduct cutting-edge, original research. Most PhD students in our programs finish their degree within 5-6 years. Assuming full-time status is 6 credits/semester, a student could complete 60 credit hours in 5 years. Thus, reduction of credit hours to 60 credits would impact only the number of hours of dissertation research (BIOL 7970) for which students typically register. Furthermore, the minimum number of credit hours of BIOL 7970 remains unchanged (12 credits for students with a master's degree and 18 credits for students without a master's degree). The proposed credit change will fully maintain the academic rigor of Biology's PhD program in Ecology because there is no change in coursework requirements, or in expectations for research productivity. At the same time we expect this change will enhance competitiveness for recruiting graduate students.

We see no need to require fewer credit hours for students who already have a MS degree. While students with a MS might be more mature and better prepared to complete the PhD than a post-baccalaureate student, they typically do not complete their research at a faster pace. Completion time more frequently reflects the nature of the dissertation project than the number of classes taken. Limiting the coursework requirement to 60 credit hours for both groups of PhD student would put them on an even playing field; if their research can be completed more quickly than 5 years, 60 credits could be taken over a shorter time frame, such as 9 credits per semester and/or enrolling in coursework over the summer. If a student requires more than 5 years to complete the research, they can enroll in Continued Graduate Advisement for up to 9 credits.



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Analysis of 21 other land-grant universities (see appendix) shows that 60 credit hours for a PhD in the biological sciences is a very reasonable proposal. The range of credit hours among these institutions is 18-108, with a mean value of 57.4; the median and modal values are 60 credits (Figure 1). Currently our requirement of 90 credits for the PhD without the MS is tied with Virginia Tech for the highest rank outside of Oregon State University, which is on the quarter system and requires 108

credit hours toward the PhD. More than half (11 of 21) of these institutions require 60 or fewer credit hours (Figure 1).

Section III: Institutional Impact

We anticipate that reduction of required credit hours toward the PhD will increase our ability to recruit and retain top graduate students from around the country, because competing programs require fewer credits. Thus we expect this change will help the Department of Biology meet institutional goals of increasing graduate student enrollments over the next several years. The proposed change will not affect existing administrative structures. We do not anticipate that any changes in faculty or staff will be necessary as a consequence of this restructuring.

Section IV: Finances

No additional costs are anticipated as a result of this change. The Department of Biology already receives more applications from highly qualified students than we can support. By reducing the number of required credit hours from 90 to 60, we anticipate that we will be able to grow our PhD program while replacing students who cycle out more rapidly with their degrees.

Appendix

Land-grant institutions included in analysis

Auburn

Clemson

Colorado State University

Iowa State University

Kansas State University

Mississippi State University

Montana State University

New Mexico State University

North Carolina State University

Oregon State University

Pennsylvania State University

University of Alaska

University of Arizona

University of Idaho

University of Massachusetts-Amherst

University of Nevada-Reno

University of Vermont

University of Wyoming

Virginia Tech

Washington State University

West Virginia University



March 12, 2012

**Requests to Restructure the
PhD Programs in the Department of Chemistry and Biochemistry**

Executive Summary

The Department of Chemistry and Biochemistry requests a restructuring of its doctoral programs in Chemistry and in Biochemistry, as described in the two attached R401-Abbreviated Templates. The goal is to reduce the number of credit hours required for completion of these two doctoral programs to a level that is consistent with those of comparable institutions, including the USU peer group of Western Land Grant Institutions.

We propose to reduce the number of required credits from the current 90 for students entering with a BS degree to 60, and reduce the number of credits for those who enter with the MS degree from the current 60 credits to 30. There will be no change in either case in formal coursework expectations, research requirements, nor any other of the benchmarks that must be met for awarding of these doctorate degrees. The only change will be in the number of credits of Dissertation Research that students will register for over time as they complete their body of original research.

These changes will put our credit requirements well within the ranges of our peer institutions. This will assist us in recruiting the most qualified doctoral students to our graduate programs. No changes in instructional, administrative, or financial resources will be needed to implement these changes.

Alvan Hengge
Professor and Head, Department of Chemistry and Biochemistry

Cover/Signature Page - Abbreviated Template

Institution Submitting Request: *Utah State University*
 Proposed Title: *PhD in Chemistry* (no change from current title)
 Currently Approved Title: *PhD in Chemistry*
 School or Division or Location: *College of Science*
 Department(s) or Area(s) Location: *Department of Chemistry & Biochemistry*
 Recommended Classification of Instructional Programs (CIP) Code¹ (for new programs): *40.0501 (Chemistry)*
(no change from current)
 Current Classification of Instructional Programs (CIP) Code (for existing programs): *40.0501 (Chemistry)*
 Proposed Beginning Date (for new programs): *08/27/2012*
 Institutional Board of Trustees' Approval Date:

Proposal Type (check all that apply):

R401-5		R401-6	
<i>Items submitted will be reviewed by OCHE. If there are any issues, the proposal will be returned for clarification/correction. If no issues, the proposal will be returned with a note of approval and the request will be placed on the General Consent Calendar of the next Regents' agenda.</i>		<i>Items submitted will be reviewed by OCHE. If there are any issues, the proposal will be returned for clarification/correction. If no issues, the proposal will be returned with a note of approval and the request will be placed on the General Consent Calendar of the next Regents' agenda.</i>	
Section #	Item	Section #	Item
4.1.5.2	<input type="checkbox"/> Minor*	6.1.1	<input type="checkbox"/> Reinstatement of Previously Suspended Program
5.1.1.1	<input type="checkbox"/> New Emphasis on an Existing Degree*	6.1.5	<input type="checkbox"/> Reinstatement of Previously Suspended Unit
5.1.2	<input type="checkbox"/> Certificate of Proficiency Not Eligible for Financial Aid		
5.1.3	<input type="checkbox"/> Out-of-Service Area Delivery of Programs		
5.1.4	<input type="checkbox"/> Name Change of Existing Programs		
	<input type="checkbox"/> Program Transfer		
5.1.5	<input checked="" type="checkbox"/> Program Restructure		
	<input type="checkbox"/> Program Consolidation		
5.1.6	<input type="checkbox"/> Program Discontinuation		
	<input type="checkbox"/> Program Suspension		
	<input type="checkbox"/> Administrative Unit Creation		
5.1.7	<input type="checkbox"/> Administrative Unit Transfer		
	<input type="checkbox"/> Administrative Unit Consolidation		
5.1.8	<input type="checkbox"/> New Center		
	<input type="checkbox"/> New Institute		
	<input type="checkbox"/> New Bureau		
5.1.9	<input type="checkbox"/> Graduate Certificate		

*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:

Printed Name:

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>.

Institution Submitting Proposal: *Utah State University*

College, School or Division in Which Program/Administrative Unit Will Be Located: *College of Science*

Department(s) or Area(s) in Which Program/Administrative Unit Will Be Located: *Chemistry and Biochemistry*

Program/Administrative Unit Title: *Chemistry and Biochemistry*

Recommended Classification of Instructional Programs (CIP) Code: *40.0501 (Chemistry)*

Certificate, and/or Degree(s) to Be Awarded: *PhD in Chemistry*

Proposed Beginning Date: *August 27, 2012*

Institutional Signatures (*as appropriate*):



*Alvan Hengge, Department Head,
Chemistry and Biochemistry*



James MacMahon, Dean, College of Science

*Mark R. McClellan, Vice President for Research
and Dean of Graduate Studies*

Date:

R401.5.1.5- Program Restructure
Utah State University
Ph.D. in Chemistry
03/12/2012

Section I: Request

The Department of Chemistry and Biochemistry requests a reduction in the number of credits required for the doctoral degree in Chemistry. The current requirements are 90 credits for students who enter with the BS degree, and 60 credits for those with an MS. We propose to reduce the required credits for both tracks by 30 credits, to 60 for students who enter with a BS, and to 30 credits for those who enter with the MS.

Section II: Need

This credit requirement reduction is needed to make our programs competitive with peer institutions. This will assist in recruiting, particularly for domestic graduate students. A survey of credit requirements at 13 other western universities, that includes all members of the USU peer group of Western Land Grant Institutions, shows an average of 62 credits for PhD degrees in Chemistry for students starting with a BS degree. The range of credit requirements among these institutions on the semester system is 18 to 78. Other than USU, the only institution with a credit requirement outside this range is Oregon State University, which is on a quarter system, and requires 108 quarter credits. Thus, 60 credits for the PhD is reasonable and consistent with peer institutions.

Colorado State University*
Montana State University*
New Mexico State University*
Oregon State University* (108 quarter credits; equivalent to 72 semester credits)
University of Alaska Fairbanks*
University of Arizona*
University of California-Davis*
University of Colorado
University of Idaho*
University of Nevada, Reno*
University of New Mexico
University of Wyoming*
Washington State University*
* Indicates members of the USU Peer Group of Western Land Grant Institutions, listed on: http://usu.edu/aaa/dashboard student fac.cfm

The coursework requirements for our PhD and MS degrees are the same, and consist of ~15 credits of formal coursework and 1 credit/year of seminar. Students typically complete their coursework by the end of their second year. The remaining credits on Programs of Study are dissertation research. Awarding of the doctoral degree is not based on completion of a set number of credits, but rather, on demonstration of subject mastery by a series of written and oral examinations, and completion of a body of original research. The only effect of the credit reduction will be that students will register for fewer CHEM 7970 dissertation research credits over the years they work on their research project. The reduction in credit requirement will have no effect on coursework requirements. The expectations in terms of the amount of research to be completed, requirement of a first author publication, and mastery of the subject as determined through rigorous annual reviews and oral exams, will not be affected. We

take pains to make it clear to students that they should not expect to be awarded a doctorate after completion of a set number of research credits, or a set number of semesters.

Our Chemistry doctorate students complete their doctorates in an average of 5.3 years. Since full time status for domestic as well as international students is attained with 6 credits/semester, 60 credits in 5 years is reached with 12 credits/year. Students who complete their research in less than 5 years can adjust their program of study accordingly in their final year, and those who need an extra semester or two can register for Continuing Graduate Advisement (CGA) credits.

The reduction in credits from 60 to 30 for students who enter with the MS degree is consistent with the advanced level of research experience and coursework of such entering students, and maintains the existing difference of 30 credits between the credit requirements of these two classifications of entering students. Working with their major professor and supervisory committees, these students typically craft a Program of Study with a reduced coursework requirement when they have taken graduate courses that are equivalent to those required by our doctorate program, which is the norm (like many institutions, we have the same formal coursework requirements for the MS and PhD degrees). These students also enter with much more research experience and make more rapid research progress in their early years. These different levels in preparation are manifested in degree completion times; Chemistry students entering with an MS typically complete their doctorate a year or more earlier than those who enter with a BS.

Section III: Institutional Impact

By reducing our credit requirements into line with those of peer institutions, we expect the change to aid our ability to recruit more and superior graduate students, particularly domestic students. This will assist us in doing our part in the University-wide goal of increasing graduate student enrollments in future years.

There will be no change to administrative structures.

There will be no change in faculty or staff requirements.

The academic requirements of this doctoral program will not be affected or changed.

Section IV: Finances

No costs are anticipated to result from this change.

Cover/Signature Page - Abbreviated Template

Institution Submitting Request: Utah State University

Proposed Title: PhD in Biochemistry (no change from current title)

Currently Approved Title: PhD in Biochemistry

School or Division or Location: College of Science

Department(s) or Area(s) Location: Department of Chemistry & Biochemistry

Recommended Classification of Instructional Programs (CIP) Code² (for new programs): 26.0202 (Biochemistry) (no change from current)

Current Classification of Instructional Programs (CIP) Code (for existing programs): 26.0202 (Biochemistry)

Proposed Beginning Date (for new programs): 08/27/2012

Institutional Board of Trustees' Approval Date:

Proposal Type (check all that apply):

R401-5		R401-6	
Items submitted will be reviewed by OCHE. If there are any issues, the proposal will be returned for clarification/correction. If no issues, the proposal will be returned with a note of approval and the request will be placed on the General Consent Calendar of the next Regents' agenda.		Items submitted will be reviewed by OCHE. If there are any issues, the proposal will be returned for clarification/correction. If no issues, the proposal will be returned with a note of approval and the request will be placed on the General Consent Calendar of the next Regents' agenda.	
Section #	Item	Section #	Item
4.1.5.2	<input type="checkbox"/> Minor*	6.1.1	<input type="checkbox"/> Reinstatement of Previously Suspended Program
5.1.1.1	<input type="checkbox"/> New Emphasis on an Existing Degree*	6.1.5	<input type="checkbox"/> Reinstatement of Previously Suspended Unit
5.1.2	<input type="checkbox"/> Certificate of Proficiency Not Eligible for Financial Aid		
5.1.3	<input type="checkbox"/> Out-of-Service Area Delivery of Programs		
5.1.4	<input type="checkbox"/> Name Change of Existing Programs		
5.1.5	<input type="checkbox"/> Program Transfer		
	<input checked="" type="checkbox"/> Program Restructure		
	<input type="checkbox"/> Program Consolidation		
5.1.6	<input type="checkbox"/> Program Discontinuation		
	<input type="checkbox"/> Program Suspension		
5.1.7	<input type="checkbox"/> Administrative Unit Creation		
	<input type="checkbox"/> Administrative Unit Transfer		
	<input type="checkbox"/> Administrative Unit Consolidation		
5.1.8	<input type="checkbox"/> New Center		
	<input type="checkbox"/> New Institute		

² 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>.

	<input type="checkbox"/>	New Bureau
5.1.9	<input type="checkbox"/>	Graduate Certificate

*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:

Printed Name:

Institution Submitting Proposal: Utah State University

College, School or Division in Which Program/Administrative Unit Will Be Located: College of Science

Department(s) or Area(s) in Which Program/Administrative Unit Will Be Located: Chemistry and Biochemistry

Program/Administrative Unit Title: Chemistry and Biochemistry

Recommended Classification of Instructional Programs (CIP) Code: 26.0202 (Biochemistry)

Certificate, and/or Degree(s) to Be Awarded: PhD in Biochemistry

Proposed Beginning Date: August 27, 2012

Institutional Signatures (as appropriate):



Alvan Hengge, Department Head,
Chemistry and Biochemistry



James MacMahon, Dean, College of Science

Mark R. McClellan, Vice President for Research
and Dean of Graduate Studies

Date:

R401.5.1.5- Program Restructure
Utah State University
Ph.D. in Biochemistry
03/12/2012

Section I: Request

The Department of Chemistry and Biochemistry requests a reduction in the number of credits required for the doctoral degree in Biochemistry. The current requirements are 90 credits for students who enter with the BS degree, and 60 credits for those with an MS. We propose to reduce the required credits for both tracks by 30 credits, to 60 for students who enter with a BS, and to 30 credits for those who enter with the MS.

Section II: Need

This credit requirement reduction is needed to make our programs competitive with peer institutions. This will assist in recruiting, particularly for domestic graduate students. A survey of credit requirements at 13 other western universities, that includes all members of the USU peer group of Western Land Grant Institutions, shows an average of 62 credits for PhD degrees in Chemistry for students starting with a BS degree. The range of credit requirements among these institutions on the semester system is 18 to 78. Other than USU, the only institution with a credit requirement outside this range is Oregon State University, which is on a quarter system, and requires 108 quarter credits. Thus, 60 credits for the PhD is reasonable and consistent with peer institutions.

Colorado State University*
Montana State University*
New Mexico State University*
Oregon State University* (108 quarter credits; equivalent to 72 semester credits)
University of Alaska Fairbanks*
University of Arizona*
University of California-Davis*
University of Colorado
University of Idaho*
University of Nevada, Reno*
University of New Mexico
University of Wyoming*
Washington State University*
* Indicates members of the USU Peer Group of Western Land Grant Institutions, listed on: http://usu.edu/aaa/dashboard_student_fac.cfm

The coursework requirements for our PhD and MS degrees in Biochemistry are the same, and consist of 15 credits of formal coursework and 1 credit/year of seminar. Students typically complete their coursework by the end of their second year. The remaining credits on Programs of Study are dissertation research. Awarding of the doctoral degree is not based on completion of a set number of credits, but rather, on demonstration of subject mastery by a series of written and oral examinations, and completion of a body of original research. The only effect of the credit reduction will be that students will register for fewer CHEM 7970 dissertation research credits. The reduction in credit requirement will have no effect on coursework requirements. The expectations in terms of the amount of research to be completed, requirement of a first author publication, and mastery of the subject as determined through rigorous annual reviews and oral exams, will not be affected. We take pains to make it clear to students that they should not expect to be awarded a doctorate

after completion of a set number of research credits, or a set number of semesters.

Our Biochemistry students complete their doctorates in an average of 5.5 years. Since full time status for domestic as well as international students is attained with 6 credits/semester, 60 credits in 5 years is reached with 12 credits/year. Students who complete their research in less than 5 years can adjust their program of study accordingly in their final year, and those who need an extra semester or two can register for CGA credits.

The reduction in credits from 60 to 30 for students who enter with the MS degree is consistent with the advanced level of research experience and coursework of such entering students, and maintains the existing difference of 30 credits between the credit requirements of these two classifications of entering students. Working with their major professor and supervisory committees, these students typically craft a Program of Study with a reduced coursework requirement when they have taken graduate courses that are equivalent to those required by our doctorate program, which is the norm (like many institutions, we have the same formal coursework requirements for the MS and PhD degrees). These students also enter with much more research experience and make more rapid research progress in their early years.

Section III: Institutional Impact

By reducing our credit requirements into line with those of peer institutions, we expect the change to aid our ability to recruit more and superior graduate students, particularly domestic students. This will assist us in doing our part in the University-wide goal of increasing graduate student enrollments in future years.

There will be no change to administrative structures.

There will be no change in faculty or staff requirements.

The academic requirements of this doctoral program will not be affected or changed.

Section IV: Finances

No costs are anticipated to result from this change.

Cover/Signature Page - Abbreviated Template

Institution Submitting Request: Utah State University
Proposed Title: Restructuring of Geology PhD Program
Currently Approved Title:
School or Division or Location: College of Science
Department(s) or Area(s) Location: Department of Geology
Recommended Classification of Instructional Programs (CIP) Code¹ (for new programs):
Current Classification of Instructional Programs (CIP) Code (for existing programs): 40.0601
Proposed Beginning Date (for new programs): *MM/DD/YEAR*
Institutional Board of Trustees' Approval Date: *MM/DD/YEAR*

Proposal Type (check all that apply):

R401-5			R401-6		
<i>Items submitted will be reviewed by OCHE. If there are any issues, the proposal will be returned for clarification/correction. If no issues, the proposal will be returned with a note of approval and the request will be placed on the General Consent Calendar of the next Regents' agenda.</i>			<i>Items submitted will be reviewed by OCHE. If there are any issues, the proposal will be returned for clarification/correction. If no issues, the proposal will be returned with a note of approval and the request will be placed on the General Consent Calendar of the next Regents' agenda.</i>		
Section #	<input type="checkbox"/>	Item	Section #	<input type="checkbox"/>	Item
4.1.5.2	<input type="checkbox"/>	Minor*	6.1.1	<input type="checkbox"/>	Reinstatement of Previously Suspended Program
5.1.1.1	<input type="checkbox"/>	New Emphasis on an Existing Degree*	6.1.5	<input type="checkbox"/>	Reinstatement of Previously Suspended Unit
5.1.2	<input type="checkbox"/>	Certificate of Proficiency Not Eligible for Financial Aid			
5.1.3	<input type="checkbox"/>	Out-of-Service Area Delivery of Programs			
5.1.4	<input type="checkbox"/>	Name Change of Existing Programs			
	<input type="checkbox"/>	Program Transfer			
5.1.5	<input checked="" type="checkbox"/>	Program Restructure			
	<input type="checkbox"/>	Program Consolidation			
5.1.6	<input type="checkbox"/>	Program Discontinuation			
	<input type="checkbox"/>	Program Suspension			
	<input type="checkbox"/>	Administrative Unit Creation			
5.1.7	<input type="checkbox"/>	Administrative Unit Transfer			
	<input type="checkbox"/>	Administrative Unit Consolidation			
	<input type="checkbox"/>	New Center			
5.1.8	<input type="checkbox"/>	New Institute			
	<input type="checkbox"/>	New Bureau			
5.1.9	<input type="checkbox"/>	Graduate Certificate			

*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: *MM/DD/YEAR*

Printed Name: *Name of CAO or Designee*

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>.

Institution Submitting Proposal: *Utah State University*

College, School or Division in Which Program/Administrative Unit Will Be Located: *College of Science*

Department(s) or Area(s) in Which Program/Administrative Unit Will Be Located: *Department of Geology*

Program/Administrative Unit Title: *Department of Geology*

Recommended Classification of Instructional Programs (CIP) Code: *40.0601*

Certificate, and/or Degree(s) to Be Awarded: *PhD in Geology*

Proposed Beginning Date: *July 1, 2012*

Institutional Signatures (*as appropriate*):

Department Chair



W. David Liddell

Career and Technical Education Director

Dean or Division Chair



James A. MacMahon

Graduate School Dean

Council on Teacher Education

Date: *March 8, 2012*

Program Request - Abbreviated Template
Utah State University
PhD in Geology
03/08/2012

Section I: Request

The Department of Geology requests a restructuring of our PhD Program wherein the number of credits required for the PhD (from BS) will be reduced from 90 to 72 credits and for the PhD (from MS) from 60 to 42 credits.

Section II: Need

This restructure is necessary to make the Department of Geology more competitive in recruiting PhD students. The vast majority of our peer institutions require far fewer credit hours for the PhD (72 is the modal number) than does our institution (refer to table below). The only other institution in the state that grants the PhD in Geology is the University of Utah. The University of Utah does not have a minimum number of required credits, but does require, "about 20 semester hours of course credits" for the PhD with prior MS degree.

This change will not affect the rigor of our PhD program. This change will not affect the core courses required for the PhD students, nor will it affect the effort devoted to their PhD dissertation projects. The students will simply be signing up for fewer dissertation or continuing advisement credits.

SCHOOL	PhD (from MS)	PhD (from BS)
Colorado State U	42	72
Iowa State Univ	36	72
North Carolina State U	54	72
New Mexico State U	No PhD	No PhD
Oregon State U	?	"3 yr"
Penn State	?	"4 yr"
Texas A&M	64	96
U CA Davis	?	72
Univ Utah	3 yr/ 20 cr min	NA - MS required
VPI	?	90
Washington State U	34+	72
MEAN	46 (based on 5 with actual credits listed)	78 (based on 7 with actual credits listed)
MEDIAN	42	72

Section III: Institutional Impact

The proposed program restructure should result in an increase in applications to the Geology Department by qualified PhD applicants. This will "raise the bar" for an already excellent program.

This change should not affect affiliated departments or programs. No changes in faculty, staff or equipment will be required by the change. Students who are already enrolled in the PhD program will have the option of completing under the old or the new credit requirements.

Section IV: Finances

No additional costs are associated with this change. The change will result in more efficient utilization of resources (e.g. PhD graduate tuition awards).

Section V: Program Curriculum

*****THIS SECTION OF THE ABBREVIATED TEMPLATE REQUIRED FOR EMPHASES AND MINORS ONLY.*****

All Program Courses

Course Prefix & Number	Title	Credit Hours
Required Courses		
	Sub-Total	
Elective Courses		
	Sub-Total	
Track/Options (if applicable)		
	Sub-Total	
Total Number of Credits		

New Courses to Be Added in the Next Five Years

Semester 1	Course Prefix and Number	Course Title
<i>(List courses – use one row per course)</i>		
Semester 2		
<i>(List courses – use one row per course)</i>		
<i>Continue with Semesters for Entire Program</i>		

Program Schedule

Cover/Signature Page - Abbreviated Template

Institution Submitting Request: *Utah State University*
 Proposed Title: *PhD in Physics*
 Currently Approved Title: *PhD in Physics*
 School or Division or Location: *College of Science*
 Department(s) or Area(s) Location: *Physics*
 Recommended Classification of Instructional Programs (CIP) Code¹ (for new programs): *40.0801 (Physics)*
 Current Classification of Instructional Programs (CIP) Code (for existing programs): *40.0801 (Physics)*
 Proposed Beginning Date (for new programs): *08/27/2012*
 Institutional Board of Trustees' Approval Date: *MM/DD/YEAR*

Proposal Type (check all that apply):

R401-5			R401-6		
<i>Items submitted will be reviewed by OCHE. If there are any issues, the proposal will be returned for clarification/correction. If no issues, the proposal will be returned with a note of approval and the request will be placed on the General Consent Calendar of the next Regents' agenda.</i>			<i>Items submitted will be reviewed by OCHE. If there are any issues, the proposal will be returned for clarification/correction. If no issues, the proposal will be returned with a note of approval and the request will be placed on the General Consent Calendar of the next Regents' agenda.</i>		
Section #		Item	Section #		Item
4.1.5.2	<input type="checkbox"/>	Minor*	6.1.1	<input type="checkbox"/>	Reinstatement of Previously Suspended Program
5.1.1.1	<input type="checkbox"/>	New Emphasis on an Existing Degree*	6.1.5	<input type="checkbox"/>	Reinstatement of Previously Suspended Unit
5.1.2	<input type="checkbox"/>	Certificate of Proficiency Not Eligible for Financial Aid			
5.1.3	<input type="checkbox"/>	Out-of-Service Area Delivery of Programs			
5.1.4	<input type="checkbox"/>	Name Change of Existing Programs			
	<input type="checkbox"/>	Program Transfer			
5.1.5	<input checked="" type="checkbox"/>	Program Restructure			
	<input type="checkbox"/>	Program Consolidation			
5.1.6	<input type="checkbox"/>	Program Discontinuation			
	<input type="checkbox"/>	Program Suspension			
	<input type="checkbox"/>	Administrative Unit Creation			
5.1.7	<input type="checkbox"/>	Administrative Unit Transfer			
	<input type="checkbox"/>	Administrative Unit Consolidation			
	<input type="checkbox"/>	New Center			
5.1.8	<input type="checkbox"/>	New Institute			
	<input type="checkbox"/>	New Bureau			
5.1.9	<input type="checkbox"/>	Graduate Certificate			

*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: *MM/DD/YEAR*

Printed Name: *Name of CAO or Designee*

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>.

Institution Submitting Proposal: *Utah State University*

College, School or Division in Which Program/Administrative Unit Will Be Located: *Science*

Department(s) or Area(s) in Which Program/Administrative Unit Will Be Located: *Physics*

Program/Administrative Unit Title: *Physics*

Recommended Classification of Instructional Programs (CIP) Code: *40.0801 (Physics)*

Certificate, and/or Degree(s) to Be Awarded: *PhD in Physics*

Proposed Beginning Date: *August 27, 2012 (fall semester)*

Institutional Signatures (*as appropriate*):



Jan J. Sojka, Department Head, Physics



James MacMahon, Dean, College of Science

*Mark R. McClellan, Vice President for Research
and Dean of Graduate Studies*

Date:

**R401.5.1.5- Program Restructure
Utah State University
Ph.D. in Physics
03/12/2012**

Section I: Request

The Department of Physics proposes to restructure its PhD degree in Physics. The current credit hour requirement is 90 credits for an incoming student with a BS degree. We propose reducing the minimum credit hours to 72 credit hours.

Section II: Need

Academic departments at USU carried out an in-depth review of their graduate degree programs during the Spring Semester 2012. Data was supplied to the departments from an NRC National study and each department was requested to review this information in the context of their own programs. The USU Physics PhD program, like most others in the nation has two components, advanced course and research requirements. The advanced course requirement in Physics is a core of 32 credit hours and this was found to be similar to that of most other physics departments. Analysis of the research credit requirement was quite different. At the present time, the USU minimum credit requirement to complete a PhD is set at 90 credit hours. In the NRC survey, the range of minimum credits is quite variable, however the 90 credit hour minimum is one of the largest in the survey. In comparison with USU peer institutions and with land grant schools, our 90-credit requirement is one of the largest. No statistical average number is identified since some of the schools do not define a minimum. Within our peer group, 6 schools specify a 72 credit minimum requirement.

Nationally, physics PhD programs take 5 to 6 years to complete, with the first two years being used to complete coursework at about 9 credits per semester. The subsequent 3 to 4 years are devoted to research at about 6 credits per semester. However, at USU and at other schools, the research is not measured by credit hours, but rather by research accomplishments such as refereed publications and presentations at national meetings. In this context the USU Physics program's time to completion, as well as academic course work and research requirements are consistent with those of our peer institutions, but our minimum credit requirement is significantly higher.

The need to align our Physics PhD minimum credit hour requirement with our peers is based on the need to recruit the best possible graduate students. When comparing the USU Physics Department's 90-credit requirement with those of our peer institutions, potential graduate students would note that ours is significantly longer. This puts USU's physics program at a recruiting disadvantage.

The request to reduce the minimum credit hours from 90 to 72 will not change our course requirements, nor the method by which a student's research accomplishments are evaluated.

Section III: Institutional Impact

Anticipate that reduction of required credit hours toward the PhD will increase our ability to recruit and retain top graduate students from around the country, because competing programs require fewer credits.

Section IV: Finances

No additional costs are anticipated from this change.

5.4 Transfer, Restructuring, or Consolidation of Existing Programs

Section I: Request

The Departments of Geology and Watershed Sciences at Utah State University both seek to add a "Geomorphology & Earth Surface Processes" specialization to their respective MS and PhD degrees in Geology and Watershed Science. Primary activities impacted include the writing of a catalog description and the development and finalization of specialization requirements. No instructional activities will be impacted, as courses to be used for the requested specialization are already offered.

Section II: Need

The MS and PhD degrees in Watershed Science currently offer no specialization in geomorphology in spite of the depth of faculty expertise in this area. Both the Geology & Watershed Sciences departments have several faculty with research interests in this area, and a common specialization would strengthen the linkages between the departments/colleges and could allow students to become more interdisciplinary in their research interests. The "Geomorphology & Earth Surface Processes" specialization will prepare students for careers in research, monitoring, management and restoration of land surfaces with a particular emphasis on the processes that shape landscapes across multiple scales. Course offerings in this specialization will include a) foundational knowledge, b) essential analytical, laboratory and field methods and skills, and c) application to topical challenges to land management, ecosystem recovery and stream/river restoration. A depth of foundational knowledge will be emphasized through geology, hydrology, fluvial geomorphology, fluvial hydraulics and hillslope geomorphology. A rich range of courses offered in Geology and Watershed Sciences, and other programs across the University (e.g. Ecology, Soils, Climate, Civil & Environmental Engineering, etc.) will fulfill the requirements of the specialization and build a breadth of understanding and interdisciplinary perspective among participating students.

Section III: Institutional Impact

The proposed change will not affect enrollments in the instructional programs of the two lead departments or of affiliated departments or programs, nor will administrative structures be affected. Two recent faculty hires in the Department of Watershed Sciences are teaching the additional courses as part of their role assignments. Faculty in the Geology Department presently teach courses that will support this specialization.

Section IV: Finances

No additional costs or savings are anticipated from this change.

Section V: Program Curriculum

All Program Courses

The GESP specialization requirements are designed to allow for flexible programs of study tailored to each student's needs and interests relative to their past experience. The minimum University and Departmental Degree requirements for the respective Department's graduate degree need to be met. In addition to those requirements (but a part of the total credit requirement for each degree), the GESP specialization requires a core-set of foundational coursework in i) hydrology, ii) geomorphology and iii) analytical and computational skills. If a student has previously taken coursework or has relevant experience in these depth requirement areas, the student's supervisory committee may waive or substitute these requirements as they see fit.

DEPARTMENT SPECIFIC TRACK REQUIREMENTS (1 – 3 CREDITS)

Students must fulfill the requirements specified for their departmental degree in addition to specialization requirements.

For Watershed Sciences students this includes:

- WATS 6800/7800 – Watershed Sciences Departmental Seminar – 1 (F/Sp)
- WATS 6250 – Watershed Sciences Graduate Induction Course - 1 (F)

For Geology students this includes:

- GEO 6100/7100 – Graduate Seminar in Geomorphology - 1-3 (F)

CORE REQUIREMENT (9 CREDITS)

Students with this specialization must demonstrate proficiency in three core areas: hydrology, geomorphology, and analytical/computational methods. Students must take at least three courses from this list of core courses. In general, students are expected to take one course in each of these core areas. The student's Supervisory Committee may modify this requirement based on the student's past coursework and/or experience and select any three courses that will best address the specific student's deficiencies.

ELECTIVES

It is recommended that students choose electives from the Electives list below or from the core requirement list as electives that are not used to meet their core requirement.

	Course Prefix, Number and Title	Credit Hours
Department Requirements	Department of Watershed Sciences Students	
	WATS 6800/7800 – Watershed Sciences Seminar	1
	WATS 6250 – Watershed Sciences Graduate Induction	1
	Department of Geology Students	
	GEO 6100/7100 – Graduate Seminar in Geomorphology	1-3
	Sub-Total	1-3
Courses to Fulfill Core Requirements	i. Hydrology Requirement	
	WATS 5490 - Small Watershed Hydrology (Sp)	4
	CEE 6400 - Physical Hydrology (F)	3
	ii. Geomorphology Requirement	
	WATS 6150 - Fluvial Geomorphology (F)	3
	WATS 5670- Sediment Transport in Stream Assessment & Design (Su)	2
	GEO 6120/7120 – Advanced Geomorphology (Sp)	3
	iii. Analytical & Computational Methods Requirement	
	GEO 6540 – Quantitative Methods in Geology (F)	3
	GEO 6800/7800 – Graduate Seminar (F/Sp)	1-6
	WATS 6003 - Remote Sensing of Land Surfaces (Sp)	4
	WATS 6850* - Geomorphic Change Detection (Su)	1
	WATS 6900 – River Bathymetry Toolkit (Su)	1
	WATS 6900 – Graduate Special Topics (F/Sp)	1-6
	WATS 6920 – Advanced GIS & Spatial Analysis (Sp)	3
	WILD 6900 - GIS Programming with Python I (Sp)	1
	WILD 6740 - Physical Processes in Remote Sensing (Sp)	3
	WILD 6750 - Applied Remote Sensing (F)	3
Sub-Total	9 (min)	
Elective Courses	Potential Electives (organized by Department)	
	BIOLOGY	
	BIOL 6010 – Biogeography (Sp)	3
	BIOL 6020 – Modeling Biological Systems (F)	3
	BIOL 5030 – Individual-Based Models in Ecology & Evolution (F)	3
	BIOL 6050 - Programming & Database Management for Biologists II (F)	3
	CONTINUED ON NEXT PAGE	

Course Prefix & Number	Title	Credit Hours
Elective Courses	Potential Electives CONT. (organized by Department)	
	CIVIL & ENVIRONMENTAL ENGINEERING	
	CEE 6003 – Remote Sensing of Land Surfaces (Sp)	4
	CEE 6440 – Geographic Information Systems in Water Resources (F)	3
	CEE 6450 - Hydrologic Modeling (Sp)	3
	CEE 6470 – Sedimentation Engineering (Sp)	3
	CEE 6490 - Integrated River Basin/Watershed Planning & Management (Sp)	3
	CEE 6520 - Applied Hydraulics (F)	3
	CEE 6590 – Evaluation of Hydrologic Modeling Systems (Sp)	3
	CEE 7430 - Stochastic Hydrology (Sp)	3
	ENVIRONMENT & SOCIETY	
	ENVS 6320/7320 – Water Law & Policy in the United States (Sp)	3
	ENVS 6530 – Natural Resources Administration (F)	3
	GEOLOGY	
	GEO 5510 – Groundwater Geology (F)	3
	GEO 6540 – Quantitative Methods in Geology (F)	3
	GEO 5630 - Photogeology and Image Analysis (Sp)	3
	GEO 6100/7100 – Graduate Seminar in Geomorphology (F)	1-6
	GEO 6520 – Techniques in Groundwater Investigations (Sp)	3
	GEO 6880 – Paleoclimatology (SP)	3
	GEO 6100/7100 – Graduate Seminar in Geomorphology (F)	1-3
	GEO 6120/7120 - Advanced Geomorphology (SP)	3
	GEO 6250/7250 - Mechanics & Process in Earth Science (SP)	3
	GEO 6660 – Applied Geophysics (Sp)	4
	GEO 6800/7800 – Graduate Seminar (F/Sp)	1-6
	GEO 6970 – Thesis Research	
	GEO 7970 – Dissertation Research	
	MATHEMATICS	
	MATH 5620 – Numerical Solution of Differential Equations (Sp)	3
	MATH 5670 – Stochastic Processes (F)	3
	PLANT SOILS AND CLIMATE	
	PSC 6130 - Soil Genesis, Morphology, and Classification (F)	4
	PSC 5670/6670 - Environmental Soil Physics (F)	4
	PSC 7210 - Advanced Topics in Pedology (Sp)	2
	SOCIOLOGY	
	SOC 6620 – Environment, Technology & Social Change (Sp)	3
	SOC 6630 – Natural Resources & Social Development (Sp)	3
	SOC 6640 – Conflict Management in Natural Resources (Sp)	3

Course Prefix & Number	Title	Credit Hours
Elective Courses	Potential Electives CONT. (organized by Department)	
	STATISTICS	
	STAT 5100 – Linear Regression & Time Series (F)	3
	STAT 5200 – Design of Experiments (Sp)	3
	STAT 5600 – Applied Multivariate Statistics (Sp)	3
	STAT 6180 – Time Series (Sp)	3
	STAT 6410 – Applied Spatial Statistics (F)	3
	WATERSHED SCIENCES	
	WATS 6150 - Fluvial Geomorphology (F)	3
	WATS 6170 - Fluvial Geomorphology Lab (F)	2
	WATS 5200 - Fish Habitats (F)	2
	WATS 5490 - Small Watershed Hydrology (Sp)	4
	WATS 5640/7640 - Riparian Ecology and Management (Sp)	3
	WATS 5670 - Sediment Transport in Stream Assessment & Design (Su)	2
	WATS 5660 - Watershed and Stream Restoration (Su)	2
	WATS 5670 - Watershed and Stream Restoration Practicum (Su)	2
	WATS 5680/6880 - Paleoclimatology (Sp)	3
	WATS 6003 - Remote Sensing of Land Surfaces (Sp)	4
	WATS 6250 - WATS Graduate Induction Course (F)	1
	WATS 6520 - Applied Hydraulics (Sp)	3
	WATS 6740 - Remote Sensing: Modeling & Analysis	3
	WATS 6850* - Geomorphic Change Detection (Su)	1
	WATS 6900 – Fluvial Hydraulics & Ecohydraulics (Sp)	2-3
	WATS 6900 - Partnering with Beaver in Restoration Design (F)	1
	WATS 6900 - River Bathymetry Toolkit (Su)	1
	WATS 6900 - Graduate Special Topics	1-5
	WATS 6920 - Advanced GIS & Spatial Analysis (Sp)	3
	WATS 6921 - GIS Research Projects (Sp)	2
	WATS 6970 - Thesis Research	
	WATS 7970 - Dissertation Research	
	WILDLAND RESOURCES	
	WILD 6350 - Wildland Soils (Sp)	3
	WILD 6510 - Topics in Spatial Ecology (Sp)	1-3
	WILD 6710/7710 - Landscape Ecology (Sp)	3
WILD 6740 - Physical Processes in Remote Sensing (Sp)	3	
WILD 6750 - Applied Remote Sensing (F)	3	
WILD 6900 - GIS Programming with Python I (Sp)	1	
WILD 6900 - GIS Programming with Python II (Sp)	1	
	Subtotal (Electives)	Varies
	TOTAL REQUIRED	10-12

New Courses to Be Added in the Next Five Years

No new courses are needed for the specialization to meet the requirements outlined above. There is already flexibility within the above curriculum to offer courses as new topics within the GEO 6100/7100 (Graduate Seminar in Geomorphology), GEO 6120/7120 (Advanced Geomorphology), and WATS 6900 (Special Topics). If new courses are added, they will be listed as elective courses.

Program Schedule

The GESP specialization requirements are designed to allow for flexible programs of study tailored to each student's needs and interests relative to their past experience. In general, students should seek to complete:

- In First Year:
 - Departmental Requirements (1-3 credits)
 - Core Requirements
 - Elective(s) necessary to support their research
- In Second Year:
 - Complete or continue remaining electives
 - Research (Thesis/Dissertation)
- Third Year & Beyond (PhD)
 - Complete or continue remaining electives
 - Research (Thesis/Dissertation)

Institution Submitting Proposal: Utah State University

College, School, or Divisions in which program/administrative unit will be located: College of Natural Resources and College of Science

Departments or Areas in Which Program/Administrative Unit will be located: Department of Watershed Sciences and Department of Geology

Recommended Classification of Instructional Program (CIP) Code: 03.0205

Certificate and/or Degrees to be Awarded: MS and PhD in Watershed Sciences and MS and PhD in Geology, new specialization in Geomorphology and Earth Surface Processes

Institutional Signatures:

Charles Hawkins, Department Head, Watershed Sciences Date

Chris Luecke, Dean, College of Natural Resources Date

David Liddell, Department Head, Geology Date

James MacMahon, Dean, College of Science Date

Mark R. McLellan, Vice President for Research and Dean of the School of Graduate Studies Date

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):

R401-5			R401-6		
<i>Items submitted will be reviewed by OCHE. If there are any issues, the proposal will be returned for clarification/correction. If no issues, the proposal will be returned with a note of approval and the request will be placed on the General Consent Calendar of the next Regents' agenda.</i>			<i>Items submitted will be reviewed by OCHE. If there are any issues, the proposal will be returned for clarification/correction. If no issues, the proposal will be returned with a note of approval and the request will be placed on the General Consent Calendar of the next Regents' agenda.</i>		
Section #	Item		Section #	Item	
4.1.5.2	<input type="checkbox"/> Minor*		6.1.1	<input type="checkbox"/> Reinstatement of Previously Suspended Program	
5.1.1.1	<input type="checkbox"/> New Emphasis on an Existing Degree*		6.1.5	<input type="checkbox"/> Reinstatement of Previously Suspended Unit	
5.1.2	<input type="checkbox"/> Certificate of Proficiency Not Eligible for Financial Aid				
5.1.3	<input type="checkbox"/> Out-of-Service Area Delivery of Programs				
5.1.4	<input type="checkbox"/> Name Change of Existing Programs				
	<input type="checkbox"/> Program Transfer				
5.1.5	<input type="checkbox"/> Program Restructure				
	<input type="checkbox"/> Program Consolidation				
5.1.6	<input type="checkbox"/> Program Discontinuation				
	<input type="checkbox"/> Program Suspension				
	<input type="checkbox"/> Administrative Unit Creation				
5.1.7	<input type="checkbox"/> Administrative Unit Transfer				
	<input type="checkbox"/> Administrative Unit Consolidation				
5.1.8	<input checked="" type="checkbox"/> New Center				
	<input type="checkbox"/> New Institute				
	<input type="checkbox"/> New Bureau				
5.1.9	<input type="checkbox"/> Graduate Certificate				

*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.

Utah State University
Center for Society, Economics and the Environment (CSEE)

Section I: Request

Utah State University proposes to establish a university-wide center that builds on its existing institutional strength in the social science of human-environment interactions and the multitude of ways in which social and economic development conditions are linked to environmental amenities and natural resource assets. The Center for Society, Economics and the Environment (CSEE) will achieve four objectives. It will: (1) serve as a key research resource to community, state, regional, and national agencies and organizations, (2) act as an information source for social science projects aimed at environmental, natural resource, and development issues, (3) foster inter-disciplinary research relationships among USU faculty, and (4) enrich educational opportunities for students researching linkages between social, economic and environmental phenomena.

Section II: Need

The underlying premise of the proposed USU Center for Society, Economy and the Environment (CSEE) is that local environments, economies, and societies are highly interdependent, and that efforts to enhance any one of these will succeed when all three are considered together. Additionally, urban and rural regions of the state and region seek economic prosperity, diversity of their economic structure, and development of their communities in a socially and environmentally sustainable manner. Development of communities in Utah, the Intermountain West, and beyond relies upon wise use of a region's natural resource base in a manner that enhances the quality of life; this requires capacity to collect and analyze relevant data and policy choices, which many communities and agencies do not possess.

USU has a large number of social scientists engaged in research, education, and outreach activities at the nexus of societal decision making, economic development and valuation, and the environmental and resource base. These scientists, located primarily in the Departments of Applied Economics, Environment and Society, and Sociology, Social Work and Anthropology, share a long history of collaboration in both research and educational efforts. However, the absence of an established bridging infrastructure across the several colleges and departments in which research and outreach on socioeconomic and environmental topics occurs hinders the ability of these scientists to fulfill a key part of the USU Mission: "...to [serve] the public through learning, discovery, and engagement."

No entity within the Utah System of Higher Education has a center with a similar mission. An unofficial entity at Utah State University entitled the Center for Public Lands and Rural Economics is funded by a federal line item. This organization focuses on health care, education, and quality of life in rural areas from a political science perspective. The Bureau of Economic and Business Research at the University of Utah conducts some public lands studies—particularly with respect to economic impact studies of Utah's energy resources—but for the most part is concerned with housing and real estate, construction, demography, and industry impact studies. Southern Utah University's Office of Regional Services facilitates community engagement between local, state, and federal governments as rural regions, particularly those in southwestern Utah, consider development alternatives. The SUU Office of Regional Services does little in the way of original research, acting primarily as an outreach organization.

CSEE would be unique among officially designated centers in the USHE: an interdisciplinary unit focused on original research highlighting the connection between socio-economic development and Utah's environmental and natural resource base, in partnership with local, state and federal entities.

Section III: Institutional Impact

CSEE will serve as a key resource to community, state, regional, and national agencies and organizations whose missions or needs include issues involving the relationships between socioeconomic conditions and environment/resource conditions. The USU researchers to be affiliated with CSEE are experienced in management of competitive grants and contracts. The team leading this proposal has worked on a number of projects together, including a major public lands study for the Utah Governor's Office of Public Lands Policy Coordination Office. Collectively, the team has completed grants and/or contracts with state agencies (Utah Department of Agriculture and Food, Division of Water Quality, Division of Water Resources, State Parks and Recreation, and Division of Wildlife Resources) and federal agencies (US Department of Agriculture, US National Park Service, US Forest Service, Bureau of Land Management, Tennessee Valley Authority, US Geological Survey, and the US Army Corps of Engineers.) CSEE plans to leverage this wealth of experience in establishing a highly visible campus research entity.

As a coordinated and highly visible USU entity specifically designed to conduct contract-based research efforts, CSEE will allow USU to better serve the needs of agencies and organizations, and to more effectively bridge the research and outreach roles that are central to USU's mission as a Land Grant University. CSEE will use the USU Libraries Digital Commons system as a repository for its research and outreach products, allowing CSEE to serve as a clearinghouse and one-stop information source for extension personnel, agencies, organizations and individuals seeking to access research-based findings on the interplay of social/economic/environmental phenomena.

CSEE will engage faculty across several departments and colleges in collaborative research examining the ways in which social, economic, and environmental sustainability are linked. A preliminary list of potentially affiliated scientists reveal 18 faculty members located in the three affiliated departments. Faculty residing in other academic units but sharing similar interests will be welcome to affiliate with CSEE. In addition to enhancing interactions among social scientists whose work is linked to environmental and resource issues, CSEE will also provide a mechanism for more efficiently communicating the array of social science research expertise that exists at USU to physical and natural scientists across campus, with a goal of increasing opportunities for the pursuit of larger, integrated projects that require input from the both the biophysical sciences and the social sciences.

Finally, CSEE will expand and enrich the educational opportunities available to students engaged in degree programs that include a focus on the linkages between social, economic and environmental phenomena. CSEE will generate new funding and project-based training opportunities for students via project-funded research assistantships, fellowships, or project internship positions. M.S. and Ph.D. students from Applied Economics, Environment and Society, and Sociology are expected to benefit from CSEE activities. While we do not anticipate any new degree programs or curricula as a result of CSEE activities, students in core participating departments will benefit from increased collaboration and coordination in educational activities and events, such as visiting speaker series, faculty/student seminars, etc. In addition, the ability of CSEE to engage faculty from participating departments in more regular interaction will enhance opportunities to coordinate curricular offerings, including cross-departmental course offerings.

Section IV: Finances

CSEE will function largely through the entrepreneurial efforts of affiliated faculty members, with some partnering from the Utah Agricultural Experiment Station (UAES) to support marketing and contracting

activities. UAES has already granted some “release time” to scientists leading the CSEE effort. CSEE leadership is applying for a UAES seed grant to handle initial CSEE expenses (e.g., stationery, website design and coordination with USU Libraries, travel to visit with stakeholders); verbal commitments for additional support has been received from the Dean of CHSS.

Institution Submitting Proposal: Utah State University

College, School or Division in Which Program/Administrative Unit Will Be

Located: College of Agriculture, College of Humanities and Social Sciences, College of Natural Resources

Department(s) or Area(s) in Which Program/Administrative Unit Will Be Located:

Department of Applied Economics, Department of Sociology, Social Work, and Anthropology, and Department of Environment and Society

CIP Code: 03.02 (Natural Resources Management and Policy)

Program/Administrative Unit Title:

Center for Society, Economics and the Environment

Proposed Beginning Date:

January 2013

Institutional Signatures (as appropriate):

Raymond T. Coward, Chief Academic Officer: _____

Noelle Cockett, Dean, College of Agriculture: _____

John Allen, Dean, College of Humanities and Social Sciences: _____

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

Paul M. Jakus, Head, APEC Department: _____

Leon Anderson, Head, SSWA Department: _____

Mark Brunson, Head, ENVS Department: _____