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11-6-2014

## Educational Policies Committee Minutes, November 6, 2014

Utah State University

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# EDUCATIONAL POLICIES COMMITTEE MINUTES

**6 November 2014**

A meeting of the Educational Policies Committee was held on 6 November 2014 at 3:00 pm in Old Main 136 (Champ Hall Conference Room)

Present: Larry Smith, Chair  
Roland Squire, Registrar's Office (represented by Marci Smith)  
Heidi Kesler, Curriculum Retention  
Michele Hillard, Secretary  
Richard Mueller, College of Science (represented by Dennis Welker)  
Karen Mock, Quinney College of Natural Resources  
Kevin Olson, Caine College of the Arts  
Kacy Lundstrom, Libraries  
Ed Reeve, Curriculum Subcommittee Chair (represented by Janet Anderson)  
Melanie Nelson, USU-Eastern  
Eddy Berry, Humanities and Social Sciences  
Jared Schultz, Education and Human Services  
Doug Fiefia, USUSA President  
Nathan Straight, Regional Campuses

Absent: Scott DeBerard, Graduate Council  
Norm Jones, General Education Subcommittee Chair  
Kelly Fadel, Huntsman School of Business  
Thom Fronk, Engineering  
Scott Bates, Academic Standards Subcommittee Chair  
Derek Hastings, Graduate Studies Senator

Visitors: Sandie Nadelson, Director, Nursing and Health Professions

## **I. Approval of the minutes of the 2 October 2014 meeting**

Approved by committee.

## **II. Subcommittee Reports**

### **a. Curriculum Subcommittee (Larry Smith)**

Larry Smith reviewed the Curriculum Subcommittee business.

All courses were approved.

Request from the Department of Biology to add a new Human Biology emphasis to the existing BS. (see below)

Request from the Department of Economics and Finance to create a minor in Real Estate. (see below)

Request from the Department of Health, Physical Education, and Recreation to discontinue the School Health emphasis. (see below)

Request from the Department of Health, Physical Education, and Recreation to discontinue the School Health Teaching minor. (see below)

Request from the Department of Instructional Technology and Learning Sciences to reduce 20 credit hours from the BS to PhD and 17 credit hours from the MS to PhD. (see below)

Request from the Department of Plants, Soils, and Climate to change the name of the major in Environmental Soil/Water Science to Land-Plant-Climate Systems. (see below)

*Eddy Berry moved to approve the business of the Curriculum Subcommittee. Dennis Welker seconded; motion approved.*

**b. Academic Standards Subcommittee** (Scott Bates)

No report

**c. General Education Subcommittee** (Larry Smith)

October 21, 2014, 8:30 A.M.  
Champ Hall Conference Room

**Present:** Dean Adams, Engineering; Eddy Berry, Social Sciences; Dan Coster, Quantitative Intensive; Brock Dethier, Writing Program; Doug Fiefia, USUAS President; Laura Gelfand, Caine College of the Arts; Dawn Kirby, Humanities and Social Sciences; Harrison Kleiner, Connections; Kacy Lundstrom, Library; Brian McCuskey, Humanities; Kris Miller, Honors; Karen Mock, Natural Resources; Bob Mueller, Regional Campus; Dick Mueller, Science; Melanie Nelson, USU Eastern; Michele Hillard, Secretary; Larry Smith, Provost's Office; Lawrence Culver, American Institutions; Ryan Dupont, Life and Physical Sciences; Mary Leavitt, Advising; Shelley Lindauer, Education and Human Services

**Absent:** Kathy Chudoba, Business; Cindy Dewey, Creative Arts; Stephanie Hamblin, University Advising; John Mortensen, Student Services; Lee Rickords, Agriculture and Applied Sciences; Janet Anderson, Provost's Office; Norm Jones, Chair

**Visitor:** Barbara Williams, Provost's Office

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**Call to Order** – Dawn Kirby

**Approval of Minutes** – September 16, 2014

Motion to approve made by Dean Adams, Laura Gelfand seconded. Minutes approved.

## Course Approvals

### Course/Designation Removals

#### Syllabi Approvals

CMST 3700 (CI) **Approved**..... Brock Dethier  
Motion to approve made by Brian McCuskey, Karen Mock seconded. Motion approved

CMST 4460 (CI) **Approved**..... Brock Dethier  
Motion to approve made by Brian McCuskey, Karen seconded. Motion approved

USU 1300 (BAI) Jeff Bateman **Pending**..... Lawrence Culver

WILD 5700 (CI) **Pending** ..... Brock Dethier

#### Business

HONR 3070 (Change in required credits)

Change wording to reflect the requested change. Write it so that the model includes flexibility for all students. Make it 3-6 variable credits.

Below is a link to the recent article about our Gen Ed Program that appeared in the “campus model” section of an Assoc. of American Colleges and Universities publication.

<http://www.aacu.org/campus-model/aligning-general-education-and-major-utah-state-university>

USU was also recognized as having a model program in the text of the Degree Qualification

Profile recently released by the Lumina Foundation and the Assoc. of American Colleges and Universities.

Meeting Adjourned: 8:50 am

*Karen Mock moved to approve the business of the General Education Subcommittee. Eddy Berry seconded; motion approved.*

Meeting adjourned at 3:13 pm

**Cover/Signature Page - Abbreviated Template/Abbreviated Template with Curriculum**

Institution Submitting Request: Utah State University  
 Proposed Title: B.S. in Biology with Human Biology Emphasis (new emphasis)  
 Currently Approved Title: NA  
 School or Division or Location: College of Science  
 Department(s) or Area(s) Location: Department of Biology  
 Recommended Classification of Instructional Programs (CIP) Code<sup>1</sup> (for new programs): 29.9999  
 Current Classification of Instructional Programs (CIP) Code (for existing programs): NA  
 Proposed Beginning Date (for new programs): 08/01/2014  
 Institutional Board of Trustees' Approval Date:

Proposal Type (check all that apply):

Regents' General Consent Calendar Items	
<i>R401-5 OCHE Review and Recommendation; Approval on General Consent Calendar</i>	
SECTION NO.	ITEM
5.1.1 <input type="checkbox"/>	Minor*
5.1.2 <input checked="" type="checkbox"/>	Emphasis*
5.2.1 <input type="checkbox"/>	(CER P) Certificate of Proficiency*
5.2.3 <input type="checkbox"/>	(GCR) Graduate Certificate*
5.4.1 <input type="checkbox"/>	New Administrative Unit
	Administrative Unit Transfer
	Administrative Unit Restructure
	Administrative Unit Consolidation
5.4.2 <input type="checkbox"/>	Conditional Three-Year Approval for New Centers, Institutes, or Bureaus
5.4.3 <input type="checkbox"/>	New Center
	New Institute
	New Bureau
5.5.1 <input type="checkbox"/>	Out-of-Service Area Delivery of Programs
5.5.2 <input type="checkbox"/>	Program Transfer
	Program Restructure
	Program Consolidation
5.5.3 <input type="checkbox"/>	Name Change of Existing Programs
5.5.4 <input type="checkbox"/>	Program Discontinuation
	Program Suspension
5.5.5 <input type="checkbox"/>	Reinstatement of Previously Suspended Program
	Reinstatement of Previously Suspended Administrative Unit

*\*Requires "Section V: 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*

<sup>1</sup> 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>.

**Program Request - Abbreviated Template**  
**Utah State University**  
**Bachelor of Science in Biology with a Human Biology Emphasis**  
**10/22/2014**

**Section I: Request**

This document requests a new Human Biology Emphasis be added to the existing Bachelor of Science degree in Biology.

**Section II: Need**

There is student demand for a biology curriculum tailored to the interests of students wishing to pursue health-related careers. Many of these students are no longer pursuing biology majors. By creating a curriculum that continues to provide a strong grounding in biological sciences but with special emphasis in human-related areas, the Department of Biology will attract and retain some of the best and brightest undergraduates. An important feature of the Human Biology Emphasis is that because it retains strength in the basic sciences, students who ultimately decide to pursue careers outside the health professions will still be well-prepared for graduate school or employment in basic or biomedical sciences.

The Human Biology emphasis for the Bachelor's degree in Biology is designed to increase elective flexibility while maintaining rigor. The Human Biology emphasis prepares students for professional schools by teaching them to be scientists, but also broadens their understanding of the human condition. Inclusion of social science and humanities requirements more closely aligns the Human Biology emphasis with new professional school admission requirements. For example, starting in 2015, the Medical College Admission Test (MCAT) will give equal weight to testing biological, biochemical, chemical and physical foundations and to testing psychological, social, and biological foundations of behavior.

The Human Biology emphasis parallels the Biology emphasis with the following differences:

Biology emphasis requirements NOT in the Human Biology emphasis:

- Field course requirement

Curriculum features NEW to the Human Biology emphasis:

- Required courses in Biology (not required for the Biology emphasis)
  - Freshman seminar course of either Pre-Health Professions or Biology Professions
- Required courses in Social Sciences and Humanities
  - General Psychology, Introductory Sociology, or Introduction to Social Problems
- Changes in elective choices
  - Allowance of human biology-related courses outside of Biology such as nutrition and osteology

### **Section III: Institutional Impact**

Our department currently teaches many of the courses taken by pre-health students. The Human Biology emphasis will help us retain pre-health students as majors in the department while providing them with what we believe is the most appropriate background for success in professional schools and careers in health. Additionally, the Department of Biology has an excellent working relationship with the pre-health advising staff whose feedback was solicited in the development of the Human Biology emphasis.

The proposed change is not anticipated to significantly affect enrollments in any other instructional programs of affiliated departments or programs, nor will the proposed change affect any existing administrative structures. No changes in faculty or staff will be required, nor will any new physical facilities or modification to existing facilities be required. No equipment will need to be committed to initiate this change.

### **Section IV: Finances**

We do not anticipate any costs or savings from this change. No new funds are required. We do not anticipate any budgetary impact on other programs since we teach most of the courses taken by pre-health students anyway.

## Section V: Program Curriculum

### All Program Courses (with New Courses in Bold)

This table continues on the following page.

Course Prefix and Number	Title	Credit Hours
Required Courses	<u>Required Biology Courses (27-28 credits):</u>	
	BIOL 1050- Biology Professions	
	OR	
	BIOL 1060- Pre-Health Professions	1
	BIOL 1610- Biology I	4
	BIOL 1620- Biology II (BLS)	4
	BIOL 2220- General Ecology	3
	BIOL 3060- Principles of Genetics (QI)	4
	BIOL 5250- Evolutionary Biology (CI)	3
	BIOL 4600- Advanced Human Physiology	
	-OR-	
	BIOL 5600- Comparative Animal Physiology AND BIOL 5610- Animal Physiology Laboratory	5
	BIOL 3300- General Microbiology	4
	-OR-	OR
	BIOL 5210- Cell Biology	3
	<u>Required Supporting Courses (3 credits)</u>	
	PSY 1010- General Psychology (BSS)	
	-OR-	
	SOC 1010- Introductory Sociology (BSS)	
	-OR-	
	SOC 1020- Introduction to Social Problems (BSS)	3



Course Prefix and Number	Title	Credit Hours
Required Courses (continued)	<u>Required Physical Science Courses (32-39 credits):</u>	
	CHEM 1210- Principles of Chemistry I	4
	CHEM 1215- Chemical Principles Laboratory I	1
	CHEM 1220- Principles of Chemistry II (BSP)	4
	CHEM 1225- Chemical Principles Laboratory II	1
	CHEM 2310- Organic Chemistry I	4
	CHEM 2315- Organic Chemistry Laboratory I	1
	CHEM 2320- Organic Chemistry II	4
	CHEM 2325- Organic Chemistry Laboratory II	1
	CHEM 3700- Introductory Biochemistry AND CHEM 3710- Introductory Biochemistry Laboratory	4
	-OR-	OR
	CHEM 5700- General Biochemistry I AND CHEM 5710- General Biochemistry II AND CHEM 5720- General Biochemistry Laboratory	9
	PHYS 2110- General Physics- Life Sciences I AND PHYS 2120- General Physics- Life Sciences II	8
	-OR-	OR
PHYS 2210/2215 Gen. Physics- Sci & Eng I (QI) AND PHYS 2220/2225 Gen. Physics- Sci & Eng II (QI)	10	
MATH 1210 Calculus I (QL)	4	
STAT 3000 Statistics for Scientists (QI)	3	
<b>Sub-Total</b>		<b>69-77</b>
Elective Courses	4000 level or above BIOL or PUBH courses BIOL 2320 Human Anatomy BIOL 3100 Bioethics	
	<u>Maximum 4 credits from among the following:</u> BIOL 4250 Internship/Co-Op (1-2 credits) BIOL 4710 Teaching Internship (1 credit) BIOL 5800 Undergraduate Research (1-3 credits) Up to 2 credits of seminar courses	9
	<u>Up to 3 credits from other departments with approval of Director of Undergraduate Studies:</u> Must be appropriate to the Human Biology emphasis, and must be different from the courses used to fulfill University Studies Depth Education requirements.	
	<b>Sub-Total</b>	<b>9</b>
Track/Options (if applicable)	NA	
<b>Sub-Total</b>		<b>0</b>
<b>Total Number of Credits</b>		<b>78-86</b>

## Program Schedule

FRESHMAN YEAR					
Fall Semester (16 credits)			Spring Semester (15 credits)		
BIOL 1610	Biology I	4	BIOL 1620	Biology II	4
CHEM 1210	Principles of Chemistry I	4	CHEM 1220	Principles of Chemistry II (BPS)	4
CHEM 1215	Chemical Principles Laboratory I	1	CHEM 1225	Chemical Principles Laboratory II	1
BIOL 1050 Or BIOL 1060	Biology Professions Or Pre-Health Professions	1	PSY 1010 Or SOC 1010 Or SOC 1020	General Psychology Or Introductory Sociology Or Introduction to Social Problems	3
	University Studies or Math prerequisite courses (if students need Math courses prerequisite to MATH 1210, credits in addition to those listed here may be required)	6		University Studies or Math prerequisite courses (if students need Math courses prerequisite to MATH 1210, credits in addition to those listed here may be required)	3
SOPHOMORE YEAR					
Fall Semester (15-18 credits)			Spring Semester (15-18 credits)		
BIOL 2220	General Ecology	3	BIOL 3060	Principles of Genetics (QI)	4
CHEM 2300	Principles of Organic Chemistry I	3	CHEM 3700	Introductory Biochemistry	3
CHEM 2315	Organic Chemistry Laboratory I	1	CHEM 3710	Introductory Biochemistry Laboratory	1
MATH 1210	Calculus I (QL)	4	STAT 3000	Statistics for Scientists (QI)	3
	University Studies or Elective courses	5-7		University Studies or Elective courses	5-7
JUNIOR YEAR					
Fall Semester (15-18 credits)			Spring Semester (15-18 credits)		
BIOL 3300 Or BIOL elective	General Microbiology Or Elective	4 Or 3-4	BIOL 3300 or BIOL elective	General Microbiology Or Elective	4 or 3-4
PHYS 2110 Or PHYS 2110 & PHYS 2115	General Physics- Life Sciences I Or Physics for Sci. & Engineers I (QI) Physics for Sci. & Engineers Lab I	4 Or 5	PHYS 2110 Or PHYS 2110 & PHYS 2115	General Physics- Life Sciences II Or Physics for Sci. & Engineers II (QI) Physics for Sci. & Engineers Lab II	4 or 5
	University Studies or Elective courses	6-9		University Studies or Elective courses	6-9
SENIOR YEAR					
Fall Semester (15-18 credits)			Spring Semester (15-18 credits)		
BIOL 5250 Or BIOL elective	Evolutionary Biology (CI) Or BIOL elective	3	BIOL 5250 Or BIOL elective	Evolutionary Biology (CI) Or BIOL elective	3
Upper level Physiology with Laboratory Or BIOL elective	BIOL 5600 Comparative Animal Physiology And BIOL 5610 Animal Physiology Laboratory Or BIOL elective	5	Upper level Physiology with Laboratory Or BIOL elective	BIOL 4600 Advanced Human Physiology Or BIOL elective	5
	University Studies or Elective courses	7-15		University Studies or Elective courses	7-15

**Cover/Signature Page - Abbreviated Template/Abbreviated Template with Curriculum**

**Institution Submitting Request:** Utah State University

**Proposed Title:** Minor in Real Estate

**Currently Approved Title:**

**School or Division or Location:** Huntsman College of Business, Logan UT

**Department(s) or Area(s) Location:** Department of Economics and Finance

**Recommended Classification of Instructional Programs (CIP) Code<sup>1</sup> (for new programs):** 52.15

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

**Proposed Beginning Date (for new programs):** 08/15/2015

**Institutional Board of Trustees' Approval Date:**

**Proposal Type (check all that apply):**

Regents' General Consent Calendar Items		
<i>R401-5 OCHE Review and Recommendation; Approval on General Consent Calendar</i>		
SECTION NO.		ITEM
5.1.1	<input checked="" type="checkbox"/>	Minor*
5.1.2	<input type="checkbox"/>	Emphasis*
5.2.1	<input type="checkbox"/>	(CER P) Certificate of Proficiency*
5.2.3	<input type="checkbox"/>	(GCR) Graduate Certificate*
5.4.1	<input type="checkbox"/>	New Administrative Unit
	<input type="checkbox"/>	Administrative Unit Transfer
	<input type="checkbox"/>	Administrative Unit Restructure
	<input type="checkbox"/>	Administrative Unit Consolidation
5.4.2	<input type="checkbox"/>	Conditional Three-Year Approval for New Centers, Institutes, or Bureaus
5.4.3	<input type="checkbox"/>	New Center
	<input type="checkbox"/>	New Institute
	<input type="checkbox"/>	New Bureau
5.5.1	<input type="checkbox"/>	Out-of-Service Area Delivery of Programs
5.5.2	<input type="checkbox"/>	Program Transfer
	<input type="checkbox"/>	Program Restructure
	<input type="checkbox"/>	Program Consolidation
5.5.3	<input type="checkbox"/>	Name Change of Existing Programs
5.5.4	<input type="checkbox"/>	Program Discontinuation
	<input type="checkbox"/>	Program Suspension
5.5.5	<input type="checkbox"/>	Reinstatement of Previously Suspended Program
	<input type="checkbox"/>	Reinstatement of Previously Suspended Administrative Unit

*\*Requires "Section V: 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: \_\_\_\_\_

<sup>1</sup> 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>.

**Program Request - Abbreviated Template**  
**Utah State University**  
**Minor in Real Estate**  
**10/01/2014**

**Section I: Request**

This request is to create a minor in real estate in the Department of Economics and Finance in the Jon M. Huntsman School of Business. The primary impact of this new minor will be the creation of two new courses.

**Section II: Need**

The creation of the new courses and a minor in real estate will afford students more educational options in an area where many have shown great interest. Each semester students inquire about additional courses that involve the topic of real estate. Currently we only offer one course in real estate. In contrast, the University of Utah offers 10 courses at the undergraduate and graduate level in real estate.

**Section III: Institutional Impact**

The real estate courses will be additional electives that can be taken by business majors. Although there will be some students who choose a real estate course in lieu of some other elective within the Huntsman School, no adverse impact is anticipated on other departments or programs. Further, no additional administrative resources will be needed. Advisors will need to be informed of the range and scope of the real estate courses and minor. There will be no need for additional faculty or staff. The courses will be taught by the existing faculty and staff who have expertise in this area of study.

**Section IV: Finances**

*Currently, due to limited course offerings relative to the number of majors, upper division finance courses often have over 50 students in a section. Therefore, the department needs to offer additional upper division finance courses. The two new real estate courses will meet this need.*

**Section V: Program Curriculum**

**All Program Courses (with New Courses in Bold)**

<b>Course Prefix and Number</b>	<b>Title</b>	<b>Credit Hours</b>
Required Courses		
FIN 3200	Financial Management	2
FIN 3400	Corporate Finance	2
FIN 4430	Real Estate Finance	3
FIN 4540 (new course)	Real Estate Valuation	3
FIN 4550 (new course)	Real Estate Development	3
	<b>Sub-Total</b>	<b>13</b>
	<b>Total Number of Credits</b>	<b>13</b>

## **Program Schedule**

### Fall Semester

FIN 3200 Financial Management – 2 hours

FIN 3400 Corporate Finance – 2 hours

FIN 4540 Real Estate Valuation – 3 hours

### Spring Semester

FIN 4430 Real Estate Finance – 3 hours

FIN 4550 Real Estate Development – 3 hours

## Appendix G: Abbreviated Template

### Instructions:

- The Abbreviated Template should be used for those items identified as needing the Abbreviated Template in R401-4 and R401-5 and listed as possible items to check on the Cover/Signature Page below.
- **An Abbreviated Template consists of a Cover/Signature Page – Abbreviated Template and Program Request – Abbreviated Template.**
  - **Cover/Signature Page – Abbreviated Template:** Complete the items requested at the top of the page, INCLUDING SELECTING A CIP CODE. Check which type(s) of item(s) apply.
  - **Program Request – Abbreviated Template:** Complete the sections requested, removing the descriptive italics and replacing them with the content of the proposal.
- Prepare the Abbreviated Template per R401-6 instructions as a **Word document** (no PDF formats). Begin each of the two sections (Cover/Signature Page and Program Request) at the top of a new page. When *descriptions of the content required for each section appear in this font color*, the descriptive italics are to be removed and replaced with the institutional content before the institution submits the proposal to the OCHE.
- The CAO or his/her designated representatives should e-mail the completed Abbreviated Template (including electronic signature) to [academicaffairs@ushe.edu](mailto:academicaffairs@ushe.edu).
- The institution is responsible for maintaining a record of the submission as the OCHE Academic and Student Affairs office is not responsible for storing electronic copies of submitted proposals.

**Cover/Signature Page - Abbreviated Template/Abbreviated Template with Curriculum**

Institution Submitting Request: Utah State University

Proposed Title: NA

Currently Approved Title: School Health Emphasis of the BS Health Education and Promotion

School or Division or Location: NA

Department(s) or Area(s) Location: Health, Physical Education & Recreation

Recommended Classification of Instructional Programs (CIP) Code<sup>1</sup> (for new programs): NA

Current Classification of Instructional Programs (CIP) Code (for existing programs): 13.1307

Proposed Beginning Date (for new programs): NA

Institutional Board of Trustees' Approval Date: / /

**Proposal Type (check all that apply):**

Regents' General Consent Calendar Items		
<i>R401-5 OCHE Review and Recommendation; Approval on General Consent Calendar</i>		
SECTION NO.		ITEM
5.1.1	<input type="checkbox"/>	Minor*
5.1.2	<input checked="" type="checkbox"/>	Emphasis*
5.2.1	<input type="checkbox"/>	(CER P) Certificate of Proficiency*
5.2.3	<input type="checkbox"/>	(GCR) Graduate Certificate*
5.4.1	<input type="checkbox"/>	New Administrative Unit
	<input type="checkbox"/>	Administrative Unit Transfer
	<input type="checkbox"/>	Administrative Unit Restructure
	<input type="checkbox"/>	Administrative Unit Consolidation
5.4.2	<input type="checkbox"/>	Conditional Three-Year Approval for New Centers, Institutes, or Bureaus
5.4.3	<input type="checkbox"/>	New Center
	<input type="checkbox"/>	New Institute
	<input type="checkbox"/>	New Bureau
5.5.1	<input type="checkbox"/>	Out-of-Service Area Delivery of Programs
5.5.2	<input type="checkbox"/>	Program Transfer
	<input type="checkbox"/>	Program Restructure
	<input type="checkbox"/>	Program Consolidation
5.5.3	<input type="checkbox"/>	Name Change of Existing Programs
5.5.4	<input type="checkbox"/>	Program Discontinuation
	<input type="checkbox"/>	Program Suspension
5.5.5	<input type="checkbox"/>	Reinstatement of Previously Suspended Program
	<input type="checkbox"/>	Reinstatement of Previously Suspended Administrative Unit

*\*Requires "Section V: 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:

\_\_\_\_\_

<sup>1</sup> 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>.

**Program Request - Abbreviated Template**  
**Utah State University**  
**School Health Emphasis- BS Health Education and Promotion**  
*09/23/2014*

**Section I: Request**

Discontinuation of the School Health Emphasis within the BS Health Education and Promotion degree. This will result in Utah State University no longer offering teacher education preparation for the Health endorsement.

**Section II: Need**

In the past three years the School Health emphasis at USU has averaged three graduates and this trend has been declining for the past decade. With the growth of the Community Health and Health Sciences emphases (approximate doubling from 70 to 145 students) within the BS Health Education and Promotion degree present resources make it extremely difficult to serve all three emphases. At present Weber State University offers the School Health Teaching Major while BYU, the U of U, and SUU offers the School Health Teaching Minor. These programs have the capacity to provide sufficient graduates to meet future state demand for licensed School Health teachers.

**Section III: Institutional Impact**

This discontinuation will also impact the School Health Minor as the HPER faculty will remove school health curriculum from academic courses and will no longer be offering supervisory services for teacher education in School Health. The School Health Emphasis at present has 15 students enrolled in the program. It is unclear if any of these students would switch to another emphasis within Health Education and Promotion or to another teaching degree. All remaining students who desire to earn the School Health Emphasis will be alerted to a schedule where the required courses will be offered in order for them to complete the program. No request for new faculty, staff or physical facilities will be submitted. We do not anticipate any negative impact on other undergraduate programs.

**Section IV: Finances**

No new funds are requested and there are no new budgetary impacts on the department or college.

**Section V: Program Curriculum**

**All Program Courses**

The current courses for the School Health Emphasis program will continue to be offered as part of the Community Health and Health Sciences emphases within the BS Health Education and Promotion degree with the following exceptions:

HEP 3300	Clinical Experience I	1 cr
HEP 4300	Clinical Experience II	1 cr
HEP 4400	Creative Methods in Teaching Health Education	3 cr
HEP 5500	Student Teaching Seminar	1 cr



HEP 5630 Student Teaching 10 cr

In order to complete the presently declared majors the following course schedule is recommended:

### Program Schedule

#### *Fall 2014*

HEP 3300	<i>Clinical Experience I</i>	1 cr
HEP 4300	<i>Clinical Experience II</i>	1 cr
HEP 4400	Creative Methods in Teaching Health Education	3 cr
HEP 5500	<i>Student Teaching Seminar</i>	1 cr
HEP 5630	<i>Student Teaching</i>	10 cr

#### *Spring 2015*

HEP 3300	<i>Clinical Experience I</i>	1 cr
HEP 4300	<i>Clinical Experience II</i>	1 cr
HEP 4400	Creative Methods in Teaching Health Education	3 cr
HEP 4500	<i>Sexual Education within the Schools</i>	3 cr
HEP 5500	<i>Student Teaching Seminar</i>	1 cr
HEP 5630	<i>Student Teaching</i>	10 cr

#### *Fall 2015*

HEP 3300	<i>Clinical Experience I</i>	1 cr
HEP 4300	<i>Clinical Experience II</i>	1 cr
HEP 4400	Creative Methods in Teaching Health Education	3 cr
HEP 5500	<i>Student Teaching Seminar</i>	1 cr
HEP 5630	<i>Student Teaching</i>	10 cr

#### *Spring 2016*

HEP 3300	<i>Clinical Experience I</i>	1 cr
HEP 4300	<i>Clinical Experience II</i>	1 cr
HEP 4400	Creative Methods in Teaching Health Education	3 cr
HEP 4500	<i>Sexual Education within the Schools</i>	3 cr
HEP 5500	<i>Student Teaching Seminar</i>	1 cr
HEP 5630	<i>Student Teaching</i>	10 cr

#### *Fall 2016*

HEP 3300	<i>Clinical Experience I</i>	1 cr
HEP 4300	<i>Clinical Experience II</i>	1 cr
HEP 4400	Creative Methods in Teaching Health Education	3 cr
HEP 5500	<i>Student Teaching Seminar</i>	1 cr
HEP 5630	<i>Student Teaching</i>	10 cr

#### *Spring 2017*

HEP 3300	<i>Clinical Experience I</i>	1 cr
HEP 4300	<i>Clinical Experience II</i>	1 cr
HEP 4400	Creative Methods in Teaching Health Education	3 cr

<i>HEP 4500</i>	<i>Sexual Education within the Schools</i>	<i>3 cr</i>
<i>HEP 5500</i>	<i>Student Teaching Seminar</i>	<i>1 cr</i>
<i>HEP 5630</i>	<i>Student Teaching</i>	<i>10 cr</i>

*If all declared students complete their student teaching prior to Spring 2017 course offerings may end sooner.*

## Appendix G: Abbreviated Template

### Instructions:

- The Abbreviated Template should be used for those items identified as needing the Abbreviated Template in R401-4 and R401-5 and listed as possible items to check on the Cover/Signature Page below.
- **An Abbreviated Template consists of a Cover/Signature Page – Abbreviated Template and Program Request – Abbreviated Template.**
  - **Cover/Signature Page – Abbreviated Template:** Complete the items requested at the top of the page, INCLUDING SELECTING A CIP CODE. Check which type(s) of item(s) apply.
  - **Program Request – Abbreviated Template:** Complete the sections requested, removing the descriptive italics and replacing them with the content of the proposal.
- Prepare the Abbreviated Template per R401-6 instructions as a **Word document** (no PDF formats). Begin each of the two sections (Cover/Signature Page and Program Request) at the top of a new page. When *descriptions of the content required for each section appear in this font color*, the descriptive italics are to be removed and replaced with the institutional content before the institution submits the proposal to the OCHE.
- The CAO or his/her designated representatives should e-mail the completed Abbreviated Template (including electronic signature) to [academicaffairs@ushe.edu](mailto:academicaffairs@ushe.edu).
- The institution is responsible for maintaining a record of the submission as the OCHE Academic and Student Affairs office is not responsible for storing electronic copies of submitted proposals.

**Cover/Signature Page - Abbreviated Template/Abbreviated Template with Curriculum**

Institution Submitting Request: Utah State University

Proposed Title: NA

Currently Approved Title: School Health Minor

School or Division or Location: NA

Department(s) or Area(s) Location: Health, Physical Education & Recreation

Recommended Classification of Instructional Programs (CIP) Code<sup>1</sup> (for new programs): *NA*

Current Classification of Instructional Programs (CIP) Code (for existing programs): *13.1307*

Proposed Beginning Date (for new programs): *NA*

Institutional Board of Trustees' Approval Date: / /

**Proposal Type (check all that apply):**

<b>Regents' General Consent Calendar Items</b>		
<i>R401-5 OCHE Review and Recommendation; Approval on General Consent Calendar</i>		
<b>SECTION NO.</b>		<b>ITEM</b>
5.1.1	<input checked="" type="checkbox"/>	Minor*
5.1.2	<input type="checkbox"/>	Emphasis*
5.2.1	<input type="checkbox"/>	(CER P) Certificate of Proficiency*
5.2.3	<input type="checkbox"/>	(GCR) Graduate Certificate*
5.4.1	<input type="checkbox"/>	New Administrative Unit
	<input type="checkbox"/>	Administrative Unit Transfer
	<input type="checkbox"/>	Administrative Unit Restructure
	<input type="checkbox"/>	Administrative Unit Consolidation
5.4.2	<input type="checkbox"/>	Conditional Three-Year Approval for New Centers, Institutes, or Bureaus
5.4.3	<input type="checkbox"/>	New Center
	<input type="checkbox"/>	New Institute
	<input type="checkbox"/>	New Bureau
5.5.1	<input type="checkbox"/>	Out-of-Service Area Delivery of Programs
5.5.2	<input type="checkbox"/>	Program Transfer
	<input type="checkbox"/>	Program Restructure
	<input type="checkbox"/>	Program Consolidation
5.5.3	<input type="checkbox"/>	Name Change of Existing Programs
5.5.4	<input type="checkbox"/>	Program Discontinuation
	<input type="checkbox"/>	Program Suspension
5.5.5	<input type="checkbox"/>	Reinstatement of Previously Suspended Program
	<input type="checkbox"/>	Reinstatement of Previously Suspended Administrative Unit

*\*Requires "Section V: 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:

\_\_\_\_\_

<sup>1</sup> 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>.

**Program Request - Abbreviated Template**  
**Utah State University**  
**School Health Minor**  
*09/23/2014*

**Section I: Request**

Discontinuation of the School Health Teaching Minor. This will result in Utah State University no longer offering teacher education preparation for the Health endorsement.

**Section II: Need**

In the past three years the School Health Teaching Minor at USU has suspended acceptance due to inadequate clinical placement opportunities within Cache Valley and northern Utah. With the growth of the Community Health and Health Sciences emphases (approximate doubling from 70 to 145 students) within the BS Health Education and Promotion degree present resources make it extremely difficult to serve all emphases plus the Teaching Minor. At present Weber State University offers the School Health Teaching Major while BYU, the U of U, and SUU offers the School Health Teaching Minor. These programs have the capacity to provide sufficient graduates to meet future state demand for licensed School Health teachers.

**Section III: Institutional Impact**

The School Health Minor at present has no students enrolled in the program.

**Section IV: Finances**

No new funds are requested and there are no new budgetary impacts on the department or college.

**Section V: Program Curriculum**

**All Program Courses**

The School Health Minor at present has no students enrolled in the program. Therefore, a discontinuation schedule is not presented.

**Cover/Signature Page - Abbreviated Template**

**Institution Submitting Request:** *Utah State University*  
**Proposed Title:** *PhD in Instructional Technology & Learning Sciences*  
**Currently Approved Title:** *PhD in Instructional Technology & Learning Sciences*  
**School or Division or Location:** *College of Education*  
**Department(s) or Area(s) Location:** *Instructional Technology & Learning Sciences*  
**Recommended Classification of Instructional Programs (CIP) Code<sup>1</sup> (for new programs):**  
**Current Classification of Instructional Programs (CIP) Code (for existing programs):** 13.0501  
**Proposed Beginning Date (for new programs):** Fall 2015  
**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:

<sup>1</sup> 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>.

R401-5.5  
Program Request - Abbreviated Template

Utah State University  
PhD In Instructional Technology & Learning Sciences  
8/20/2014

**Section I: Request**

The Department of Instructional Technology & Learning Sciences requests to restructure its PhD program. For this degree program the current credit hour requirements are 90 for BS to PhD and 60 for MS to PhD for incoming students. ITLS proposes that the minimum credit hours be reduced to **70** credit hours for the BS to PhD and to **43** for MS to PhD. This is a reduction of 20 credit hours from the BS to PhD and 17 credit hours from the MS to PhD.

**Section II: Need**

The awarding of a PhD is not based solely on the number of credits a student has taken; rather it is the mastery of knowledge and skills determined by written and oral comprehensive examinations and the completion of a body of original research (dissertation). Decreasing the number of credits will not affect the quality or rigor of the program but will allow students to complete in a more timely manner. The reduced credit requirements will also necessitate a closer connection between the student and his/her committee in order to establish a viable research plan from the beginning of the program.

Analysis of our peer institutions that offer a PhD in Instructional Technology, Table 1, indicates that all of the institutions require between 60 to 90 credits for a PhD, with the exception on the University of Memphis that requires 54 credits. With this proposed reduction we will become more competitive and will be able to recruit higher qualified applicants.

Table 1. Credits Required by peer Universities for a PhD in Instructional Technology or Learning Sciences, MS to PhD

Institution	Degree	Credits Required
Brigham Young University	PhD in Instructional Psychology & Technology	87
University of Washington	PhD in Learning Sciences	60
Indiana University	PhD in Instructional Systems Technology	60
University of Georgia	PhD in Learning, Design, & Technology	64
Florida State University	PhD in Instructional Systems	90
University of Memphis	PhD in Instructional Design & Technology	54

**Section III: Institutional Impact**

ITLS anticipates the reduction of required credit hours to obtain a PhD in Instructional Technology & Learning Sciences will increase our ability to recruit and retain the best students from around the country. This change will also help ITLS meet the goals of the recently submitted 5-year Graduate Program Plan. The change will not affect existing administrative structure. ITLS does not expect any changes in faculty or staff to implement the proposed changes.

**Section IV: Finances**

No additional costs are anticipated as a result of the proposed change. ITLS receives more qualified applications for the PhD than can be accepted in any given time frame. By reducing the credits from 90 to 70 for the BS to PhD program and from 60 to 43 for the MS to PhD program, ITLS may be able to increase the number of funded graduate students as students should be able to finish their degree quicker and require a reduced amount of tuition award dollars.

Institution Submitting Proposal: *Utah State University*

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

Department(s) or Area(s) in Which Program/Administrative Unit Will Be Located: *Instructional Technology & Learning Sciences*

Program/Administrative Unit Title: *Instructional Technology & Learning Sciences (ITLS)*

Recommended Classification of Instructional Programs (CIP) Code: 13.0501

Certificate, and/or Degree(s) to Be Awarded: *PhD in Instructional Technology & Learning Sciences*

Proposed Beginning Date: *August 1, 2015*

Institutional Signatures (*as appropriate*):



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*Mimi Recker, Department Head  
Instructional Technology & Learning Sciences*

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*Beth Foley, Dean  
College of Agriculture*

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*Mark R. McLellan, V.P. of Research  
Graduate School Dean*

Date:



Institution Submitting Request: Utah State University  
 Proposed Title: Land-Plant-Climate Systems  
 Currently Approved Title: Environmental Soil / Water Sciences  
 School or Division or Location: College of Agriculture and Applied Sciences  
 Department(s) or Area(s) Location: Department of Plants, Soils and Climate  
 Recommended Classification of Instructional Programs (CIP) Code<sup>5</sup> (for new programs):  
 Current Classification of Instructional Programs (CIP) Code (for existing programs): 01.1299  
 Proposed Beginning Date (for new programs): 08/31/2015  
 Institutional Board of Trustees' Approval Date: MM/DD/YEAR

Proposal Type (check all that apply):

Regents' General Consent Calendar Items		
<i>R401-5 UCHE Review and Recommendation; Approval on General Consent</i>		
SECTION NO.		ITEM
5.1.1	<input type="checkbox"/>	Minor*
5.1.2	<input type="checkbox"/>	Emphasis*
5.2.1	<input type="checkbox"/>	Certificate of Proficiency*
5.2.3	<input type="checkbox"/>	Graduate Certificate*
5.4.1	<input type="checkbox"/>	New Administrative Unit
	<input type="checkbox"/>	Administrative Unit Transfer
	<input type="checkbox"/>	Administrative Unit Restructure
	<input type="checkbox"/>	Administrative Unit Consolidation
5.4.2	<input type="checkbox"/>	New Center
	<input type="checkbox"/>	New Institute
	<input type="checkbox"/>	New Bureau
5.5.1	<input type="checkbox"/>	Out-of-Service Area Delivery of Programs
5.5.2	<input type="checkbox"/>	Program Transfer
	<input checked="" type="checkbox"/>	Program Restructure
	<input type="checkbox"/>	Program Consolidation
5.5.3	<input checked="" type="checkbox"/>	Name Change of Existing Programs
5.5.4	<input type="checkbox"/>	Program Discontinuation
	<input type="checkbox"/>	Program Suspension
5.5.5	<input type="checkbox"/>	Reinstatement of Previously Suspended Program
	<input type="checkbox"/>	Reinstatement of Previously Suspended Administrative Unit

\*Requires "Section V: 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*

**Proposal for a Restructuring and Name Change of Environmental Soil / Water Sciences to the Land-Plant-Climate Systems Major****SECTION I: Request**

This proposal seeks approval for a restructuring and a name change of the major in Environmental Soil / Water Science (ESWS) to **Land-Plant-Climate Systems** in the Department of Plants, Soils and Climate (PSC). This is a renaming and realignment of curriculum from the current major. The proposed restructured program description and required courses are fully described in Appendix 1.

**SECTION II: Need**

The world is confronted by complex and connected problems including food insecurity and hunger, accelerating climate change, degradation of arable lands and challenges to the sustainability of ecosystem services. Climate change is projected to have profound effects on ecosystems and human activities including agriculture. The availability of water for communities and agriculture is threatened by water source degradation and over-exploitation. These problems are very complex, but do share the theme of interactions between the physical environment and the biosphere. We have a responsibility to provide objective knowledge to our students about agricultural sustainability, climate change, and the interactions in the earth's critical zone. The emerging issues of food security, climate and environmental change require that we harness our academic programs to ensure that PSC students become familiar with the science and objective knowledge underlying these issues. While many elements of the above problems are addressed in the present ESWS curriculum, the current academic structure does not provide readily for the integration of knowledge needed to address these issues for the 21st Century. Furthermore the name of the major does not emphasize the link to climate science and land systems studies that are true advantages of the Plants, Soils and Climate Department. The proposed major of Land-Plant-Climate Systems (LPCS) will explore the interactions between physical and biological sciences in the framework of promoting sustainable systems. There are currently no similar majors offered in the Utah Higher Education System (UHES). In the US Land Grant University system there are several examples that have similarities. The University of California at Davis in the Department of Land Air and Water Resources has a focus on the integrating themes of climate change, environmental quality, agricultural sustainability, and landscape interfaces and processes ([http://lawr.ucdavis.edu/strategic\\_planning.htm](http://lawr.ucdavis.edu/strategic_planning.htm)). The University of Minnesota, Department of Soil, Water and Climate offers an undergraduate degree in Environmental Sciences, Policy and Management (<http://www.swac.umn.edu/Education/Undergrad/index.htm>). The proposed integrated LPCS major in PSC would be a unique offering while maintaining the specialized disciplinary knowledge offerings of the previous ESWS major through emphases and minors.

*A Major for Undergraduates Integrating Climate, Soils and Plants*

The Plants, Soils and Climate Department currently offers undergraduate majors in Environmental Soil / Water Sciences, Plant Science and Residential Landscape Design and Construction. No formal major integrates Plants, Soils and Climate and no undergraduate major is available for students with a focus in climate or biometeorology. We currently offer six minors including: Climate Change and Energy, Crop Biotechnology, Agronomy, Soil Science, Ornamental Horticulture and Horticulture. However, there are several faculty members who are climate scientists with active research and teaching programs and there are students in PSC majors with interest in the area of applied climatology and environmental biophysics. The proposed major would add an emphasis for PSC undergraduate students to receive training in these

areas of science. Students interested in Sustainable Food Production will find an emphasis that considers both plant and animal aspects of agriculture. The number of students advised into a College of Agriculture and Applied Sciences (CAAS) Interdisciplinary Studies major has grown steadily from fewer than five to 24 in the past six years. The CAAS academic advisor who mentors these students estimates that about half are primarily interested in Sustainable Food Production. In addition, the current PSC majors do not adequately address the integration of land, plants and climate nor is there a program that promotes a systems approach to agricultural or environmental sciences. We will promote a problem solving approach in our teaching through new interdisciplinary courses and training students to become adaptive and flexible in their expertise.

#### *Connections to General Student Population*

Courses to be developed will include at least one breadth course in Physical Sciences and will support the current minor offerings. Required courses at the undergraduate level that serve students from natural resources and engineering will be improved through considerations to broaden the student experience.

### **SECTION III: Institutional Impact**

The proposed major in **Land-Plant-Climate Systems** will not require additional faculty to initiate. Faculty to teach the courses have been identified and are generally already engaged in area of integrated scholarship. However, future full development of the program will require additional faculty in integrated environmental sciences with expertise in climate and water. Needs for interdisciplinary faculty are dependent upon student numbers. The PSC department already has professional advising for its undergraduates. The departmental faculty and department head have been consulted and are supportive of the restructuring of the major as indicated by the attached documentation.

### **SECTION IV: Finances**

Teaching needs in the area of climate and water sciences will increase as student demand grows. University studies classes with large enrollments will request undergraduate teaching fellows as needed from Office of the Provost. Additional resources will be requested as justified based on enrollment and demand for new courses through the standard departmental, college and university channels.

#### **References**

American College & University Presidents Climate Commitment [ACUPCC]  
from <http://www.presidentsclimatecommitment.org/> Accessed 4/21/14

**Proposal for a Major in Land-Plant-Climate Systems**

Institution Submitting Proposal: Utah State University

College, School or Division affected: College of Agriculture and Applied Sciences and Utah Climate Center

Department(s) or Areas(s) affected: Plants, Soils and Climate

Change Description: Rename and restructure the Environmental Soil and Water Science major to Land-Plant-Climate Systems major

Proposed Beginning Date: Fall 2015

Institutional Signatures (as appropriate):

\_\_\_\_\_, Department Chair

\_\_\_\_\_, Dean or Division Chair

\_\_\_\_\_, Chief Academic Officer

\_\_\_\_\_, President

\_\_\_\_\_, Date

Appendix 1. Program Description

(This is included as an appendix but can be formatted as Section V if necessary)

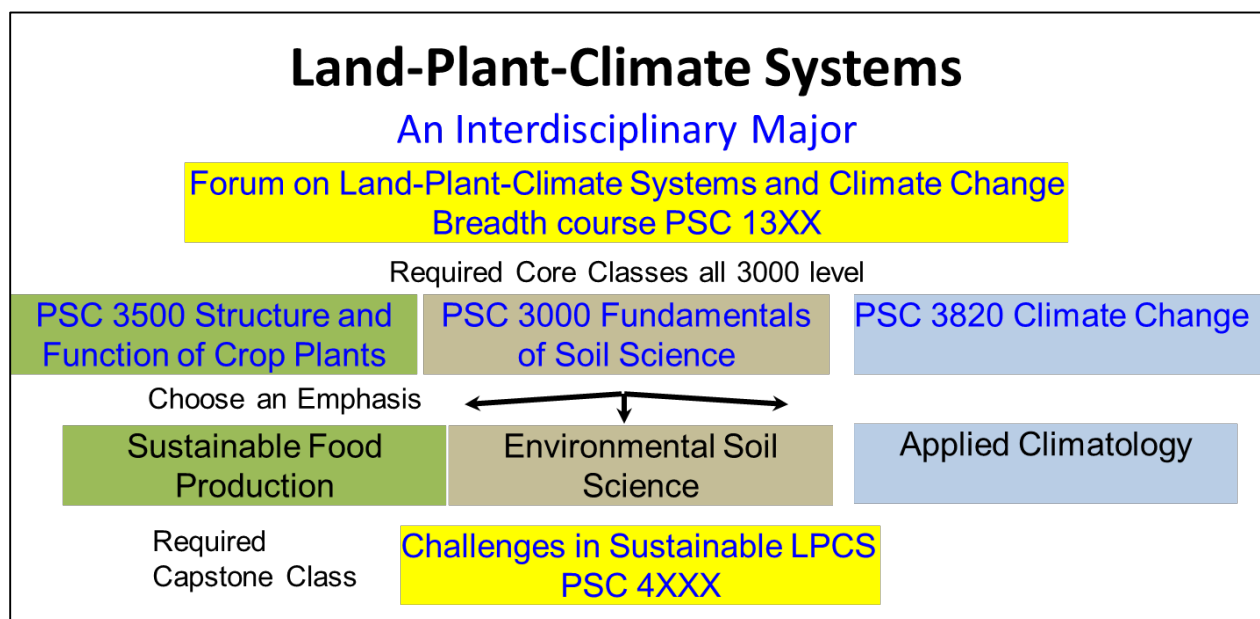


Fig. 1. Overview of LPCS Major

**University General Education Requirements**

Communications Literacy (6 credits) and Quantitative Literacy (3-4 credits), Math 1050 College algebra (QL) or a MATH course requiring MATH 1050 as a prerequisite is the minimum required for this major (most emphases require additional mathematics). Breadth Requirements include 18 credits at least one course from each of 6 categories. University Studies Depth Education Requirements (two CI, and one QI) and 2 credits in each: Depth Humanities and Creative Arts (DHA) and Depth Social Sciences (DSS).

**Major Core Required Courses (15 credits)**

The five 5 core classes required of all students to complete the major are described below. The PSC 13XX class will meet one breadth general education physical science requirement for students.

1. **PSC 13XX** Forum on Land-Plant-Climate Systems **BPS** (3)
2. **PSC 3500** Structure and Function of Crop Plants (3)
3. **PSC 3000** Fundamentals of Soil Science (4)
4. **PSC 3820** Climate Change **DSC/QI** (3)
5. **PSC 4XXX** Challenges in Sustainable Land-Plant-Climate Systems (Capstone) **CI** (2)

**New Courses Proposed, Required for the Major**

**PSC 13XX Forum on the Land-Plant-Climate Systems (BPS)**

Introductory breadth physical science class designed to explore global challenges facing the world and local communities in food security, water availability, land degradation, climate change and agricultural and environmental sustainability. Communication and quantitative skills for assessing these complex issues will be strengthened and form the basis for further work on interactions of water with plants in the terrestrial environment. Water, soils, plants and the atmosphere form a physically integrated, dynamic system in which the various flow processes of energy and matter occur. This is proposed as a new course but may eventually replace the current PSC 2010 Soils, Waters and the Environment (BPS).  
3 credits PSC faculty

**PSC 4XXX Challenges in Sustainable Land-Plant-Climate Systems (CI)**

Capstone experience for students completing the major. Students integrate socio-economic and sustainability concepts in the analysis of agricultural and environmental problem(s) and present findings in oral and written reports. Students will engage in collaborative research using their knowledge of Land-Plant-Climate systems. This is proposed as a new course but will eventually replace both the current PSC 4820 Challenges in Climate Change and Energy (CI) and PSC 5740 Environmental Quality: Soil and Water.

Prerequisites: PSC 3820 Climate Change; PSC 3000 Fundamentals of Soil Science, PSC 3500 Structure and Function of Plants  
2 credits, PSC faculty

**Subtotal = 5 credit hours**

**Emphasis Required Courses**

*Select One Emphasis and complete emphasis requirements*

**Sustainable Food Production**

**Environmental Soil Science**

**Applied Climatology**

**Total = 120-124 credit hours**

**Courses and Requirements listed in each emphasis include the courses required for the LPCS major for completeness.**

## Sustainable Food Production

Addressing the challenges in the search for sustainable food production requires a diverse understanding of agriculture and the environment. The goal of sustainable agriculture is to support integrated systems of plant and animal production practices that will, over the long term: satisfy human food and fiber needs; enhance environmental quality and the natural resource base, make the most efficient use of nonrenewable resources and on-farm resources, sustain economic viability of agriculture; and enhance the quality of life for farmers, farm workers and society as a whole. The number of students advised into a College of Agriculture and Applied Sciences (CAAS) Interdisciplinary Studies major has grown steadily from fewer than five to 24 in the past six years. The CAAS academic advisor who mentors these students estimates that about half are primarily interested in Sustainable Food Production. Students in the Sustainable Food Production emphasis will gain a strong foundation in science and develop an individualized curriculum inclusive of animal and crop production as well as the economic and sociological implications of agricultural production. Specific courses will be selected across disciplines within CAAS and tailored to meet each student's interests and goals. The Sustainable Food Production emphasis will include a farm practicum as well as the Land-Plant-Climate Systems capstone course to provide both farming experience and real-world, interdependent problem-solving experience. This emphasis will provide students with an understanding of the interdisciplinary nature of farming systems by emphasizing the ecological theory underpinning the design of farming systems for maximal sustainability. Students will gain a firm foundation for a variety of career options such as owning their own farming enterprise or working as a farm manager for a larger conventional or organic operation. Students will have a sufficiently strong foundation in science to undertake graduate work in agroecology, and they will also be prepared for further study in agricultural business, outreach or policy.

### Emphasis in Sustainable Food Production

#### General Education Requirements (37 credits)

ENGL 1010 (CL) Introduction to Writing (or test)	3
ENGL 2010 (CL) Intermediate Writing	3
ASTE 2900 (BSS) Humanity in the Food Web	3
WILD 2200 (BLS) Ecology of Our Changing World	3
APEC 3010 (DSS) Intro.to Agricultural Economics and Agribusiness	3
HIST 3950 (DHA; CI) Environmental History	3
MATH 1050 (QL) College Algebra	4
PHIL 1120 (BHU) Social Ethics	3
PSC 13XX (BPS) Forum on the Land-Plant-Climate Systems	3
USU 1300 (BAI) US Institutions	3
USU 1330 (BCA) Civilization: Creative Arts	3
ASTE 5260 (CI) Environ. Impacts of Agric. Systems	3
(QI) * see below	

#### Required Preparatory and Professional Core Courses (50-53 credits)

BIOL 1610 (BLS) Biology I	4
---------------------------	---

BIOL 1620 ( <b>BLS</b> ) Biology II	4
CHEM 1110 ( <b>BPS</b> ) General Chemistry I	4
CHEM 1115 ( <b>BPS</b> ) General Chemistry I Lab	1
GEO 3150 ( <b>DSC/QI</b> ) Energy in the 21 <sup>st</sup> Century	3
PSC 2800 Fundamentals of Organic Agriculture	3
PSC 3000 Fundamentals of Soil Science	4
PSC 3500 Structure and Function of Plants	3
PSC 3600 Introduction to Plant Breeding and Heredity	2
PSC 3820 Climate Change ( <b>DSC/QI</b> )	3
BIOL 4430 Introduction to Plant Pathology	4
BIOL 4500 Applied Entomology	3
PSC 5550 Weed Biology and Control	3
PSC 4900 Organic Farm Practicum <b>and/or</b>	
PSC 4250 Internship in Plants, Soils and/or Climate	1-4
PSC 5530 ( <b>QI</b> ) Soils and Plant Nutrient Bioavailability	3
PSC 5XXX Advanced Agroecology	3
PSC 4XXX ( <b>CI</b> ) Challenges in Sustainable LPCS	2

**Agricultural Coursework**

**Select at least 18 credits from the following):**

ADVS 1100 Small-Scale Animal Production	3
ADVS 5030 Sustainable Agricultural Production Systems w/ Animals	3
ASTE 1130 Planting and Tillage Equipment	3
ASTE 3080 Compact Power Units for Agric. and Turfgrass Apps.	3
PSC 3420 ( <b>QI</b> ) Landscape Irrigation Design	2
PSC 4000 Soil and Water Conservation	4
PSC 4050 Greenhouse Management and Crop Production	4
PSC 4280 Field Crops	3
PSC 4320 Forage Production and Pasture Ecology	3
PSC 4400 Modern Vegetable Production	3
PSC 4200 Temperate Zone Fruit Production	3
PSC 4700 Irrigated Soils	3
WILD 4000 Rangeland Management	3
WILD 4500 Conservation Biology	3

**Human Systems Coursework**

**Select at least 12 credits from the following:**

ENVS 2340 ( <b>BSS</b> ) Natural Resources and Society	3
ENVS 3330 Environment and Society	3
ENVS 4700 Communicating Sustainability	3
ENVS 5550 Sustainability: Concepts and Measurement	3
LAEP 2039 Foundations of Sustainability	3
MGT 2350 Small Business Management	3
MGT 3500 Fundamentals of Marketing	3
MIS 5700 ( <b>DSS</b> ) Internet Mngt. & Electronic Commerce	3
NDFS 1260 Food Literacy	3



**Proposal for a Major in Land-Plant-Climate Systems**

**9**

PHIL 3510 Environmental Ethics	<b>3</b>
SOC 3610 ( <b>DSS</b> ) Rural Sociology	<b>3</b>
SOC 4620 ( <b>DSS</b> ) Sociology of the Environment and Natural Res.	<b>3</b>
SOC/ENVS 5640/6640( <b>CI</b> ) Conflict Management in Natural Res.	<b>3</b>
<u>WATS 1200 (<b>BLS</b>) Biodiversity and Sustainability</u>	<b>3</b>

**Total Required 117-120 (minimum 120 required for BS degree)**

## Environmental Soil Sciences

This emphasis prepares students for careers or advanced study in the environmental and soil sciences and the management of land and water resources. Students gain fundamental understanding of the basic sciences and mathematics, as well as a strong background in soil science. Courses emphasize the interactive soil/water processes in terrestrial ecosystems—from the microscopic to the landscape perspective. From this base, each student can design his or her own program of specialization. Graduates are prepared for a variety of career opportunities in the public and private sectors, or to advance their educations in competitive graduate programs.

### Emphasis in Environmental Soil Science

#### General Education Requirements (32 credits)

(CL1) ENGL 1010 Introduction to Writing (or test)	3
(CL2) ENGL 2010 Intermediate Writing	3
(QL) (see Mathematics requirement)	
(BAI)	3
(BCA)	3
(BHU)	3
(BLS) WILD 2200 Ecology of Our Changing World*	3
(BPS) PSC 13XX Forum on the LPCS*	3
(BSS) suggest ASTE 2900 Humanity in the Food Web	3
(DHA) suggest HIST 3950 Environmental History (CI)	3
(DSS) suggest APEC 3010 Intro. to Ag Econ. or APEC 3012	3
(QI) see preparatory classes	
(CI) PSC 48XX Challenges in LPCS* and 1 other	2

\* These specific courses are required for the LPCS major or the ESS emphasis as well

#### Required Preparatory Courses (46-50 credits)

BIOL 1610 Biology I	4
GEO 1110 Physical Geology (BPS)	3
GEO 1115 Physical Geology Lab	1
PSC 3000 Fundamentals of Soil	4
PSC 3500 Structure and Function of Plants	3
PSC 3820 Climate Change (DSC/QI)	3

Complete *one* of the two following blocks of Chemistry courses (9 or 10):

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#### Block 1 (9 credits)

CHEM 1110 General Chemistry I (BPS)	4
CHEM 1120 General Chemistry II (BPS)	4
CHEM 1125 General Chemistry II Laboratory	1

*or*

#### Block 2 (10 credits)

CHEM 1210 Principles of Chemistry I	4
CHEM 1215 Chemical Principles Laboratory I	1
CHEM 1220 Principles of Chemistry II (BPS)	4
CHEM 1225 Chemical Principles Laboratory II	1

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Complete *one* of the two following blocks of Mathematics courses and *one* Statistics Course, also covers Quantitative Literacy (QL) (11-14 credits):

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Block 1 (10 credits)		
MATH 1050	College Algebra (QL)	4
MATH 1060	Trigonometry	2
MATH 1210	Calculus I (QL)	4
<i>or</i>		
Block 2 (8 credits)		
MATH 1210	Calculus I (QL)	4
MATH 1220	Calculus II (QL)	4
STAT 2000	Statistical Methods (QI)	4
<i>or</i>		
STAT 3000	Statistics for Scientists (QI)	3

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Complete *one* of the two following blocks of Physics courses (8 credits):

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Block 1 (8 credits)		
PHYS 2110	General Physics - Life Sciences I	4
PHYS 2120	General Physics - Life Sciences II (BPS)	4
<i>or</i>		
Block 2 (8 credits)		
PHYS 2210	Physics for Scientists and Engineers I (QI)	4
PHYS 2220	Physics for Scientists and Engineers II (BPS/QI)	4

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**Required Professional Core (17 credits)**

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PSC 5050	Principles of Environmental Soil Chemistry	3
PSC 5130	Soil Genesis, Morphology, and Classification	4
PSC 5670	Environmental Soil Physics	4
PSC 5560	Analytical Techniques for the Soil Environment	3
PSC 5310	Soil Microbiology	3
<i>or</i>		
PSC 5530	Soils and Plant Nutrient Bioavailability (QI)	3

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**Further Discipline Related Courses (15 credits)**

Select 15 credits from this list of PSC, ASTE, GEO, WATS, WILD courses with advisor

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PSC 2800	Fundamentals of Organic Agriculture	3
PSC 3400	Arboriculture	3
PSC 3600	Introduction to Plant Breeding and Heredity	2
PSC 3810	Turfgrass Management	3
PSC 4000	Soil and Water Conservation	4

PSC 4200	Temperate Zone Fruit Production	3
PSC 4280	Field Crops	3
PSC 4320	Forage Production and Pasture Ecology	3
PSC 4400	Modern Vegetable Production	3
PSC 4500	Soil Reclamation	3
PSC 4700	Irrigated Soils	3
PSC 5100	Prof. Turf and Urban Landscape Water Management	3
PSC 5200	Site Specific Agric. and Landscape/Hort. Management	3
PSC 5270	Environmental Plant Physiology	2
PSC/BIOL 5310	Soil Microbiology	3
PSC/WILD 5350	Wildland Soils	3
PSC 5400	General Meteorology	3
PSC 5430	Plant Nutrition	2
PSC 5500	Environmental Physics of Land Ecosystems and Climate	3
PSC 5530	Soils and Plant Nutrient Bioavailability (QI)	3
PSC 5550	Weed Biology and Control	4
PSC/CEE/WATS 5003	Remote Sensing of Land Surfaces	3
ASTE 5260	Environmental Impacts of Agricultural Systems (CI)	3
BIOL 4430	Introduction to Plant Pathology	4
BIOL 4500	Applied Entomology	3
CEE 3430	Engineering Hydrology	3
CEE 5000	Irrigation and Drainage of Agricultural Lands	3
CEE 5190	Geographic Information Systems for Civil Engineers	3
CHEM 3000	Quantitative Analysis (QI)	3
GEO 3500	Minerals and Rocks	4
GEO 3150	Energy in the 21 <sup>st</sup> Century (DSC/QI)	3
GEO 3550	Sedimentation and Stratigraphy (CI)	4
GEO/WATS 3600	Geomorphology	4
GEO 5510	Groundwater Geology (QI)	3
GEO 5520	Techniques of Groundwater Investigations (CI)	3
GEO 5600	Geochemistry	3
GEO 5630	Geologic Image Analysis	3
GEO/WATS 5150	Fluvial Geomorphology	3 or 4
GEO 5680	Paleoclimatology	3
WATS 3700	Fundamentals of Watershed Science (CI)	3
WATS 4500	Limnology: Ecology of Inland Waters	3
WATS 4530	Water Quality and Pollution	3
WATS 4930	Advanced GIS and Spatial Analysis	3
WATS 5640	Riparian Ecology and Management	3
WILD 3600	Wildland Plant Ecology and Identification	4
WILD 4750	Monitoring and Assessment in Natural Resource and Environmental Management	3
WILD 4910	Assessment and Synthesis in Natural Resource Science	3
WILD 5750	Applied Remote Sensing	3

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**Total required 110-114 (minimum 120 required for BS degree)**

### Applied Climatology

The program integrates basic and applied principles of meteorology, climatology and environmental physics with land surface processes, especially water. A sound background in math, physics and the basis of physical science is utilized to examine the biophysical interactions between land ecosystems and climate at various scales. This includes learning about instrumentation and measurements of the atmosphere, soil, water and plants in the field, and how the data are used to address practical issues related to climate, water and energy. The graduates would be well prepared to pursue graduate education in atmospheric science, climatology, hydrology and most other physical sciences, but especially suited for interdisciplinary science programs. They would also be suited to work with private consulting firms to address practical problems related to issues such as climate, weather, energy and water use. Finally, they will immediately be well prepared for positions as research technicians in federal, state and university laboratories.

#### Emphasis in Applied Climatology

##### General Education Requirements (32 credits)

(CL1) ENGL 1010 Introduction to Writing (or test)	3
(CL2) ENGL 2010 Intermediate Writing	3
(QL) see preparatory courses	
(BAI)	3
(BCA)	3
(BHU)	3
(BLS) WILD 2200 Ecology of Our Changing World*	3
(BPS) PSC 13XX Forum on the LPCS*	3
(BSS) suggest ASTE 2900 Humanity in the Food Web	3
(DHA) suggest HIST 3950 Environmental History(CI)	3
(DSS)	3
(QI) see preparatory courses	
(CI) PSC 48XX Challenges in LPCS* and 1 other	2

\* These specific courses are required for the LPCS major or the AC emphasis as well

##### Required Preparatory Courses (48 credits)

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BIOL 1610 Biology I	4
MATH 1210 Calculus I	4
MATH 1220 Calculus II	4
MATH 2250 Linear Algebra and Differential Equations	4
STAT 3000 Statistics for Scientists	3
PHYS 2210 Physics for Scientists & Engineers I	4
PHYS 2220 Physics for Scientists & Engineers II	4
CHEM 1210 Principles of Chemistry	4
GEO 1110 Physical Geology	3
GEO 1115 Physical Geology Lab	1
PSC 2000 Atmosphere and Weather	3
PSC 3000 Fundamentals of Soil Science	4
PSC 3820 Climate Change	3
PSC 3500 Structure and Function of Plants	3

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**Required Professional Core (26 credits)**

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GEO 3150 Energy in the 21 <sup>st</sup> Century	3
PSC 5000 Environmental Instrumentation	2
PSC 5270 Environmental Plant Physiology	2
PSC 5670 Environmental Soil Physics	4
PSC 5500 Land-Atmosphere Interactions	2
PSC 5300 Remote Sensing of Land Surfaces	4
PSC 5400 General Meteorology	3
GEO 5680 Paleoclimatology	3
PSC 6900 Special Problems Climate Data Analysis	3

**Further Discipline Courses (choose 12 credits)**

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Select 15 credits from this list of supporting courses	
CEE 3430 Engineering Hydrology	3
GEO 1110 Physical Geology and Geo 1115 Laboratory	4
GEO 3200 Earth Through Time (QI/DSC)	3
GEO 5440 Paleoecology (CI)	2
GEO 3100 Natural Disasters (DSC)	3
GEO 3600 Geomorphology	4
JCOM 1130 Beginning Newswriting for the Mass Media	3
ENVS 5750 Sustainable Living	3
ECON 5560 Natural resources and environmental economics	3
PSC 4200* Global and Regional Climatology	2
WILD/BIOL/SOIL 6200 Biogeochem of Terrestrial Ecosys	3

\*Possible New Classes to Be Created

**Total required 118 (minimum 120 required for BS degree)**

**Considerations for General Education Requirements (30-34 credits)**

Competency Requirements (9-10 credits)

CL 6 credits, QL 3-4 credits,

Breadth Requirements (18-20 credits)

BAI, BCA, BHU, BLS, BPS and BSS

Exploration Requirement (3-4 credits)

Depth Education Requirements

CI 2 courses, QI 1 course, 1 DHA + 1 DSS (4 cr. min.)

Upper Division Credits Requirement

40 credits numbered 3000 or above

Some suggested courses to fulfill General Studies Requirements

ASTE 5260 (CI) Environ. Impacts of Agric. Systems	3
ASTE 2900 (BSS) Humanity in the Food Web	3
ENGL 1010 (CL) Introduction to Writing	3
ENGL 2010 (CL) Intermediate Writing	3
HIST 3950 (DHA; CI) Environmental History	3
JCOM 1510 (BSS) Introduction to Mass Communication	3
PHIL 4310 (DHA) Philosophy of Science	3
PHIL 3510 (DHA) - Environmental Ethics	3
POLS 3810 (DSS) Introduction to Public Policy	3
USU 1300 (BAI) US Institutions	3
USU 1330 (BCA) Civilization: Creative Arts	3
WILD 2200 (BLS) Ecology of Our Changing World	3