Agenda CALS Curriculum Committee Meeting Tuesday, April 09, 2013, 12:00 p.m. 250 Agricultural Hall

Members:				
Francisco Pelegri,(2013) Jeri Barak, (2014) Bill Bland, (2014)	Amin Fadl, (2013) Randy Jackson, (2013) Maya Hayslett, (2013)	Jack Kloppenburg, (2015) Paul Mitchell, (2013) Masarah Van Eyck, (2015)		
CALS Ex Officio: Sarah Pfatteicher	CASI Ex Officio: Liv Sandberg (non-voting)	Student Reps: Tim Pearson UP&S Office: Susan Gisler Dan Statter		
March 26th minutes	MINUTES			
	AUTOMATIC CONSENT			
Undergraduate Sustainability Cert Proposal	ificate			
Curriculum revision: Landscape Proposed revisions Four-year Plan	e Architecture major (non profes	sional) BS degree		

NEW BUSINESS

ANNOUNCEMENTS

MINUTES

CALS Curriculum Committee Meeting Tuesday, March 26, 2013, 12:00PM 250 Agricultural Hall

Present:, Amin Fadl, Bill Bland, Jack Kloppenburg, Liv Sandberg, Masarah Van Eyck, Sarah Pfatteicher

Absent: Francisco Pelegri, Jeri Barak, Randy Jackson, Paul Mitchell

Kloppenburg motions, Fadl seconds to call meeting to order at 12:04 PM.

Minutes

03/12/13 Minutes

Unanimously approved

Course Proposals

New Course Proposals

Guest: Lynette Karls, Faculty Associate, Nutritional Sciences

Capstone Certificate in Clinical Nutrition & Capstone Certificate in Clinical Nutrition (*Dietetic Internship*)

Committee asks about vision, program scope, and type of potential applicant, funding strategy and implementation plan.

Committee informed there are two programs; one that is a post-baccalaureate certificate (coursework) and a separate program incorporates a closely-supervised internship with UW Hospitals. Lynette communicated the departments excited at the prospect to partner with UW Hospitals.

Committee informed the profession is moving to a training model of post-baccalaureate education with supervised experiences in the field. Programs will have total initial enrollment near thirty, with room to grow. Potential applicants will hold a bachelor's in a subject-specific field, pursuing a career in dietetics or nutrition. The programs will receive development funds from the Division of Continuing Studies and the Educational Innovation Initiative for one year, with subsequent years being revenue generating. The programs will first be piloted and then reviewed.

NS 650: Advanced Clinical Nutrition – Critical Care and Nutrition Support

Transcript title missing "e" in "care'.

Department will address.

Unanimously approved

NS 651: Advanced Clinical Nutrition – Pediatrics

Committee discusses contradictory information: p. 25, under justification of credits: statement appears to imply that course may be taken in the Summer and on a 14-week semester, but earlier in the proposal it says course will be typically given in the summer.

Committee informed program will be an 8 week schedule and will clarify the proposal.

Unanimously approved

NS 652: Advanced Nutrition Counseling and Education

Unanimously approved

NS 653: Clinical Nutrition Research

Unanimously approved

NS 670: Nutrition and Dietetics Practicum I

Committee states three credits would roughly correspond to nine hours per week, but documents suggest it to be over twenty hours per week for three credits (during 19.5 weeks, for a total of 600 credits/course in the proposal). Committee informed that these are the hours that match other national accrediting programs.

Committee states the number of hours in the proposal and the syllabus do not match (600 hours in the proposal, 624 in the syllabus).

There is no grading scale on the syllabus.

Committee informed department will clarify the proposal.

Unanimously approved

NS 671: Nutrition and Dietetics Practicum II

Committee states three credits would roughly correspond to nine hours per week, but documents suggest it to be over twenty hours per week for three credits (during 19.5 weeks, for a total of 600 credits/course in the proposal). Committee informed that these are the hours that match other national accrediting programs.

Committee states the number of hours in the proposal and the syllabus do not match (600 hours in the proposal (p.4), 624 in the syllabus (p.91)).

There is no grading scale on the syllabus.

Committee informed department will clarify the proposal.

Unanimously approved

Course Change Proposals

Guest: Rich Hartel, Professor, Food Science

Food Science 410: Food Chemistry

Committee asks since there is a minimum grade (BC) added as a prerequisite in proposals, would this restrict enrollment? Committee informed that it is the experience of department that students earning below a BC in 400 level courses do not tend to complete the program.

Committee informed the addition of a minimum grade as a prerequisite will be coded by the Office of Registrar, and not at the departmental level.

Unanimously approved

Food Science 412: Food Analysis

Unanimously approved

Food Science 432: Principles of Food Preservation

Committee asks if department can more clearly list prerequisites (use Food Sci instead of FS; clarify ABE, PAE). Committee concerned students will not understand.

Committee informed department will clarify the proposal.

Unanimously approved

Food Science 440: Principles of Food Engineering

Committee asks since there is a minimum grade (BC) added as a prerequisite in proposals, would this restrict enrollment? Committee informed that it is the experience of department that students earning below a BC in 400 level courses do not tend to complete the program.

Committee requests that Math 221 or equivalent be added to qualify as a prerequisite.

Committee requests "Phys" be spelled out for list of prerequisites.

Committee informed department will clarify the proposal.

Unanimously approved

Food Science 511: Chemistry and Technology of Dairy Products

Unanimously approved

Food Science 532: Integrated Food Manufacturing

Unanimously approved

Food Science 550: Food Fermentations

Committee states this course replaces three 300 level courses for one 500 level Biochemistry course. How does the biochemistry course content compare to the content of the previous prerequisite courses? How does an upper level course in biochemistry make the course available to a wider audience?

Committee requests greater justification to address questions stated above.

Committee informed department will clarify the proposal.

Unanimously approved

New Course Proposals

Biology 265: Rainforests and Coral Reefs

Committee tables the proposal

Biology 599: Capstone in Biology

Committee tables the proposal

Inter-Ag 275: Leading Learning Communities as Peer Mentors

Committee suggests change to transcript title (remove LCs?)

Committee requests clarification to course description: is course specific to WISE Peer mentors?

Committee requests updating "beginning term" to Spring 2014.

Committee requests change course number on page three of proposal from 375 to 275.

Committee requests change course number on syllabus from 375 to 275.

AB and BC missing from grading scale.

Committee requests an updated CV for the instructor and removal of references from instructors CV

No motion from committee

Old Business

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Committee adjourns at 1:37 PM

Submitted Dan Statter,

Proposal for an Undergraduate Sustainability Certificate

Sponsoring Unit: Gaylord Nelson Institute for Environmental Studies developed by Office of Sustainability

Developed by

Patrick Eagan

Education Fellow, Office of Sustainability, Chair of Environment and Resources Program, Gaylord Nelson Institute for Environmental Studies

Craig H. Benson

Director of Sustainability Research and Education and Wisconsin Distinguished Professor, Office of Sustainability

Angela Pakes Ahlman

External Relations Coordinator, Office of Sustainability

4/3/13

Table of Contents

Transmittal Letter from Nelson Institute for Environmental Studies

Certificate Form (see separate file during final application)

Proposal Narrative

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- 5.0 Administration
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- 7.0 Overlap limits
- 8.0 Assessments and Program Review
- 9.0 Enrollment progress and Certification Completion
- 10.0 Resources and Ongoing Commitment
- 11.0 Sunset Provisions

Appendices

Interested key faculty and staff

Supporting letters

Course descriptions spreadsheet-for final submittal-working copy attached

Sample course Plans

Certificate Title: Sustainability Certificate

1.0 Introduction and Purpose

Sustainability skills and perspectives are rapidly becoming valued capabilities in public and private sector organizations. Yet there are few educational programs that support development of sustainability competencies at the undergraduate level. The proposed certificate is designed to provide the educational experience leading to competencies of interest to a range of public and private organizations.

The Sustainability Certificate, referred to afterwards as the certificate, is intended to provide an applied curriculum in sustainability for undergraduates that develops skills in literacy, quantitative principles, and applications with the objective of educating graduates so that they make better long-term decisions in their personal and professional lives in the context of sustainability. The certificate also provides students with opportunity to experience the diversity of perspectives and approaches associated with solving sustainability problems, and the need to fuse diverse perspectives into operative solutions. The certificate will also offer a credential that will enhance student employment and career opportunities.

Addressing sustainability issues requires a blend of technical, economic, and social strategies, requiring unique partnerships of individuals that have different types of expertise. Thus, sustainability education applies to a broad cross-section of students across the campus. Moreover, issues such as resource limitations, food systems, and climate change will make sustainability education and professional practice highly valued into the foreseeable future. UW-Madison's reputation in life sciences, engineering, environmental science, business, and social issues provide an ideal opportunity to provide a sustainability certificate for undergraduate students.

Sustainability is a broad and emerging subject that is connected to and links many disciplines. For example, practicing medicine, business, and engineering design that supports ecological integrity, economic viability, and social justice. Making meaning of sustainability has both disciplinary and place-based value. The proposed certificate is designed to be inclusive for students with different interests and academic backgrounds. The curriculum requires three courses common to all students combined with a sustainability-focused and sustainability-related courses from a variety of departments.

The certificate makes use of courses within a student's major so the student develops disciplinary expertise in sustainability that complements other coursework in the major without substantially affecting time to degree completion. A list of courses with sustainability content is attached that was compiled by the Office of Sustainability (OS) with assistance of department chairs and faculty in summer of 2012. These courses, represent many dimensions of sustainability (e.g., social and environmental justice, economics, resources, engineering applications, business applications, society and culture, history, geography, public policy, communication, ethics, population and health, food systems, and the human-environment interrelationship), and would count towards the disciplinary core requirements in the certificate. This will be a living list that is updated

as new courses with sustainability content evolve and existing courses are modified. The list will be posted on the OS website for easy access by students across campus.

2.0 Sponsoring Unit

OS is organizing the undergraduate certificate in collaboration with the Nelson Institute for Environmental Studies, which will serve as the certificate's administrative home. The certificate will be offered in conjunction with campus partners from the Colleges of XXX and Schools of XXX. Letters of support from these units are attached in the appendix along with the approval letter from the Nelson Institute for Environmental Studies.

Creation of this certificate is consistent with the OS mission:

The University of Wisconsin–Madison aligns research and education on sustainability (our purpose) with campus operations (our practices) in the service of environmental, economic, and social responsibility to people and the planet. The University of Wisconsin–Madison will be a living model for sustainability, exemplifying values and actions that demonstrate our commitment to stewardship of resources, respect for place, and the health and well being of the broader community, now and for the future.

The Instructional and Governance Committees of the Nelson Institute will address academic issues associated with the certificate for Environmental Studies. OS will be responsible for facilitating coordination and development of the curriculum, admission evaluation, and developing appropriate service and experiential learning opportunities.

3.0 Proposal Timeline

September through May 2013

College, School and Department proposal introductions—support letters

Fall 2013

University Academic Planning Council submittal.

4.0 Curriculum/Program Description

The 19-credit certificate will include the following coursework:

- Required Courses in Sustainability Principles and Literacy (9 cr) Select 3 out of five listed:
 - ES 101, Forum on the Environment 2 credits Lectures and discussions about environmental issues. Historical and contemporary environmental impacts of humans on the biosphere. Global futures: population, technology, societal values, resources and prospects for sustainable management..

- ES 126, ILS 126, Introduction to Environmental Science, (4 cr, P, no prerequisites, available for Honors). A place-based course in which students learn about sustainability issues relating to energy and food on the UW-Madison campus. The course teaches through campus initiatives such as WE CONSERVE to the underlying principles of environmental science. The weekly laboratory meets in the "dream" collaborative teaching spaces of the Wisconsin Institutes for Discovery that showcase sustainable building design.
- ES 250, Introduction to Sustainability Science (3 cr). This course aims to develop a solutions-oriented understanding of environmental and energy issues. To advance these goals, the course introduces basic quantitative analysis methods and builds these skills by solving problems inspired by real-world sustainability issues.
- S 540 Sociology of International Development (3 cr) Sociological analysis of relationships among economic growth, environmental sustainability and social justice in the developing world. Considers frameworks for understanding poverty, hunger, educational and technological inequality, and the impact of globalization on prospects for socially and ecologically sustainable development.
- ES 139 Resources and People (3cr) An introductory exploration into the relationships between humans and the earth's resources, including food, energy, physical materials, water, biota, and landscapes; it considers issues linked to population and scarcity, resource tenure, green consumerism, political economy, environmental ethics, risks and hazards, political ecology, and environmental justice.
- **Disciplinary Core Courses (6 cr)**. This coursework consists of sustainability-related courses within the student's major. Students will select these courses with input from faculty advisors within their home college from lists compiled by the Office of Sustainability and posted on the OS. At least two courses must be used to fulfill this requirement. Sample course plans are listed in the appendices.
- Service Learning (1 cr). A 1-cr service learning experience will be coordinated with the Morgridge Center for Public Service from the list of service learning courses. The purpose of this course is to provide students with an appreciation for public service and commitment to community, which is essential to solve many sustainability problems.

• Capstone (3 cr). InterEgr 601, Sustainability Capstone (2 cr). The capstone course will be created through the College of Engineering, and will be organized, administered, and offered by Angela Pakes Ahlman, adjunct professor in the College of Engineering, and OS External Relations Coordinator. The capstone course is an experiential team-based learning experience dealing with a sustainability issue in campus operations (if available) or in the Dane County area. Teams will be comprised of students from various departments and colleges to ensure that students experience the range of perspectives that must be addressed for solution of sustainability problems. The capstone experience will have written and oral presentation requirements. This course will be approved through normal college approval processes and in the mean time a special topics course number will be used.

5.0 Administration

5.1 Administrator

Rebecca Ryan, Undergraduate Programs Coordinator in the Nelson Institute for Environmental Studies, will be responsible for advising all students in the certificate program. Single points of contact will be identified in participating instructional units.

Angela Pakes Ahlman, adjunct professor in the College of Engineering and OS External Relations Coordinator will be responsible for general administration, admissions, and program review under the direction of the UW-Madison Director of Sustainability Research and Education.

5.2 Is the certificate program duplicative of an existing or anticipated major?

There is no current major or certificate with a focus specifically on sustainability at the undergraduate level. A number of sustainability-related certificates for graduate students are available and the Certificate in Energy Sustainability exists for undergraduate students in the College of Engineering. However, no organized major or certificate is available or planned for undergraduate students that is specifically focused on sustainability. The proposed certificate fills this gap, providing a continuum of sustainability education from freshman year through doctoral study.

Some overlap exists with the existing Environmental Studies Certificate, which requires 15 credits of interdisciplinary course work related to the environment. There is also an undergraduate degree in Environmental Studies that can have an environmental focus. The proposed certificate is meant to complement these existing programs, provide students with a specific sustainability credential, and fuse major-specific course work, sustainability fundamentals, service learning, and an integrating capstone experience in a manner that is available nowhere else on campus.

6.0 Admissions

The certificate will begin with cap of 100 students. The cap could be expanded after a 3-year period if demand is realized and appears persistent. Students entering the certificate will be required to have completed at least on semester on campus and have a GPA of at least 3.0. Applicants will be required to prepare a one page personal statement indicating why they are interested in the certificate, describing their career plan, and indicating how the education provided by the certificate will prepare them for their career,

Students will be required to maintain a minimum GPA of a 2.8. Special students will not eligible because of the capacity considerations.

7.0 Overlap limits

None known

8.0 Assessment and Program Review

An Oversight Committee of interested faculty will oversee the certificate develop more specific learning objectives and provide periodic assessment.. This committee has not been formed, but solicitation of faculty has been conducted (see A-1 below for a list of faculty that have indicated interest). The UW-Madison Director of Sustainability Research and Education, or a designee, will chair the Oversight Committee. This committee will develop a plan for assessment using student surveys and learning outcomes during the first year that the certificate is offered. Since this is a campus wide proposal, Engineering or other College or School APC will not be needed.

9.0 Enrollment Progress and Certification Completion

Angela Pakes Ahlman of OS will monitor enrollment progress with oversight by the Oversight Committee. Certificate completion will be evaluated and determined by Rebecca Ryan of the Nelson Institute for Environmental Studies using DARS.

10.0 Resources and Ongoing Commitment

The Certificate will be offered if the UW-Madison campus provides budgetary resources based on student credit hours (or similar formulation) to the Nelson Institute for Environmental Studies and the College of Engineering for the courses in the certificate that are required outside the student's major (see Section 4). OS will provide resources for administration by Angela Pakes Ahlman.

11.0 Sunset Provisions

The certificate executive committee will evaluate enrollment and capability on an annual basis. If enrollment trends or staffing indicate that certificate will not be viable in the future (e.g., 5 yr window), admissions to the certificate will cease and the certificate

program will be decommissioned after students within the certificate program have completed their requirements and/or graduated.

Appendices

A-1 Interested key Faculty and Staff

The following faculty has indicated interest as being listed as key faculty from a 2012 survey of all interested faculty and their courses on sustainability:

Craig Benson, Geological Engineering, Civil & Environmental Engineering

Greg Downey, School of Journalism

Patrick Eagan, Engineering Professional Development

Thomas Eggert, lecturer, School of Business

Holly Gibbs, Geography

Doug Reinemann, Biological Systems Engineering

Jessie Steinberg, Philosophy

Ann Terlaak, School of Business

Sheldon Xiaodong Du, Agricultural and Applied Economics

A-2 Sample Course Programs

Engineering Example

- ES 101, 126, 250
- Environmental Impact of Transportation Systems CEE 570
- Air Pollution Effects, Measurement and Control CEE 423
- Service Credit for Campus Transportation models
- Capstone

Business Example

- ES 101, 126, 250
- Sustainable Approaches to System Improvement OTM 365—likely to change to OTM 470

- Sustainable Property Development RMI 651
- Service Credit for Campus Business model for a local business
- Capstone

Community and Environmental Sociology

- ES 101, 126, 250
- Environmental Stewardship and Social Justice C&E 541
- Agriculture Technology and Society C&E 612
- Service Credit for Campus local food sourcing for campus
- Capstone

A-3 Sustainability-Related Courses for Disciplinary Core

See attached spreadsheet. Table will be prepared for final submission. Available upon request from Patrick Eagan. Vetted by Beth Appelt, Nelson Institute.

2013-2014 Revisions to the BS Major in Landscape Architecture (Landscape Studies) Non Professional Degree

College and University Requirements (35 – 39 cr)

Comm A (3 cr)

Comm B (3 cr)

Math 112 and 113, or 114 (5 cr)

Math 211, 221, or Stats 301 (3-5 cr)

Ethnic St (3 cr)

First-year seminar

Geog 127 (5 cr) (counts as Intl St Req)

Chem 103, 108, or 109 (4-5 cr)

Botany 130 or 100 + 2 (5 cr)

Botany 260, 455, or 460 (3-4 cr)

Core Curriculum: (33 - 35 cr)

LA 201 (Introductory Landscape Architecture Studio) (2 cr)

LA 250 (Survey of Landscape Architecture Design) (3 cr)

LA 260 (History of Landscape Architecture) (3 cr)

LA 262 (Landscape Inventory and Evaluation Methods) (4 cr)

LA 695 (Application of Geographic Systems in Landscape Architecture)

or URPL 622 (Application of Geographic Systems in Planning) (3 cr)

Soils 301(General Soil Science) (4 cr) or Soils 230 (Soil: Ecosystem and Resource) (3 cr)

Hist 460 (American Environmental History) (4 cr) or Art HIst 457 (History of American Vernacular

Architecture and Landscapes (3 cr)

URPL/LA 463 (Evolution of American Planning) (3 cr)

URPL 601 (Site Planning) (3 cr)

Capstone: LA 691(Senior Thesis (3 cr)

Three, LA 1-credit 375 courses (3 cr) or equiv as determined by advisor

Must Complete One of Three Specialization Tracks (18-22 cr.)

Specialization Track: Ecological Restoration (21-22 credits)

LA 353 (Landscape Architecture Technology I) (3 cr)

LA 666 (Restoration Ecology) (3 cr)

Botany 455 (Vegetation of Wisconsin) (4 cr)

Botany 400 (Plant Systematics) or 401 (Vascular Flora of Wisconsin) (4 cr)

Envir Studies 651 (Conservation Biology) (3 cr), Geog 339 (Environmental Conservation) (4 cr), or Envir. St. 360 (Extinction of Species) (3cr)

Agronomy 370 (Grassland Ecology), LA 361 (Wetlands Ecology), or

Soils 323 (Soil Biology) or Zoo 315 (Limnology—Conservation of Aquatic Resources) (3cr),

LA 399 or 699 (Field-based Independent Study or Internship) (1 cr)

General Electives (24-31cr)

Restoration students are encouraged to select Botany 130, Botany 260 or 460 and Stats 301or equivalent under College and University Requirements

Specialization Track: Environmental Planning (20 – 22 credits)

Econ 101 (Principles of Microeconomics) (4 cr)

Sociology 210 (Survey of Sociology) or Sociology 211 (The Sociological Enterprise) (4 cr)

Geo 305 (Introduction to the City (4 cr.) or URPL 590 (Urban Design: Theory and Practice) (3cr)

URPL 668 (Green Politics) (3 cr), or Forestry 515 (Renewable Resources Policy) (3 cr), or IES/URPL 449 (Government and Natural Resources) 3 cr.

Real Est/URPL 306 (The Real Estate Process) (3 cr) or Real Est/URPL 420 (Urban and Regional Economics) (3 cr) or AAE 343 (Environmental Economics) (3-4 cr) or AAE 532 (Natural Resource Economics) (3 cr)

Geo/URPL 312 (Regional Development and Planning) (3 cr) or Soc/URPL 677 (Urbanism and Urbanization (3 cr) or CES/URPL 617 (Community Development) **(3 cr)

General Electives (24 -32 cr)

Specialization Track: Cultural and Historic Landscapes (18 – 20 credits)

LA 677 (Cultural Resource Preservation and Landscape History) (3 cr)

Folklore 320 (Folklore of Wisconsin) (3 cr.), or Folklore 439 (Foodways) (3 cr), or Folklore 490 (Field Methods and the Public Presentation of Folklore) (3 cr), or Folklore 539 (Folklore of Festivals and Celebrations, 3 cr.), or Folklore 540 (Local Culture and Identity in the Upper Midwest, 3 cr.)

History 201 (The Historian's Craft: Topics Course) (4 cr.) or History 403 (Immigration and Assimilation in American History, 3-4 cr.)

Anthro/AIS 354 (Archeology of Wisconsin, 3 cr.) or Anthro/AIS 353 (Indians of the Western Great Lakes, 3 cr.) or Amer Ind Studies 250 (Indians of Wisconsin, 3 cr.), or AIS/Anthro 431 (American Indian Folklore, 3 cr.), or AIS/LSC 444 (Native American Environmental Issues and the Media, 3 cr.) or Anthro 470 (Ecological Anthropology, 3 cr.) or Anthro 474 (Ethnobotany) (3 cr.) or AIS/CES/Soc 578 (Poverty and Place, 3 cr.)

Art Hist 457 (History of American Vernacular Architecture and Landscapes) (3 cr) or Art Hist 449 (Field School in American Vernacular Architecture History) (3 cr.) or Art Hist 464 (soon to be 264) (Dimensions of Material Culture (3 cr)

Geog 342 (Geography of Wisconsin) (3 cr) or Geog 309 (People, Land and Food: Comparative Study of Agricultural Systems, 3 cr.), or Geog 501 (Space and Place: A Geography of Experience) (3 cr) or Geog 305 (Introduction to the City) (4 cr), or Geog 434 (People, Wildlife, and Landscapes, 3 cr.), or Geog 301 (Geography of Social Organization, 3 cr.) or URPL 711 (Planning for Food Systems and Marketplaces, 3 cr.)

General electives (26 - 34 cr)

Total Credits: 120-124

SAMPLE Four-Year Plan

Last Updated: June 2013

This Sample Four-Year Plan is a tool to assist you and your advisor in planning your academic career. Use it along with the Curriculum Sheet for your program, your DARS report, and the Course Guide.

	Fall Semester		Fall Semester	1 700. p. 08. 0	Spring Semester	l duide.	Fall Semester	
	Sample Courses	Credits	Actual Courses	Credits	Sample Courses	Credits	Actual Courses	Credits
					-			
	LAND ARC 250 ¹	3			LAND ARC 262	4		
	LAND ARC 201 ¹	2			GEOG 127	5		
	COMM A	3			BOTANY 130 or 100	3-5		
	General Elective	3			MATH 113	2		
r 1	MATH 112 ¹	3				14-16		
Year	1 st Year Freshman Seminar	1						
>		15						
	General Elective	3			Specialization	3		
	Specialization	4			LAND ARC 260	3		
	СОММ В	3			BOTANY 260	3		
r 2	CHEM 108	5			URPL 463	3		
Year		15			MATH 211 or STAT 301	3-5		
>						15-17		
	Specialization	3			Specialization	3		
	Ethnic Studies	3			URPL 601	3		
	General Elective	3			LAND ARC 695/URPL 622	3		
r 3	HIST 460 or ART HIST 457	3-4			LA 375 Series	3		
Year	SOIL SCI 301 or SOIL SCI 230	3-4			General Elective	3		
>		15-17				15		
	Specialization	3			CAPSTONE	3		
	Specialization	3			Specialization	3		
	General Elective	3			General Elective	3		
	General Elective	3			General Elective	4		
	General Elective	3				13		
4		15						
Year 4								
λ								

Notes:

College & University Requirements: 35-39 cr

Core Curriculum: 33-35 cr Specialization Track: 22 cr General Electives: 28 cr

Credits in the above categories will vary with the selection of specialization track, students must complete a minimum of 120 credits

If Botany 100 is taken an additional 2 credit lab in the biological or physical sciences will be required