APPROVED BY SENATE
11/12/2018

ILLINOIS

Proposal to the Senate Educational Policy Committee

PROPOSAL TITLE: Revise the Horticultural Food Systems Concentration within the Crop Sciences Major for the Bachelor of Science Degree, in the Department of Crop Sciences, College of ACES

SPONSOR: Dr. Sarah Lovell, Associate Professor in Crop Sciences and Undergraduate Program Coordinator, Phone: 217-244-3433, Email: stlovell@illinois.edu

COLLEGE CONTACT: Mary Lowry, Assistant Dean, Office of Academic Programs, College of ACES, Phone: 217-333-9391, Email: lowry@illinois.edu

BRIEF DESCRIPTION: The Department of Crop Sciences proposes revisions to the curriculum of the Horticultural Food Systems concentration of the Crop Sciences Major. The changes include: adding a new required course (1 credit); creating new categories of "Specialized Courses" and "Focus Area Electives" to better describe the options; moving several courses from the "Required" section to a "Specialized courses" section to allow greater flexibility in scheduling and in allowing students to specialize in certain areas; and removing courses that have been deactivated or considered less applicable. There are no changes to the major being proposed, and the number of hours required for graduation is also not changing.

"Core" classes are very specific to the core of horticulture, and all courses on that list must be completed in order to have a basic understanding of Horticultural Food Systems (HFS). "Specialized" courses allow students to specialize in an area within HFS, for example, gaining depth of knowledge in genetics & breeding or in plant management. We expect students to take at least 2 courses from the category of "Focus Area", so they can expand their breadth of knowledge, drawing from a broader set of courses within Crop and Horticultural Sciences.

Specifically, the purpose of each change is as follows (line numbers matching the table found in Appendix A):

- Line 10: Updated number of hours to reflect changes, and new totals are more consistent with other concentrations
- Line 12: A new course was developed to be required by all majors
- Lines 13, 17, 25, 27, 29: Moved to "specialized courses" section to allow more flexibility in scheduling and in specializing
- Lines 15 and 21: Moved to "focus area electives"
- Line 28: Course is less applicable to our students than other soils classes

- Line 32: New section added to allow flexibility, including most courses removed from the concentration required section
- Lines 33, 34, 38, 39: Course added (moved from above section "Concentration Required"
- Lines 35, 36: Courses appropriate to specialization
- Line 41: Changed to specify "Focus Area Electives" as more specific grouping
- Line 42, 43, 50: Moved from above section "Concentration Required"
- Lines 50, 54, 57: Optional courses also available in "Specialized Course" section, but must include note "May only be applied here if not used as 'Specialized Course'" to avoid a single course to meet two different requirements.
- Line 51, 59, 61: Courses removed because they have been deactivated
- Line 62: Course added because it is appropriate to the concentration

JUSTIFICATION: The revisions to this concentration will allow students greater flexibility in scheduling coursework and in specializing on certain topic areas. The previous version of the concentration was highly specific, with many specifically required courses. That situation caused course conflicts and sometimes resulted in a student being delayed a semester in completing the program. The revised concentration creates a balance between obtaining a key learning outcome: "Demonstrates knowledge in the key subject matter areas of applied plant biology; crop growth and development; crop management and protection; and soil science", and also have some opportunity to tailor the program to specific career paths they intend to follow. This revision does not lighten the program, but rather helps to be more consistent with other Concentrations in the department. While the hours of specifically required courses are reduced by 12-13 for specifically required courses, the newly freed hours will allow students to take courses that match related knowledge areas, such as Business & Entrepreneurship, Food Science, etc. The hours can also support greater flexibility to gain experiences through international programs and internships. The revised format matches with other Concentrations, unlike the previous version that was considerably more restrictive in the specific courses required than Concentrations in Crop Sciences.

BUDGETARY AND STAFF IMPLICATIONS:

1) Resources
   a. How does the unit intend to financially support this proposal?

      This proposal requires no additional resources, because it is primarily a re-grouping of courses already required in the concentration, and includes only existing courses.

   b. How will the unit create capacity or surplus to appropriately resource this program? If applicable, what functions or programs will the unit no longer support to create capacity?

      For this proposal, no additional capacity or surplus is expected.

   c. Will the unit need to seek campus or other external resources? If so, please provide a summary of the sources and an indication of the approved support.

The unit will not need campus or external resources for these revisions.

d. Please provide a letter of acknowledgment from the college that outlines the financial arrangements for the proposed program.

   A letter is attached as Appendix B.

2) Resource Implications

   a. Please address the impact on faculty resources including the changes in numbers of faculty, class size, teaching loads, student-faculty ratios, etc.

      These revisions are not expected to impact faculty resources, because they draw from the same courses for students that we currently have.

   b. Please address the impact on course enrollment in other units and provide an explanation of discussions with representatives of those units.

      Enrollment in certain courses (those previously "Specifically required") may drop by 2-4 students, but those are primarily within our own unit and would likely be redistributed within the unit. A letter from the ABE department allowing the addition of TSM 311 and a letter from IB allowing the addition of IB 420 are attached as Appendix C. All other courses in the concentration are within the Department of Crop Sciences.

   c. Please address the impact on the University Library

      We expect the impact on the University Library to remain at the same level, and a letter of support from them is included as Appendix D.

   d. Please address the impact on technology and space (e.g. computer use, laboratory use, equipment, etc.)

      We do not expect an impact on technology and space, since the number of students in each of the course would remain within the typical range.

DESIRED EFFECTIVE DATE:

Spring 2019

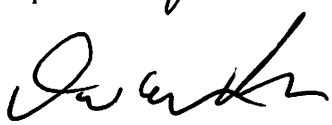
STATEMENT FOR PROGRAMS OF STUDY CATALOG: Because the nature of the concentration is not changing, there will not be any change to the catalog text.

CLEARANCES: *(Clearances should include signatures and dates of approval.* ***These signatures must appear on a separate sheet.*** *If multiple departments or colleges are sponsoring the proposal, please add the appropriate signature lines below.)*

Signatures:

Unit Representative

Date: 9/20/18



College Representative:

Date: 9/20/18

Graduate College Representative:

Date:

Council on Teacher Educatien Representative:

Date:

Appendix A: Comparison of Current and Proposed Horticultural Food Systems Concentration

	Current Requirements:	Current Hours	Revised Requirements:	Revised Hours
1	Natural Science and Technology Required	15-16	Natural Science and Technology Required	15-16
2	CHEM 102: General Chemistry I		CHEM 102: General Chemistry I	
3	& CHEM 103: and General Chemistry Lab I		& CHEM 103: and General Chemistry Lab I	
4	CHEM 104: General Chemistry II		CHEM 104: General Chemistry II	
5	& CHEM 105: and General Chemistry Lab II		& CHEM 105: and General Chemistry Lab II	
6	CHEM 232: Elementary Organic Chemistry I		CHEM 232: Elementary Organic Chemistry I	
7	or CPSC 382: Organic Chem of Biol Processes		or CPSC 382: Organic Chem of Biol Processes	
8	IB 103: Introduction to Plant Biology		IB 103: Introduction to Plant Biology	
9				
10	Horticultural Food Systems Concentration Required	63	Horticultural Food Systems Concentration Required	49-50
11			Horticultural Food Systems Concentration Required Core:	27
12			(Add) CPSC 102: Research in Crop Sciences (1 hr.)	
13	ACE 231: Food and Agribusiness Mgt			
14	CPSC 226: Introduction to Weed Science		CPSC 226: Introduction to Weed Science (3 hrs.)	
15	CPSC 261: Biotechnology in Agriculture			
16	CPSC 270: Applied Entomology		CPSC 270: Applied Entomology (3 hrs.)	
17	CPSC 352: Plant Genetics			
18	CPSC 498: Crop Sci Professional Develpmt		CPSC 498: Crop Sci Professional Develpmt (1 hr.)	
19	HORT 100: Introduction to Horticulture		HORT 100: Introduction to Horticulture (3 hrs.)	
20	HORT 240: Plant Propagation		HORT 240: Plant Propagation (3 hrs.)	
21	HORT 341: Greenhouse Mgmt and Production			
22	HORT 360: Vegetable Crop Production		HORT 360: Vegetable Crop Production (3 hrs.)	
23	HORT 361: Small Fruit Production		HORT 361: Small Fruit Production (2 hrs.)	
24	HORT 362: Tree Fruit Production		HORT 362: Tree Fruit Production (2 hrs.)	
25	HORT 421: Horticultural Physiology			
26	NRES 201: Introductory Soils		NRES 201: Introductory Soils (3 hrs.)	
27	NRES 438: Soil Nutrient Cycling			
28	or NRES 474: Soil and Water Conservation			
29	or NRES 488: Soil Fertility and Fertilizers			
30	PLPA 204: Introductory Plant Pathology		PLPA 204: Introductory Plant Pathology (3 hrs.)	
31				

32			**(Add) Select 7 or 8 hours from the following specialized courses:**	7-8
33			(Add) CPSC 352: Plant Genetics (4 hrs.)	
34			(Add) HORT 341: Greenhouse Mgmt and Production (4 hrs.)	
35			(Add) HORT 442: Plant Nutrition (4 hrs.)	
36			(Add) IB 420 or CPSC 484: Plant Physiology	
37			or HORT 421 Horticultural Physiology (3 or 4 hrs.)	
38			(Add) NRES 438: Soil Nutrient Cycling (3 hrs.)	
39			(Add) or NRES 488: Soil Fertility and Fertilizers (3 hrs.)	
40				
41	Select 15 hours from the following:		**(Add) Select 15 hours from the following focus area electives:**	15
42			(Add) ACE 231: Food and Agribusiness Mgt (3 hrs.)	
43			(Add) CPSC 261: Biotechnology in Agriculture (3 hrs.)	
44	CPSC 431: Plants and Global Change		CPSC 431: Plants and Global Change (4 hrs.)	
45	CPSC 437: Principles of Agroecology		CPSC 437: Principles of Agroecology (3 hrs.)	
46	HORT 180: Medicinal Plants and Herbology		HORT 180: Medicinal Plants and Herbology (3 hrs.)	
47	HORT 205: Local Food Networks		HORT 205: Local Food Networks (3 hrs.)	
48	HORT 298: Undergraduate Seminar		HORT 298: Undergraduate Seminar (1 to 3 hrs.)	
49	HORT 301: Woody Landscape Plants I		HORT 301: Woody Landscape Plants I (4 hrs.)	
50			(Add) HORT 341: Greenhouse Mgmt and Production* (4 hrs.)	
51	**HORT 343: Deactivated Course**			
52	HORT 344: Planting for Biodiversity and Aesthetics		HORT 344: Planting for Biodiversity and Aesthetics (3 hrs.)	
53	HORT 363: Postharvest Handling Hort Crop		HORT 363: Postharvest Handling Hort Crop (2 hrs.)	
54			(Add) HORT 421: Horticultural Physiology* (4 hrs.)	
55	HORT 434: Designing Urban Agriculture		HORT 434: Designing Urban Agriculture (2 hrs.)	
56	HORT 435: Urban Food Production		HORT 435: Urban Food Production (3 hrs.)	
57	HORT 442: Plant Nutrition		HORT 442: Plant Nutrition * (4 hrs.)	
58	HORT 447: Horticultural Plant Breeding		HORT 447: Horticultural Plant Breeding (3 hrs.)	
59	**HORT 464: Deactivated Course**			
60	HORT 475: Permaculture & Agroforestry		HORT 475: Permaculture & Agroforestry (3 hrs.)	
61	**HORT 482: Deactivated Course**			
			(Add) TSM 311: Humanity in the Food Web (3 hrs.)	
	Total ACES prescribed and elective hours must total 35 hours, of which 20 must be completed in residence.		Total ACES prescribed and elective hours must total 35 hours, of which 20 must be completed in residence.	

*** May only be applied here if not used as a Specialized Course.**

Appendix B:

ILLINOIS

COLLEGE OF AGRICULTURAL, CONSUMER AND ENVIRONMENTAL SCIENCES

Academic Programs
128 Mumford Hall, MC-710
1301 W. Gregory Drive
Urbana, IL 61801

August 6, 2018

To Whom It May Concern:

I am writing in support of the proposal to make revisions to the concentration in Horticultural Food Systems offered under the major in Crop Sciences, in the Department of Crop Sciences, proposed by Dr. Sarah Lovell. The program has not requested funding from the college to support these revisions, and none has been made available. The courses already exist and we don't expect to need to increase capacity due to the proposed changes. If you have any questions, please contact me.

Sincerely,

Prasanta Kalita

Professor and Associate Dean

Appendix C:

ILLINOIS

COLLEGE OF AGRICULTURAL, CONSUMER AND ENVIRONMENTAL SCIENCES

Department of Agricultural & Biological Engineering
338 Agriculture Engineering Sciences Building, MC-644
1304 W. Pennsylvania Ave.
Urbana, IL 61801

August 14, 2018

Dr. Sarah Lovell
Associate Professor of Landscape Agroecology
Undergraduate Program Coordinator
Department of Crop Sciences
University of Illinois
stlovell@illinois.edu

Dear Sarah,

I approve your request to include TSM 311 Humanity in the Food Web, in your proposal to the Senate Educational Policy Committee for the revision of the Horticultural Food Systems Concentration within the Crop Sciences Major as an additional, optional course.

As a consequence, it is estimated that enrollment in the course would increase by 2-4 students each term it is offered. These numbers, and more, can readily be accommodated.

I wish you success with your proposal!

Sincerely,

Alan Hansen

Alan C. Hansen
Professor and Interim Head
Department of Agricultural and Biological Engineering
achansen@illinois.edu

UNIVERSITY OF ILLINOIS
AT URBANA-CHAMPAIGN

School of Integrative Biology
286 Morrill Hall
505 South Goodwin Avenue
Urbana, IL 61801

August 10, 2018

Dr. Sarah Lovell
Associate Professor of Landscape Agroecology
Undergraduate Program Coordinator
Department of Crop Sciences
University of Illinois
stlovell@illinois.edu

Dear Sarah,

I approve your request to include IB 420 (CPSC 484), Plant Physiology, in your proposal to the Senate Educational Policy Committee for the revision of the Horticultural Food Systems Concentration within the Crop Sciences Major as an additional, optional course.

As a consequence, it is estimated that enrollment in the course would increase by 2-4 students each term it is offered. These numbers, and more, can readily be accommodated.

I wish you success with your proposal!

Sincerely yours,

S. Downie

Stephen R. Downie
Associate Director of Academic Affairs
School of Integrative Biology
sdownie@illinois.edu

Appendix D:

UNIVERSITY OF ILLINOIS
AT URBANA-CHAMPAIGN

University Library
Office of University Librarian and Dean of Libraries
230 Main Library, MC-522
1408 West Gregory Drive
Urbana, IL 61801

August 21, 2018

Dr. Sarah Lovell
Associate Professor and Undergraduate Program Coordinator
Crop Sciences
1009 Plant Science Lab
M/C 634

Dear Prof. Lovell:

The University Library recently received a proposal from you outlining the Crop Sciences department's plans to revise the Horticultural Food Systems Concentration within the Crop Sciences Major for the Bachelor of Science Degree, in the Department of Crop Sciences, College of ACES.

Based upon the documents received and reviewed by Sarah Williams in the Funk ACES Library, it is our belief that there will be no impact on the University Library. We are already supporting this program and see no meaningful changes in our operations as a result of this move.

If additional services or materials are required as the programs further develop, we will be happy to discuss those needs as they emerge.

Sincerely,

John Wilkin
Juanita J. and Robert E. Simpson
Dean of Libraries and University Librarian

e-c: Mary Lowry, Assistant Dean for Student Success, College of ACES
Thomas Teper
Sarah Williams

phone 217-333-0790 • *fax* 217-244-4358