

UNIVERSITY COUNCIL
ACADEMIC PROGRAMS COMMITTEE
REQUEST FOR DECISION

PRESENTED BY: Gordon Hill, Chair, Academic Programs Committee

DATE OF MEETING: May 21, 2009

SUBJECT: **Agriculture & Bioresources: Reinstatement of majors**

DECISION REQUESTED:

It is recommended:

That Council approve the replacement of the BSA Plant Science major and its themes with three majors in the fields of specialization of Crop Science, Horticulture Science and Applied Plant Ecology, two minors in the fields of specialization of Rangeland Resources and Applied Plant Ecology, and the termination of the major in Plant Science.

PURPOSE:

The Bachelor of Science in Agriculture is an academic program at the University of Saskatchewan. New fields of specialization at the major level and at related minor levels, and terminations of majors must be approved by University Council.

SUMMARY

Several plant science majors were deleted in 2005 and these programs were consolidated into a single major, Plant Science. The major in Agronomy was reinstated last year as part of the revisions to the Diploma in Agriculture program.

In its program assessment of the Plant Science programs, the College of Agriculture & Bioresources has agreed that this program was not specific enough in focus to serve the interests of students. The College has proposed to terminate the Plant Science major and to reinstate several separate programs in plant sciences: majors in Crop Science, Horticulture Science and Applied Plant Ecology, and minors in Applied Plant Ecology and Rangeland Resources. The attached documentation describes these changes.

At its April 21 meeting, the Academic Programs Committee of Council discussed the proposal with Associate Dean Dan Pennock. The committee agreed to recommend that Council approve the reinstatement of the majors in Crop Science, Horticulture Science and Applied Plant Ecology, and of the minors in Rangeland Resources and Applied Plant Ecology, and to terminate the major in Plant Science.

ATTACHMENTS: Proposal documents



College of Agriculture
and Bioresources

**Proposal for Re-establishment of Majors in Plant Science
December, 2008**

Background:

Prior to 2005, the Department of Plant Sciences offered majors in Agronomy, Crop Science, Horticulture Science, Plant Ecology and Rangeland Resources. Systematic Program Review (SPR) and an accreditation review suggested the majors should be more integrated and the number reduced. Thus, in 2005, these five majors were eliminated and one Plant Science Major was formed with five themes or concentrations including: 1) Agronomy; 2) Horticulture; 3) Rangeland Ecology; 4) Plant Improvement; and 5) General Plant Science. Students already in programs in 2005, who had elected one of the previous majors, remained in those majors.

Over the past four years, the total number of students in the College has increased slightly but the number of students enrolled in the Plant Science programs has dropped sharply; this is particularly true for students choosing to study in four out of the five themes during this five year period. Enrolment and graduation statistics for Plant Science programs from 2002-2007 are found in Tables 1 and 2. Comparing enrolments in 2007 with those of 2002, all programs are down, with the total number of students in Plant Science falling by 40% despite increasing job prospects in these areas. Agronomy managed to maintain the majority of its enrolment over this period, while rapid and sharp drops occurred in Crop Science (Plant Improvement), Horticulture, and Ecology/Range. Particularly drastic is the reduction in the Crop Science Program. Effective in fall of 2008, the Agronomy major was re-created to provide more visibility and align it with the new Diploma in Agronomy allowing "laddering" into it from the diploma.

Several reasons have been proposed to explain this drop in student numbers in Plant Science. We believe the major reasons was the creation of a single major that reduced the visibility of the specializations and the number of students electing to take them. Plant Science is a very general term and it has not proven to be effective in recruiting students into the program.

An additional SPR concern was the lack of faculty in Plant Ecology and Horticulture. Since SPR new faculty have been added in Horticulture (Professor Grant Wood) and Plant Ecology/Rangeland (Professors Eric Lamb and Bruce Coulman). These new faculty provide a stronger teaching faculty in these areas.

We are proposing to replace the present Plant Science Major and its themes (described in Table 3) with three majors: 1) Crop Science; 2) Horticulture Science; and 3) Applied Plant Ecology (proposals are attached). Introducing these three majors will increase the visibility of programs as well as their relevance and attractiveness to a wider range of students. Curricula for the three majors will also be less restrictive, allowing students to personally select a broader array of elective courses to meet their personal educational goals. Along with these new majors will be an increased effort to recruit and retain students. Minors in Applied Plant Ecology and Rangeland Resources are being proposed and other minors are being planned that will be available to students within the College and potentially to students from across campus.

All of these majors have a common core of courses required by the College of Agriculture and Bioresources and the Department of Plant Sciences (Table 4). The major differences in the majors occur in courses to be taken in the third and fourth years. In Table 5, the Applied Plant Ecology major is compared to the B.Sc Renewable Resource Management, the proposed B.Sc. Environmental Biology and the B.Sc. Honours Environmental Biology. The proposed Applied Plant Ecology major has a common core of courses for the BSA degree, thus has much more of an agricultural focus than these other programs.

The new majors have been examined by Laurel Sawatzky, Business Analyst, College of Agriculture and Bioresources, and she has determined that no new resources will be required to offer them.

Table 1. Enrolment in College programs 2002-2007.

October census

Major (old)	Theme (new)	2002	2003	2004	2005	2006	2007	% of 2002
Agronomy		77	74	66	59	31	12	
	Agronomy						58	91
Crop Science		56	29	24	11	7	3	
	Plant Improvement						5	14
Horticulture		26	23	27	13	7	2	
	Horticulture Science						5	26
Plant Ecology		6	6	5	4	0	0	
Range		5	7	8	6	4	2	
	Rangeland Ecology						2	36
	Plant Science*				31	42	13	
Total PLSC		170	139	130	124	91	102	60
BSA total		567	516	560	551	477	487	86
B.Sc. AgBusiness						56	98	
College Total		567	516	560	561	533	585	103

* The themes were listed separately for Plant Science in 2007. The 2007 figure represents General and undecided.

Table 2. Graduates of the College of Agriculture and Bioresources.

Spring and Fall

Major (old and new)	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008
Agronomy	27	33	21	42	27	27	16	24	14	30
Crop Science	14	16	30	24	27	8	15	4	2	5
Horticulture Science	4	4	3	14	5	5	9	3	6	4
Plant Ecology/Range	2	10	5	3	2	2	5	3	4	3
Plant Science PLIM/GEN										6
Total Plant Science	47	63	59	83	61	42	45	34	26	48
Total College	146	185	154	170	141	109	112	89	97	118

**Table 3. PLANT SCIENCE MAJOR 2008
120 C.U.**

REQUIRED COURSES (72-25 C.U.)
AGRIC 111.3, Agric. Science I
AGRIC 112.3, Agric. Science II
AGRIC 113.3, Agri-Food Issues and Institutions
BIOL 120.3, The Nature of Life
BIOL 121.3, The Diversity of Life
CHEM 112.3, Intro to Chemistry
CHEM 250.3, Intro to Organic Chemistry
ECON 111.3, Price Theory and Resource
6 C.U. of Humanities, Fine Arts or Social Sciences
RCM 300.3 Oral and Written Communication
BIOL 222.3, The Living Plant
BIOL 226.3, Genes to Genomics
3 C.U. of ENG 111.3, 112.3, 113.3 or 114.3
MATH 101.3, Elem. Calculus or Math 110.3
PLSC 213.3, Principles of Ecology
PLSC 220.3, Fundamentals of Horticulture
PLSC 222.3, Intro to Field Crops
SLSC 240.3, Agric. Soil Science
BIOL 331.3, Intro Plant Physiology
PLSC 240.3, Plant Metabolism
PLSC 314.3, Statistical Methods
PLSC 335.3, Integrated Pest Management
PLSC 492.3 or PLSC 494.6, Undergrad thesis
HORTICULTURE THEME (21 C.U.)
PLSC 330.3, Ornamentals*
PLSC 433.3, Greenhouse Structure and Crops*
PLSC 435.3, Landscape Design
PLSC 441.3, Advanced Fruit Growing*
PLSC 451.3, Vegetable Science*
PLSC 461.3, Post Harvest Management of Hort Crops*
PLSC 470.3, Plant Propagation*
PLANT IMPROVEMENT THEME (21 C.U.)
BIOL 345.3, Intro Plant Pathology
PLSC 405.3, Evolution and Population Genetics
PLSC 411.3, Plant Breeding
PLSC 416.3, Applied Plant Biotechnology
PLSC 417.3, Crop Physiology
PLSC 420.3, Grain Chemistry and Technology
PLSC 470.3, Plant Propagation

RANGELAND ECOLOGY THEME (21 C.U.)
ANSC 410.3, Grazing Animal Production
BIOL 323.3, Taxonomy of Vascular Plants
BIOL 424.3, Grasses and Grasslands
EVSC 380.3, Grassland Soils and Vegetation
PLSC 422.3, Range Resources
PLSC 423.3, Landscape Ecol and Vegetation Mngmt
PLSC 425.3, Forest Ecology
GENERAL PLANT SCIENCE THEME (Select a minimum 15 of the following)
PLSC 330.3, Ornamentals
PLSC 340.3, Weed Ecology
PLSC 405.3, Evolution and Population Genetics
PLSC 411.3, Plant Breeding
PLSC 417.3, Crop Physiology
PLSC 422.3, Range Resources
PLSC 423.3, Landscape Ecol and Vegetation Mngmt
PLSC 433.3, Greenhouse Management
PLSC 435.3, Landscape Design
PLSC 441.3, Fruit Science
PLSC 451.3, Vegetable Science
PLSC 470.3, Plant Propagation

Table 4. A comparison of required courses for the proposed majors of Crop Science, Horticulture Science, and Applied Plant Ecology in the Department of Plant Sciences. Required courses for the Agronomy major are also provided.

Course	Crop Science ₁	Horticulture Science ₂	Applied Plant Ecology ₃	Agronomy
College Requirements				
6 cu Humanities, Fine Arts, or Social Sciences	X	X	X	X
AGRC 111.3	X	X	X	X
AGRC 112.3	X	X	X	X
AGRC 113.3	X	X	X	X
BIOL 120.3	X	X	X	X
CHEM 112.3	X	X	X	X
CHEM 250.3	X	X	X	X
ECON 111.3	X	X	X	X
ENG 111.3, ENG 112.3, ENG 113.3 or ENG 114.3	X	X	X	X
MATH 101.3 or 110.3	X	X	X	X
PLSC 314.3	X	X	X	X
PLSC 492.3 or PLSC 494.6	X	X	X	X
RCM 300.3	X	X	X	X
Courses Required by the Department				
BIOL 222.3	X	X	X	X
BIOL 226.3	X	X	X	X
Required Courses For Majors				
AGEC 320.3				X
BIOL 121.3	X	X	X	
BIOL 323.3			X	
BIOL 331.3	X	X ₂		X
BIOL 345.3	X ₁			
BIOL 373.3			X	
BIOL 424.3			X	
EVSC 220.3 or SLSC 240.3			X	
EVSC 380.3			X	
PLSC 213.3 or BIOL 228.3		X	X	X
PLSC 220.3	X	X	X ₃	X
PLSC 222.3	X	X	X ₃	X
PLSC 240.3	X	X	X	
PLSC 330.3		X		
PLSC 335.3	X ₁	X		X
PLSC 401.3	X ₁			X
PLSC 405.3	X			
PLSC 411.3	X	X ₂		
PLSC 416.3	X ₁			
PLSC 417.3	X	X ₂		X
PLSC 418.3	X ₁		X	

PLSC 420.3	X ₁			
PLSC 422.3			X	
PLSC 423.3			X	
PLSC 425.3			X	
PLSC 433.3		X		
PLSC 435.3		X ₂		
PLSC 441.3	X ₁	X		
PLSC 451.3	X ₁	X		
PLSC 461.3		X ₂		
PLSC 470.3	X ₁	X		
RRM 215.3			X	
SLSC 240.3		X		X
SLSC 312.3				X
SLSC 480.3			X	

¹ Note--Crop Science majors select six out of these nine superscripted courses

² Note--Horticulture Science majors select one of BIOL 331.3 or PLSC 411.3; PLSC 435.3 or PLSC 461.3

³ Note--Applied Plant Ecology majors select one of PLSC 220.3 or PLSC 222.3.

Table 5. A comparison of required courses for the proposed major in Applied Plant Ecology, Renewable Resource Management and the proposed BSc programs of Environmental Biology.

Course	BSA Applied Plant Ecology	BSc Renewable Resource Management	BSc Environmental Biology	BSc Honours Environmental Biology
6 cu Humanities, Fine Arts, or Social Sciences	X		X	X
AGRC 111.3	X			
AGRC 112.3	X			
AGRC 113.3	X			
BIOL 120.3	X	X	X	X
BIOL 121.3	X	X	X	X
BIOL 222.3	X		X	X
BIOL 224.3			X	X
BIOL 226.3	X		X	X
BIOL 228.3			X	X
BIOL 301.3			X	X
BIOL 323.2 or BIOL 365.3 or BIOL 451.3 or BIOL 455.3 or BIOL 458.3 or BIOL 466.3			X	X
BIOL 323.3	X			
BIOL 350.3				X
BIOL 363.3 or BIOL 470.3 or PLSC 423.3			X	X
BIOL 373.3	X			
BIOL 373.3 or BIOL 412.3 or PLSC 422.3 or PLSC 425.3			X	X
BIOL 410.3			X	X
BIOL 424.3	X			
BIOL 480.3 or BIOL 481.3				X
BPBE 498.3		X		
CHEM 112.3	X	X	X	X
CHEM 115.3			X	X
CHEM 250.3	X			
ECON 111.3	X	X	X	X
ENG 110.6			X	X
ENG 111.3 or ENG 112.3 or ENG 113.3 or ENG 114.3	X			
EVSC 110.3		X		
EVSC 201.3		X		
EVSC 203.3		X		
EVSC 220.3 or SLSC 240.3	X			
EVSC 310.3		X		
EVSC 380.3	X			
EVSC 410.3		X		
GEOG 120.3			X	X
GEOG 120.3 OR GEOL 206.3		X		
GEOG 130.3			X	X

GEOG 222.3		X		
GEOG 322.3		X		
MATH 101.3 or 110.3	X	X		
MATH 125.3			X	X
NS 105.3 or NS 106.3		X		
PLSC 213.3 or BIOL 228.3	X	X		
PLSC 220.3	X			
PLSC 222.3	X			
PLSC 240.3	X			
PLSC 314.3	X	X		
PLSC 418.3	X			
PLSC 422.3	X			
PLSC 423.3	X			
PLSC 425.3	X			
PLSC 492.3 or PLSC 494.6	X			
RCM 300.3	X			
RRM 212.3		X		
RRM 215.3	X	X		
RRM 300.3		X		
RRM 301.6		X		
RRM 321.3		X		
RRM 421.6		X		
SLSC 232.3 OR SLSC 240.3		X		
SLSC 480.3	X			
STATS 245.3			X	X
TOX 301.3 or BIOL 475.3 or CHEM 375.3			X	X

Majors

Proposal for Curriculum Change to be approved by Council or by Academic Programs Committee

1. PROPOSAL IDENTIFICATION

Title of proposal: Crop Science

Degree(s): BSA

Level(s) of Concentration: Major

Degree College: Agriculture and Bioresources Department: Plant Sciences

Contact person(s) (name, telephone, fax, e-mail):

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Dan Pennock
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Date: November 24, 2008

Approved by the degree College and/or home College: January 14, 2009

Proposed date of implementation: September 2009

2. TYPE OF CHANGE

Addition of a higher Level of Concentration to an existing Field of Specialization. The Plant Improvement and General Plant Sciences themes from the Plant Science major will be combined and re-established at the Major Level of Concentration as Crop Science.

3. RATIONALE

Crop Science was reduced from a Major to a Theme (Plant Improvement or General Plant Sciences) within the Plant Science Major in response to the SPR process of 2000-2001. Crop Science was rated as a B program in the SPR process and the course content of the program was well regarded by the reviewers. In response to the SPR process, Crop Science, along with Majors in Agronomy, Horticulture Science, and Plant Ecology/Rangeland Resources, was reduced to a theme within a unified Plant Science Major. There was hope that themes could be listed on student transcripts at that time, however, themes have not been placed on transcripts, nor is it likely to occur in the near future.

Recently, student enrolment in Crop Science/Plant Improvement has decreased considerably from a high of 56 in 2002 to 8 in 2008. This program is less visible under the larger Plant Science major, contributing greatly to the declining enrolment. Given the employment opportunities in public and private plant breeding and seed production sectors in Saskatchewan, it is felt that Crop Science/Plant Improvement should have continued to be a well subscribed program. Consequently we are proposing to re-establish the major of Crop Science.

4. DESCRIPTION OF PROGRAM CHARACTERISTICS

In this revised major, we have maintained most of the previous Plant Science curriculum. Three required courses from the Plant Improvement theme (PLSC 405.3, PLSC 411.3 and PLSC 417.3) have been added, and a revised list of courses from which students must select electives has been created. Students can still take a minor and open electives as with the previous Plant Science curriculum.

Courses of the proposed Crop Science Major:

Required Courses (72 OR 75 C.U.)

AGRIC 111.3--Agric. Science I
AGRIC 112.3--Agric. Science II
AGRIC 113.3--Agri-Food Issues and Institutions
BIOL 120.3--The nature of life
BIOL121.3--The diversity of life
CHEM 112.3--Intro to Chemistry
CHEM 250.3--Intro to Organic Chemistry
ECON 111.3--Price Theory and Resource
6 C.U. of Humanities, Fine Arts or Social Sciences
RCM 300.3--Oral and Written Communication
BIOL 222.3--Botany
BIOL 226.3--Genes to Genomics
3 C.U. of ENG 111.3, ENG 112.3, ENG 113.3, or ENG114.3
MATH 101.3--Elem. Calculus or Math 110.3
PLSC 220.3--Fundamentals of Horticulture
PLSC 222.3--Intro to Field Crops
BIOL 331.3--Intro Plant Physiology
PLSC 240.3--Plant Metabolism
PLSC 314.3--Statistical Methods
PLSC 405.3--Genetics of Plant Populations
PLSC 411.3--Plant Breeding
PLSC 417.3--Crop Physiology
PLSC 492.3--Literature thesis in Plant Science or PLSC 494.6--Research thesis in Plant Science

Select a minimum 18 C.U. from the following:

BIOL 345.3--Intro Plant Pathology
PLSC 335.3--Integrated Pest Management
PLSC 401.3--Sustainable Crop Production
PLSC 416.3--Applied Plant Biotechnology
PLSC 418.3--Management of Arable Grasslands
PLSC 420.3--Grain Chemistry and Technology
PLSC 441.3--Fruit Science
PLSC 451.3--Vegetable Science
PLSC 470.3--Plant Propagation

REQUIRED COURSES: 90 c.u.

RESTRICTED ELECTIVES: 18 c.u. for a minor or courses chosen in consultation with an advisor

OPEN ELECTIVES: 12 c.u. open electives

Calendar Entry

First Year (30 credit units)

AGRC 111.3 Agricultural Science I; BIOL 120.3 The Nature of Life; ECON 111.3 Price Theory and Resource Allocation; CHEM 112.3 General Chemistry I; CHEM 250.3 Intro to Organic Chemistry; AGRC 112.3 Agricultural Science II; AGRC 113.3 Agri-Food Issues and Institutions; BIOL 121.2 The Diversity of Life; 6 cu chosen from Social Science, Humanities or Fine Arts.

Second Year (30 credit units)

BIOL 222.3 The Living Plant; RCM 300.3 Effective Professional Communication; MATH 101.3 Elementary Calculus or MATH 110.3 Calculus; BIOL 226.3 Genes to Genomics; PLSC 220.3 Introduction to Horticulture; PLSC 222.3 Introduction to Field Crops; PLSC 240.3 Plant Metabolism; PLSC 314.3 Statistics; one of ENG 111.3, ENG 112.3, ENG 113.3 or ENG 114.3; 3cu open elective

Third and Fourth Year (60 credit units)

Required (15 cu): BIOL 331.3 Plant Physiology; PLSC 405.3 Genetics of Plant Populations; PLSC411.3 Plant Breeding; PLSC 417.3 Crop Physiology; AGRC 492.3 Term Paper and Technical Writing or AGRC494.6 Research and Thesis, *plus 18 cu from the following:* BIOL 345.3 Introductory Plant Pathology; PLSC 335.3 Integrated Pest Management; PLSC 401.3 Sustainable Crop Production; PLSC 416.3 Applied Plant Biotechnology; PLSC 418.3 Management of Arable Grassland; PLSC 420.3 Grain Chemistry and Technology; PLSC 441.3 Fruit Science; PLSC 451.3 Vegetable Science; PLSC 470.3 Plant Propagation.

Restricted Electives (18 cu): Students can choose to complete a minor (not Field Crop Production) or a selection of courses approved by an advisor.

Open Electives (9 cu)

5. RESOURCES

No new resources will be required. Professors Ball, Bett, Gray, Pozniak, and McCartney are responsible for delivering Plant Sciences courses for this major. Repositioning Crop Science as a major in the BSA can be accomplished within existing departmental resources.

6. RELATIONSHIPS AND IMPACT OF IMPLEMENTATION

The Department of Plant Sciences believes Crop Science can be much more effectively marketed as a Major. Significant growth in student numbers can be achieved by marketing careers in Crop Science in general and Plant Improvement specifically.

7. BUDGET

Please indicate if budget allocations within the department or the college will change due to this program. Consult with the College's Financial Analyst (Financial Services Division) and submit the Budget Consultation form if allocations are required. No additional financial resources are needed.



**Proposal for Curriculum Change
to be approved by Council or by Academic Programs Committee**

1. PROPOSAL IDENTIFICATION

Title of proposal: Horticulture Science

Degree(s): BSA

Level(s) of Concentration: Major

Degree College: Agriculture and Bioresources Department: Plant Sciences

Contact person(s) (name, telephone, fax, e-mail):

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Date: November 24, 2008

Approved by the degree college and/or home college: January 14, 2009

Proposed date of implementation: September 2009

2. TYPE OF CHANGE

Addition of a higher Level of Concentration to an existing Field of Specialization. The Horticulture Science theme in the Plant Sciences major will be reestablished at the Major Level of Concentration.

3. RATIONALE

The Systematic Program Review (SPR) of 2000-2001 rated the Horticulture Major as category C. The primary concern of the reviewers was that courses within the Horticulture Major appeared to “lack (the) academic rigor characteristic of degree programs”. The lack of upper year courses in the Horticulture Major that built upon concepts presented in lower level courses was singled out for particular criticism.

In response to the SPR process Horticulture Science, along with Majors in Crop Science, Agronomy, and Plant Ecology/Rangeland Resources, was reduced to a theme within a unified Plant Science Major. In each of the 20 years up to that point, the individual Horticulture Major constituted an enrolment of 22–27 students in its four year program. However, after 3 years of the unified Plant Science Major, just 5 students remained in the Horticulture theme.

The Department of Plant Sciences believes that Horticulture Science should be re-established as a Major for the following reasons:

1. As a theme, Horticulture Science lacks the visibility in recruitment efforts (e.g. University website, SESD print materials) that would allow it to achieve its full enrolment potential.
2. PLSC 220.3 (Fundamentals of Horticulture) is now offered on an annual basis and will be a core requirement of the Major, providing students with basic preparative knowledge. With PLSC 220.3

providing the basic background, selected topics are now covered in greater depth in upper year courses within the Horticulture program.

3. The University of Saskatchewan Horticulture Club which recently started is a campus club that promotes experiential learning in horticulture-related topics. There are now over 80 members indicating a strong interest in horticulture from students across campus.
4. The faculty compliment has been increased to four faculty members, which is sufficient to teach the required courses.
5. The number of horticulture courses taught is aligned with the number of dedicated faculty. Within the 3rd and 4th year, five required courses are offered in alternate years (PLSC 330, 441, 451, 461, 470).
6. The College of Agriculture has entered into talks with Olds College regarding a transfer agreement for diploma/degree students entering the U of S. It is anticipated this partnership will increase the number of students in the Horticulture Science major within the college.

4. DESCRIPTION OF PROGRAM CHARACTERISTICS

The proposed major in Horticulture Science includes a common core of courses from the BSA degree. The Horticulture Science major integrates biology, production, genetics, and plant breeding within a context of sound economic and environmental principles. Graduates will possess practical skills in Horticulture Science along with an integrated understanding of biological, ecological, and economic principles.

Table 1: Courses of the proposed Horticulture Science Major

1st Year: 30 credit units

AGRIC 111.3--Agricultural Science I
AGRIC 112.3--Agricultural Science II
AGRIC 113.3--Agri-Food Issues and Institutions
BIOL 120.3--The Nature of Life
BIOL 121.3--The Diversity of Life or EVSC 110.3--Renewable Resources and Environment
CHEM 112.3-- General Chemistry I Structure Bonding and Properties of Materials
CHEM 250.3--Introduction to Organic Chemistry
ECON 111.3--Price Theory and Resource Allocation
ENG 111.3--Literature and Composition Reading Poetry, or ENG 112.3--Literature and Composition Reading Drama, or ENG 113.3--Literature and Composition Reading Narrative, or ENG 114.3--Literature and Composition Reading Culture
3 CU of Humanities, Fine Arts, or Social Sciences

2nd Year: 30 credit units

BIOL 226.3--Genes to Genomics
MATH 101.3--Elementary Calculus or Math 110.3--Calculus I
PLSC 213.3--Principles of Ecology
PLSC 220.3--Fundamentals of Horticulture
PLSC 222.3--Introduction to Field Crops
PLSC 240.3--Plant Metabolism
RCM 300.3--Effective Professional Communication
SLSC 240.3--Agricultural Soil Science
3 C.U. of Humanities, Fine Arts, or Social Sciences

3rd and 4th Years: 60 credit units

Required: 30-33 credit units

BIOL 331.3--Introductory Plant Physiology or PLSC 411.3--Plant Breeding
PLSC 314.3--Statistical Methods
PLSC 330.3--Ornamental Plants
PLSC 335.3--Integrated Pest Management
PLSC 433.3--Greenhouse Structure and Crops
PLSC 441.3--Advanced Fruit Growing
PLSC 451.3--Vegetable Science

PLSC 470.3--Plant Propagation
PLSC 492.3--Literature Review in Plant Science or PLSC 494.6--Research Thesis in Plant Science
Choose at least one of the following:
PLSC 435.3--Landscape Design or PLSC 461.3--Post Harvest Management of Horticultural Crops

Restricted Electives (15-18 cu). Courses to complete a minor, or courses approved by the program advisor.

Open Electives (12 cu).

Calendar Entry

First Year (30 credit units)

AGRC 111.3 Agricultural Science I; AGRC 112.3 Agricultural Science II; AGRC 113.3 Agri-Food Issues and Institutions; BIOL 120.3 The Nature of Life; BIOL 121.3 The Diversity of Life or EVSC 110.3 Renewable Resources and Environment; CHEM 112.3 General Chemistry I; CHEM 250.3 Intro to Organic Chemistry; ECON 111.3 Price Theory and Resource Allocation; one of ENG 111.3, 112.3, 113.3 or 114.3; 3 cu from Social Science, Humanities or Fine Arts.

Second Year (30 credit units)

BIOL 222.3 The Living Plant; BIOL 226.3 Genes to Genomics; MATH 101.3 Elementary Calculus or MATH 110.3 Calculus; RCM 300.3 Effective Professional Communication; PLSC 213.3 Principles of Plant Ecology; PLSC 220.3 Introduction to Horticulture; PLSC 222.3 Introduction to Field Crops; PLSC 240.3 Plant Metabolism; SLSC 240.3 Agricultural Soil Sciences; 3 cu chosen from Social Science, Humanities or Fine Arts.

Third and Fourth Year (60 credit units)

Required (30-33 cu): BIOL 331.3 Plant Physiology or PLSC 411.3 Plant Breeding; PLSC 314.3 Statistics; PLSC 330.3 Ornamental Plants; PLSC 335.3 Integrated Pest Management; PLSC 433.3 Greenhouse Structure and Crops; PLSC 441.3 Advanced Fruit Growing; PLSC 451.3 Vegetable Science; PLSC 470.3 Plant Propagation; choose at least one of: PLSC 435.3 Landscape Design or PLSC 461.3 Post Harvest Management of Horticultural Crops; PLSC 492.3 Literature Review in Plant Science or PLSC 494.6 Research Thesis in Plant Science

Restricted Electives (15-18 cu): Courses to complete a minor, or a selection of courses approved by the program advisor.

Open Electives (12 cu)

5. RESOURCES

No new resources will be required. Professors Bors, Tanino, Waterer, and Wood are primarily responsible for the delivery of the horticulture courses. Creating a new major in Horticulture Science in the BSA program will be accomplished with existing departmental resources.

6. RELATIONSHIPS AND IMPACT OF IMPLEMENTATION

The Department of Plant Sciences believes that Horticulture Science can be much more effectively marketed as a Major. This Major, when combined with a Minor such as Food Science, Nutrition, or Agri-business is anticipated to be particularly attractive to students.

7. BUDGET

No additional financial resources are needed.



College of Agriculture
and Bioresources

**Proposal for Curriculum Change
to be approved by Council or by Academic Programs Committee**

1. PROPOSAL IDENTIFICATION

Title of proposal: Applied Plant Ecology

Degree(s): BSA

Level(s) of Concentration: Major Field of specialization: Applied Plant Ecology

Degree College: Agriculture and Bioresources Department: Plant Sciences

Contact person(s) (name, telephone, fax, e-mail):

Bruce Coulman, Head
Department of Plant Sciences
College of Agriculture and Bioresources
966-1376
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Dan Pennock
Associate Dean (Academic)
College of Agriculture and Bioresources
966-4056
dan.pennock@usask.ca

Date: November 24, 2008

Approved by the degree college and/or home college: January 14, 2009

Proposed date of implementation: September 2009

2. TYPE OF CHANGE

Addition of a higher Level of Concentration to an existing Field of Specialization. The Rangeland Ecology theme in the Plant Sciences major will be reestablished as a Major Level of Concentration in Applied Plant Ecology.

3. RATIONALE

Plant Ecology and Rangeland Resources were reduced from a Major to a Rangeland Ecology Theme within the Plant Science Major in response to the SPR process of 2000-2001. Plant Ecology and Rangeland Resources were rated as B programs in the SPR process, and the course content of the program was well regarded by the reviewers. The major weakness identified in SPR was that two majors exceeded the capacity of faculty. The SPR process recommended that either Plant Ecology or Rangeland Resources be offered as a major.

In response to the SPR, Plant Ecology/Rangeland Resources, along with Majors in Crop Science, Horticulture, and Agronomy, was reduced to a theme within a unified Plant Science Major. The impetus for changing majors to themes within Plant Sciences is not clear. It is clear, however, that enrolment in the Department of Plant Sciences has declined precipitously since majors were eliminated and themes were introduced. Agronomy was eliminated as a theme in Plant Science, and it was reintroduced as a major effective September 2008 to address declining enrolment.

The Department of Plant Sciences believes a major in Applied Plant Ecology should be offered to students.

Offering a major in Applied Plant Ecology, along with two new majors (Horticulture Science and Crop Science) in the Department of Plant Sciences will bolster sagging enrolment. The Department of Plant Sciences recommends discontinuing the Plant Science Major and its Rangeland Ecology Theme, and offering Applied Plant Ecology as a Major. The Rangeland Ecology Theme has attracted minimal interest among students. The lack of interest in the Rangeland Ecology Theme is attributed to a) the Theme being very specialized with limited employment opportunities in Canada, and b) the Theme conjures up images of managing livestock grazing, a career choice that appeals to a limited number of students. Furthermore, Rangeland Ecology was not visible because it was couched within Plant Sciences as a theme.

Applied Plant Ecology will attract students interested in a broad range of disciplines in natural and semi-natural ecosystems such as forests, grasslands, and wetlands. Applied Plant Ecology is unique and it will be the only such major offered in North American universities. Increasing demand in western Canadian industries and government agencies for highly qualified personnel for management, conservation, and restoration of natural and semi-natural ecosystems and landscapes ensure numerous opportunities for students in Applied Plant Ecology.

This new major also presents opportunities for attracting students through 2+2 transfer agreements with other institutions such as Lakeland College, Lethbridge College, Olds College, and SIAST.

4. DESCRIPTION OF PROGRAM CHARACTERISTICS

The proposed major in Applied Plant Ecology includes a common core of courses from the BSA degree. The Applied Plant Ecology major integrates principles and advanced knowledge of managing, conserving, and restoring natural and semi-natural landscapes and ecosystems. Creating a new major in Applied Plant Ecology will increase student interest and enrolment because students will be prepared to work in a wide variety of ecosystems in natural and semi-natural landscapes.

Courses of the proposed major in Applied Plant Ecology.

1st Year: (30 CU—27 CU REQUIRED: 3 CU ELECTIVES)

AGRC 111.3--Agricultural Science I

AGRC 112.3--Agricultural Science II

AGRC 113.3--Agri Food Issues and Institutions

BIOL 120.3--The Nature of Life

BIOL 121.3--The Diversity of Life

CHEM 112.3--General Chemistry I Structure Bonding and Properties of Materials

CHEM 250.3--Introduction to Organic Chemistry

ECON 111.3--Price Theory and Resource Allocation

ENG 111.3--Literature and Composition Reading Poetry, or ENG 112.3--Literature and Composition Reading

Drama, or ENG 113.3--Literature and Composition Reading Narrative, or ENG 114.3--Literature and Composition Reading Culture

RESTRICTED ELECTIVE: 3 CU Humanities, Fine Arts or Social Sciences

2nd Year: (30 CU—24 REQUIRED: 6 CU ELECTIVES)

RCM 300.3--Effective Professional Communication

BIOL 222.3--The Living Plant

BIOL 226.3--Genes to Genomics

MATH 101.3--Elementary Calculus or MATH 110.3--Calculus I

PLSC 213.3--Principles of Plant Ecology or BIOL 228.3--An Introduction to Ecology and Ecosystems

EVSC 220.3--Environmental Soil Science or SLSC 240.3-- Agricultural Soil Science

RRM 215.3--Identification of Saskatchewan Plants and Soils

At least one of PLSC 220.3--Fundamentals of Horticulture or PLSC 222.3--Introduction to Field Crops

RESTRICTED ELECTIVE: 3 CU Humanities, Fine Arts or Social Sciences

ELECTIVE: 3 CU

3rd and 4th Years (60 CU)

Required: 36 credit units

PLSC 240.3--Plant Metabolism

PLSC 314.3--Statistical Methods

PLSC 418.3--Management of Arable Grasslands

PLSC 422.3--Rangeland Resources: Ecology and Management

PLSC 423.3--Landscape Ecology and Vegetation Management

PLSC 425.3--Forest Ecology

BIOL 323.3--Taxonomy of Vascular Plants

BIOL 373.3--Community Ecology

BIOL 424.3--Grasses and Grasslands

EVSC 380.3--Grassland Soils and Vegetation

SLSC 480.3--Soils and Boreal Landscapes

PLSC 492.3--Literature Thesis in Plant Sciences or PLSC 494.6-- Research Thesis in Plant Sciences

Restricted Electives: 18 credit units Electives to be selected with advisor.

BIOL 312.3--Life in the North

BIOL 324.3--Plants and Human Affairs

BIOL 326.3--Plant Development

BIOL 342.3--Fungi Environment and People

BIOL 470.3--Conservation Biology

EVSC 430.3--Agroforestry for Environmental Management

GEOG 222.3--Introduction to Geomatics

GEOG 322.3--Introduction to Geographic Information Systems

GEOG 351.3--Northern Environments

GEOG 386.3--Environmental Impact Assessment

PLSC 340.3--Weed Biology and Ecology

SLSC 343.3--Soil Microbiology

SLSC 460.3--Soils and Boreal Landscapes

ANSC 375.3--Animal Agriculture and the Environment

ANSC 410.3--Grazing Animal Production

Open Electives: 9 credit units**Calendar Entry**

First Year (30 credit units)

AGRC 111.3 Agricultural Science I; AGRC 112.3 Agricultural Science II; AGRC 113.3 Agri Food Issues and Institutions; BIOL 120.3 The Nature of Life; BIOL 121.3 The Diversity of Life; CHEM 112.3 General Chemistry I Structure Bonding and Properties of Materials; CHEM 250.3 Introduction to Organic Chemistry; ECON 111.3 Price Theory and Resource Allocation; ENG 111.3 Literature and Composition Reading Poetry, ENG 112.3 Literature and Composition Reading Drama, or ENG 113.3 Literature and Composition Reading Narrative, or ENG 114.3 Literature and Composition Reading Culture; 3 CU chosen from Humanities, Fine Arts or Social Sciences.

Second Year: (30 credit units)

RCM 300.3 Effective Professional Communication; BIOL 222.3 The Living Plant; BIOL 226.3 Genes to Genomics; MATH 101.3 Elementary Calculus or MATH 110.3 Calculus I; PLSC 213.3 Principles of Plant Ecology or BIOL 228.3--An Introduction to Ecology and Ecosystems; EVSC 220.3 Environmental Soil Science or SLSC 240.3 Agricultural Soil Science; RRM 215.3 Identification of Saskatchewan Plants and Soils; At least one of PLSC 220.3 Fundamentals of Horticulture or PLSC 222.3 Introduction to Field Crops; 3 CU chosen from Humanities, Fine Arts or Social Sciences; 3 CU electives.

Third and Fourth Year (60 credit units)

Required (36cu): PLSC 314.3 Statistical Methods; PLSC 418.3 Management of Arable Grasslands; PLSC 422.3 Rangeland Resources: Ecology and Management; PLSC 423.3 Landscape Ecology and Vegetation Management; PLSC 425.3 Forest Ecology; PLSC 240.3 Plant Metabolism; BIOL 323.3 Taxonomy of Vascular Plants; BIOL 373.3 Community Ecology; BIOL 424.3 Grasses and Grasslands; EVSC 380.3 Grassland Soils and Vegetation; SLSC 480.3 Soils and Boreal Landscapes; AGRC 492.3 Term Paper and Technical Writing or AGRC494.6 Research and Thesis

Restricted Electives (18 cu): Students can choose courses for a minor or choose from the following selection of courses in consultation with an advisor. BIOL 312.3 Life in the North; BIOL 324.3 Plants and Human Affairs; BIOL 326.3 Plant Development; BIOL 342.3 Fungi Environment and People; BIOL 470.3 Conservation Biology; EVSC 430.3 Agroforestry for Environmental Management; GEOG 222.3 Introduction to Geomatics; GEOG 322.3 Introduction to Geographic Information Systems; GEOG 351.3 Northern Environments; GEOG 386.3 Environmental Impact Assessment; PLSC 340.3 Weed Biology and Ecology; SLSC 343.3 Soil Microbiology; SLSC 460.3 Soils and Boreal Landscapes; ANSC 375.3 Animal Agriculture and the Environment; ANSC 410.3 Grazing Animal Production.

Open Electives (6 cu)

5. RESOURCES

No new resources will be required. Professors Bai, Coulman, Lamb, and Romo are responsible for delivering Plant Sciences courses for this major. Mr. B. Pylypec will provide instructional support. Creating a new major in Applied Plant Ecology in the BSA program will be accomplished with existing departmental resources.

6. RELATIONSHIPS AND IMPACT OF IMPLEMENTATION

The Department of Plant Sciences believes that Applied Plant Ecology can be more effectively marketed as a major for students wishing to study restoration, conservation, and management of natural and semi-natural terrestrial ecosystems rather than Agricultural systems. This major is distinct because it provides students with background education in agriculture and emphasis on plant ecology in natural and semi-natural terrestrial ecosystems.

7. BUDGET

No additional financial resources are needed.

Minors



College of Agriculture
and Bioresources

**Proposal for Curriculum Change
to be approved by Council or by Academic Programs Committee**

1. PROPOSAL IDENTIFICATION

Title of proposal: Minor in Applied Plant Ecology

Degree(s): BSA

Level(s) of Concentration: Minor Field of specialization: Applied Plant Ecology

Degree College: Agriculture and Bioresources Department: Plant Sciences

Contact person(s) (name, telephone, fax, e-mail):

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College of Agriculture and Bioresources
966-1376
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Dan Pennock
Associate Dean (Academic)
College of Agriculture and Bioresources
966-4056
dan.pennock@usask.ca

Date: November 24, 2008

Approved by the degree college and/or home college: January 14, 2009

Proposed date of implementation: September 2009

2. TYPE OF CHANGE

Applied Plant Ecology will be established as a new minor in the Department of Plant Sciences.

3. RATIONALE

The Department of Plant Sciences recommends that a minor in Applied Plant Ecology be offered to students. Students in the College of Agriculture and Bioresources will find the minor in Applied Plant Ecology complementary to other majors, particularly Horticulture Science, Agronomy, Environmental Science, and Renewable Resources.

4. DESCRIPTION OF PROGRAM CHARACTERISTICS

The Applied Plant Ecology minor integrates principles and advanced knowledge of managing, conserving, and restoring natural and semi-natural landscapes and ecosystems. Creating a new minor in Applied Plant Ecology will increase student interest and enrolment because students will be prepared to work in a wide variety natural and semi-natural, terrestrial ecosystems throughout western Canada.

Courses of the proposed minor in Applied Plant Ecology.

Required courses

PLSC 213.3--Principles of Plant Ecology or BIOL 228.3--An Introduction to Ecology and Ecosystems

PLSC 425.3--Forest Ecology

BIOL 424.3--Grasses and Grasslands

EVSC 380.3--Grassland Soils and Vegetation or SLSC 480.3--Soils and Boreal Landscapes

Choose 6 credit units from the following

PLSC 423.3--Landscape Ecology and Vegetation Management

RRM 215.3--Identification of Saskatchewan Plants and Soils

BIOL 323.3--Taxonomy of Vascular Plants

BIOL 373.3--Community Ecology

Calendar Entry**Applied Plant Ecology**

Required Courses: PLSC 213.3 or BIOL 228.3, PLSC 425.3, BIOL 424.3, EVSC 380.3 or SLSC 480.3.

Electives (6 credit units): PLSC 423.3, RRM 215.3, BIOL 323.3, BIOL 373.3.

5. RESOURCES

No new resources will be required. Creating a new minor in Applied Plant Ecology in the BSA program will be accomplished with existing departmental resources and courses.

6. RELATIONSHIPS AND IMPACT OF IMPLEMENTATION

The Department of Plant Sciences believes that Applied Plant Ecology can be effectively marketed as a minor for students wishing to study restoration, conservation, and management of natural and semi-natural terrestrial ecosystems rather than intensively managed agricultural systems.

7. BUDGET

No additional financial resources are needed.



**Proposal for Curriculum Change
to be approved by Council or by Academic Programs Committee**

1. PROPOSAL IDENTIFICATION

Title of proposal: Minor in Rangeland Resources

Degree(s): BSA

Level(s) of Concentration: Minor Field of specialization: Rangeland Resources

Degree College: Agriculture and Bioresources Department: Plant Sciences

Contact person(s) (name, telephone, fax, e-mail):

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Department of Plant Sciences
College of Agriculture and Bioresources
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Dan Pennock
Associate Dean (Academic)
College of Agriculture and Bioresources
966-4056
dan.pennock@usask.ca

Date: November 24, 2008

Approved by the degree college and/or home college: TBA

Proposed date of implementation: September 2009

2. TYPE OF CHANGE

Rangeland Ecology is currently offered as a minor in the College of Agriculture and Bioresources. It is proposed that the name of this minor be changed to Rangeland Resources. Changing the name to Rangeland Resources will clearly distinguish this minor from the proposed minor in Applied Plant Ecology.

3. RATIONALE

The Department of Plant Sciences recommends that a minor in Rangeland Resources should be offered to students interested in pursuing opportunities in range management. Students in the College of Agriculture and Bioresources will find the minor in Rangeland Resources complementary to other majors, particularly Environmental Science, Renewable Resources, and Animal and Poultry Science.

4. DESCRIPTION OF PROGRAM CHARACTERISTICS

Creating this new minor simply represents renaming of the existing minor in Rangeland Ecology to Rangeland Resources. The new Rangeland Resources minor integrates principles and advanced knowledge of managing rangeland primarily for grazing.

Courses of the proposed minor in Rangeland Resources.

Required courses

PLSC 213.3--Principles of Plant Ecology

RRM 215.3---Identification of Saskatchewan Plants and Soils
PLSC 422.3--Rangeland Resources: Ecology and Management
ANSC 410.3--Grazing Animal Production

Choose 6 credit units from the following

EVSC 380.3--Grassland Soils and Vegetation
PLSC 423.3--Landscape Ecology and Vegetation Management
BIOL 323.3--Taxonomy of Vascular Plants
BIOL 424.3--Grasses and Grasslands

Calendar Entry

Rangeland Resources

Required Courses: PLSC 213.3, RRM 215.3, PLSC 422.3, ANSC 410.3.

Electives (6 credit units): EVSC 380.3, PLSC 423.3, BIOL 323.3, BIOL 424.3.

5. RESOURCES

No new resources will be required.

6. RELATIONSHIPS AND IMPACT OF IMPLEMENTATION

The Department of Plant Sciences believes that Rangeland Resources is an attractive minor for students wishing to study management of rangelands that are used primarily for grazing.

7. BUDGET

No additional financial resources are needed.

Termination

**Report Form for Program Termination
University of Saskatchewan**

Department: Plant Sciences College: Agriculture and Bioresources
Program(s) to be deleted: Plant Sciences Field of Specialization and Major
Effective date of termination: July 1 2009

1. List reasons for termination and describe the background leading to this decision.

Prior to 2005, the Department of Plant Sciences offered majors in Agronomy, Crop Science, Horticulture Science, Plant Ecology and Rangeland Resources. Systematic Program Review (SPR) and an accreditation review suggested the majors should be more integrated and the number reduced. Thus, in 2005, these five majors were eliminated and one Plant Science Major was formed with five themes or concentrations including: 1) Agronomy; 2) Horticulture; 3) Rangeland Ecology; 4) Plant Improvement; and 5) General Plant Science. Students already in programs in 2005, who had elected one of the previous majors, remained in those majors.

Over the past four years, the total number of students in the College has increased slightly but the number of students enrolled in the Plant Science programs has dropped sharply; this is particularly true for students choosing to study in four out of the five themes (See Tables 1 and 2). Comparing enrolments in 2007 with those of 2002, all programs are down, with the total number of students in Plant Science falling by 40% despite increasing job prospects in these areas. Agronomy managed to maintain the majority of its enrolment over this period, while rapid and sharp drops occurred in Crop Science (Plant Improvement), Horticulture, and Ecology/Range. Particularly drastic is the reduction in the Crop Science Program. Effective in fall of 2008, the Agronomy major was re-created to provide more visibility and align it with the new Diploma in Agronomy allowing "laddering" into it from the diploma.

Several reasons have been proposed to explain this drop in student numbers in Plant Science. We believe the major reasons was the creation of a single major that reduced the visibility of the specializations and the number of students electing to take them. Plant Science is a very general term and it has not proven to be effective in recruiting students into the program.

An additional SPR concern was the lack of faculty in Plant Ecology and Horticulture. Since SPR new faculty have been added in Horticulture (Professor Grant Wood) and Plant Ecology/Rangeland (Professors Eric Lamb and Bruce Coulman). These new faculty provide a stronger teaching faculty in these areas.

We are proposing to replace the present Plant Science Major and its themes with three majors: 1) Crop Science; 2) Horticulture Science; and 3) Applied Plant Ecology (proposals are attached). Introducing these three majors will increase the visibility of programs as well as their relevance and attractiveness to a wider range of students. Curricula for the three majors will also be less restrictive, allowing students to personally select a broader array of elective courses to meet their personal educational goals. Along with these new majors will be an increased effort to recruit and retain students. Minors in Applied Plant Ecology and Rangeland Resources are being proposed and other minors are being planned that will be available to students within the College and potentially to students from across campus.

The reestablishment of the separate majors also requires the formal deletion of the PLSC major.

2. Technical information.

2.1 Courses offered in the program and faculty resources required for these courses.
The courses offered in the PLSC major are listed in the full handout for the overall proposal.

2.2 Other resources (staff, technology, physical resources, etc) used for this program.
The resources required for the re-established majors are the same as for the deleted PLSC major. There is no request for new resources associated with this change.

2.3 Courses to be deleted, if any.
None – all existing courses will be taught in the re-established majors.

2.4 Number of students presently enrolled.
Please see table 1 and 2

2.5 Number of students enrolled and graduated over the last five years.
Please see table 1 and 2

Table 1. Enrolment in College programs 2002-2007.

October
census

Major (old)	Theme (new)	2002	2003	2004	2005	2006	2007	% of 2002
Agronomy		77	74	66	59	31	12	
	Agronomy						58	91
Crop Science		56	29	24	11	7	3	
	Plant Improvement						5	14
Horticulture		26	23	27	13	7	2	
	Horticulture Science						5	26
Plant Ecology Range		6	6	5	4	0	0	
		5	7	8	6	4	2	
	Rangeland Ecology						2	36
	Plant Science*				31	42	13	
Total PLSC		170	139	130	124	91	102	60
BSA total		567	516	560	551	477	487	86
B.Sc.						56	98	
AgBusiness College Total		567	516	560	561	533	585	103

* The themes were listed separately for Plant Science in 2007. The 2007 figure represents General and undecided.

Table 2. Graduates of the College of Agriculture and Bioresources.

Spring and Fall

Major (old and new)	199 9	200 0	200 1	200 2	200 3	200 4	200 5	200 6	200 7	200 8
Agronomy	27	33	21	42	27	27	16	24	14	30
Crop Science	14	16	30	24	27	8	15	4	2	5
Horticulture Science	4	4	3	14	5	5	9	3	6	4
Plant Ecology/Range	2	10	5	3	2	2	5	3	4	3
Plant Science PLIM/GEN										6
Total Plant Science	47	63	59	83	61	42	45	34	26	48
Total College	146	185	154	170	141	109	112	89	97	118

3. Impact of the termination.

Internal

3.1 What if any impact will this termination have on undergraduate and graduate students? How will they be advised to complete their programs?

All of the courses in the current PLSC major will be offered in the re-established majors. Therefore any students who choose to remain in the PLSC major will be able to complete their programs.

3.2 What impact will this termination have on faculty and teaching assignments?
None – all existing courses are maintained.

3.3 Will this termination affect other programs, departments or colleges?
No.

3.4 If courses are also to be deleted, will these deletions affect any other programs?
No courses are being deleted.

3.5 Is it likely, or appropriate, that another department or college will develop a program to replace this one?

No. The deletion of the PLSC major and re-establishment of the majors makes the production agriculture focus of the majors more explicit.

3.6 Is it likely, or appropriate, that another department or college will develop courses to replace the ones deleted?

No courses are being deleted.

3.7 Describe any impact on research projects.

None.

3.8 Will this deletion affect resource areas such as library resources, physical facilities, and information technology?

No.

3.9 Describe the budgetary implications of this deletion.

The new majors have been examined by Laurel Sawatzky, Business Analyst, College of Agriculture and Bioresources, and she has determined that no new resources will be required to offer them.

External

3.10 Describe any external impact (e.g. university reputation, accreditation, other institutions, high schools, community organizations, professional bodies).

The College recently underwent accreditation by the Agricultural Institute of Canada. The re-established majors replace themes in the existing PLSC major, all of which were fully accredited by the AIC.

3.11 Is it likely or appropriate that another educational institution will offer this program if it is deleted at the University of Saskatchewan?

No.

Other

3.12 Are there any other relevant impacts or considerations?

No.

3.13 Please provide any statements or opinions received about this termination.

None were received.



**UNIVERSITY OF
SASKATCHEWAN**

College of Agriculture
and Bioresources

Office of the Dean

TO: Academic Programs Committee of Council

FROM: Dr. Graham Scoles, Acting Dean

DATE: April 8, 2009

RE: Proposed Changes to the PLSC Program

The Dean's office in the College of Agriculture and Bioresources strongly supports the proposed changes to the PLSC major. We understand that this apparent reversal of the SPR recommendations for the PLSC department is likely to be a concern, and would like to address the reasons for this request in some detail.

The College of Agriculture and Bioresources has relatively aggressive enrolment targets under the second Integrated Plan (see table below) and has the highest expectation of any of the direct entry colleges. Moreover, this enrolment increase has to occur while simultaneously implementing a 10% operating budget reduction caused by our low enrolment levels of 2002/03.

University of Saskatchewan Targets for Student Enrolment for 2011/12

From http://www.usask.ca/ip/inst_planning/docs/protected/UofS_Targets_for_Student_Enrollment_2011-12_FINAL.pdf?ticket=ST-972-PhSZT5zcx2Qg4SSC1iy2

1. Undergraduate Student Enrolment Targets by Headcount

Total Undergraduate Headcount	Actual 2002/03	Actual 2007/08	Target 2011/12	% Increase 07/08 to 11/12
Agriculture and Bioresources	567	619	752	21.5
Arts & Science	9,358	8,490	8,590	1.2
Edwards School of Business	1,597	1,713	1,854	8.2
Dentistry	126	111	119	7.2
Education	1,146	1,177	1,177	0.0
Engineering	1,395	1,551	1,551	0.0
Kinesiology	465	475	475	0.0
Law	317	338	368	8.9
Medicine/Physical Therapy	318	279	336	20.4
Nursing	794	954	1,007	5.6
Pharmacy & Nutrition	416	455	455	0.0
Western College of Veterinary Medicine	282	284	312	9.9
Institution Total	16,781	16,446	16,996	3.3

The College's strategy to meet these aggressive enrolment targets is to develop new programs and to make program changes to bring students into those areas of the college that have had lower enrolments relative to other college programs. Both the B. Sc. in Agribusiness and the B. Sc. in Renewable Resource Management were developed to achieve this objective, and both are making significant contributions to meeting our college's targets.

The major remaining underperforming program is the unified PLSC program that was brought in following SPR in 2004-05. As is documented in Table 1 and 2 of the program submission, the total enrolment in PLSC has dropped from 130 in 2004 to 91 in 2006 and 102 in 2007. This decline in PLSC occurs as overall enrolment in the college-level agricultural programs (BSA+AgBus) has increased from 560 in 2004 to 585 in 2007.

We believe that this drop in enrolment has occurred primarily because of the loss in visibility that occurred when the separate majors in Crop Science, Horticulture, and Plant Ecology were lost. Recruitment activities conducted by SESD and by our College publicize majors – for example, the fact sheets that are the key handouts at all recruitment events focus on majors. The previous majors clearly (by their enrolment) found a target audience; the unified Plant Science major did not. We are unaware of any other reasons why the major drop in enrolment could have occurred.

As documented in the submission the PLSC has also added capacity in all three of the proposed majors, which addresses a second issue raised in the original SPR report.

While we understand that a case can be made against the proliferation of majors, we believe that the re-establishments of these majors adds no financial burden since they are all composed of existing courses. We believe that their re-establishment is a very important step in allowing our college to meet its enrolment targets and thereby ensuring that the existing teaching resources in the college are more effectively used.

Sincerely,



Dr. Graham Scoles
Acting Dean

GJS/mal