College of Agricultural and Life Sciences
Proposed Catalog Changes
Effective Summer 2020

Departmental of Agricultural and Extension Education

1. Change the following courses:

AGED 350 Leadership Event Coordination
1-3 credits
This course introduces students to the planning and implementation of leadership activities for the FFA - Career & Technical Student Organization. Students will use leadership, communications, and teambuilding skills to plan leadership and career development events (CDE/LDE), awards ceremonies, educational workshops, and stakeholder activities as part of the Idaho FFA State Leadership Conference (travel required). Students will collaborate with stakeholder groups including the Idaho FFA Association, Idaho FFA Alumni, Idaho FFA Foundation, Idaho Agriculture Teachers Association (IATA), and the Idaho Division of Career and Technical Education.

Distance Availability: Yes
Geographical Areas: Moscow, Twin Falls - CSI
Rationale: This course is an organized internship experience with associated curriculum, class meetings, and assignments related to the planning and facilitation of the FFA State Leadership Conference. Each student is assigned to a team and has an assigned role. The assigned roles have varying time commitments based on the pre-work required for the conference. Many of our students in this course will accumulate well over the number of hours required for a 3-credit course or internship. Therefore, allowing them to take the course for varying credit hours (between 1-3) will allow them to receive credit more closely aligned with the work completed.

AGED 359 Developing 4-H Youth Programs
~~2~~ 3 credits
~~Planning, development, and leadership principles of 4-H/youth program; role of 4-H/youth educator and volunteer leader. Web-based course.~~ This course provides participants with an overview of the planning, development, and leadership principles of a 4-H/Youth Development program, the role of the 4-H/Youth Development Extension Education, Program Coordinator, and volunteer leader.

Distance Availability: Yes
Geographical Areas: Moscow, Twin Falls – CSI
Rationale: This course has been expanded to include additional curriculum. Updated curriculum including new assignments and additional reading and course work makes this course a 3-credit course. This course is already being offered and updated curriculum has been complete with a minimal added workload.

AGED 461 Student Teaching Portfolio
~~2~~ 3 credits
Summary of the 15-week practicum experience; a notebook portfolio to include unit lesson plans, daily teaching plans, video example of teaching, report of early field experience, daily journal, summary of 10 positive and 10 challenging teaching experiences, supervisory assessments of teaching by cooperating instructor and university supervisor, and cooperating teacher's final evaluation. (Spring only)

Rationale: Increasing the number of credits from 2 to 3 appropriately reflects the student effort hours required to document their 15 week student teaching experience.

Department of Animal and Veterinary Science

1. Add the following courses:

AVS 301 Undergraduate Research in Animal Science
1-3 credits, max 6
Undergraduate research related to animal and veterinary science. Graded P/F.

Rationale: This course was determined to be a need for AVS undergraduate students to assist them to be better prepared in their scientific field by providing them with hands-on experience in research. Undergraduate students currently participate in department research activities; therefore, no additional resources will be required.

AVS 550 Critical Evaluation of Scientific Research
2 credits
Students will learn how to critically evaluate scientific literature, develop an understanding of current molecular biology, biotechnology, genomics and/or genetics techniques and strategies employed in the fields of biology and animal science, and develop scientific writing skills. Graded P/F.

Distance Availability: Yes
Geographical Areas: Salmon, ID and Zoom connection for AVS graduate students from various locations.
Rationale: This course was determined to be a need for AVS graduate students to assist them to be better prepared in their scientific field and has been taught the past 3 years as a Special Topics course; no additional resources will be required.

Department of Entomology, Plant Pathology and Nematology

1. Make the following curricular changes to the B.S.Ag.L.S. in Entomology:

Entomology (B.S.Ag.L.S.)

Required course work includes the university requirements (see regulation J-3) and:

Agricultural and Life Sciences Core		~~33 34~~ 13
Entomology Courses		
BIOL 114	Organisms and Environments	4
BIOL 115	Cells and the Evolution of Life	3
BIOL 115L	Cells and the Evolution of Life Laboratory	1
BIOL 312	Molecular and Cellular Biology	3
BIOL 313	Molecular and Cellular Laboratory	1
CHEM 111	General Chemistry I	3
CHEM 111L	General Chemistry I Laboratory	1
CHEM 112	General Chemistry II	3
CHEM 112L	General Chemistry II Laboratory	2
COMM 101	Fundamentals of Public Speaking	2
ENT 322	General and Applied Entomology	4
ENT 400	Seminar	1
ENT 438	Pesticides in the Environment	3
ENT 440	Insect Identification	4
ENT 441	Insect Ecology	3
PLSC 102	The Science of Plants in Agriculture	3
PLSC 207	Introduction to Biotechnology	3
~~PLSC 400~~	~~Seminar~~	~~1~~
SOIL 205	The Soil Ecosystem	3
SOIL 206	The Soil Ecosystem Lab	1
STAT 251	Statistical Methods	3
Select one of the following:		4
BIOL 213	Principles of Biological Structure and Function	
PLSC 205	General Botany	
Select one of the following:		3
CHEM 275	Carbon Compounds	
CHEM 277	Organic Chemistry I	
Select one of the following:		3

ENGL 207	Persuasive Writing	
ENGL 313	Business Writing	
ENGL 316	Environmental Writing	
ENGL 317	Technical Writing	
ENGL 318	Science Writing	
Select one of the following:		3-4
MATH 143	College Algebra	
MATH 160	Survey of Calculus	
MATH 170	Calculus I	
Select one of the following:		3
PLP 415	Plant Pathology	
SOIL 425	Microbial Ecology	
Select one of the following:		4
PHYS 100	Fundamentals of Physics	
& PHYS 100L	Fundamentals of Physics Lab	
PHYS 111	General Physics I	
& PHYS 111L	General Physics I Lab	
Select 3 credits of Biotechnology electives		3
Select 5 credits of Entomology electives		5
Select ~~6~~9 credits of Life Science electives		~~6~~9
Select 4 credits of Mathematics electives		4
~~Select 4 credits of Physics electives~~		~~4~~
Select one of the following:		3-5
~~BIOL 154~~ ~~& BIOL 155~~	~~Introductory Microbiology~~ ~~and Introductory Microbiology Laboratory~~	
EPPN 154 & EPPN 155	Microbiology and the World Around Us Microbiology and the World Around Us: Laboratory	
BIOL 250 & BIOL 255	General Microbiology and General Microbiology Lab	
BIOL 300	Survey of Biochemistry	
or BIOL 380	Biochemistry I	
CHEM 253 & CHEM 254	Quantitative Analysis & Quantitative Analysis: Lab	
Select one of the following:		3-4
BIOL 310	Genetics	
& BIOL 315	Genetics Lab	
GENE 314	General Genetics	

Total Hours ~~109-113~~ 111-115

Courses to total 128 credits for this degree

Rationale: During the trifurcation the BS in Agricultural and Life Sciences was established. This proposed change accomplishes a modification to the B.S.Ag.L.S. that provides flexibility to the majors while maintaining the B.S.Ag.L.S. There are minimal changes to the overall Entomology degree. In general, the courses that effectively supported the Entomology degree were moved from the core into the Entomology degree section. There is no additional workload for the department.

Department of Family and Consumer Sciences

1. Add the following course:

FCS 370 Meal Management
3 credits
Principles of meal management for individual and family meals including menu planning, purchasing, preparation, and service. Includes cultural, social, economic, and environmental aspects of food selection and menu planning and the role of food in promotion of a healthy lifestyle. Hybrid course integrating web-based modules and face-to-face class sessions.
Prereq: FCS 275

Rationale: The majority of the content for this course was previously offered as the FCS 270 Intermediate Foods course (catalog years before 2015-2016). The foods courses were revised to combine the meal management content into the FCS 275 Experimental Foods lab course beginning 2015-2016. The meal management content was delivered as on-line modules. This format of a lab course with on-line modules is confusing to students because it doesn't relate well together. It also makes it difficult for transfer students who have taken either a foods lab or a meal management course but are still required to take experimental foods because it contains both content areas. Instead the lab will be taught separately, and the on-line modules will be moved into a new meal management course which will be equivalent to a typical meal management course for food and nutrition students. Additional content will be added to better prepare students for senior-level and graduate food service management courses. This also will simplify the pre-requisite requirements for the new Master of Science in Dietetics program. While this is a new course, most of the content has been taught previously in different course formats making additional workload minimal. This course is already part of the position description for one of the food and nutrition instructors who has been given a percentage of time this year to develop the course. No additional resources are needed to offer this course.

2. Change the following courses:

FCS 224 Apparel Construction and Assembly Processes
3 credits
~~Design conception, fabric characteristics, garment construction and assembly, principles of fitting, quality control for the apparel industry. Two 3-hour studios a week and assigned work. Students must complete this course with a grade of 'C' or higher as a prerequisite to future Clothing, Textiles and Design courses. (Spring only)~~ The course explores intermediate-level garment construction techniques and the relationship between design concepts, fabric characteristics, and fit. Students will complete individual projects in a variety of fabric types and assembly techniques within an apparel industry context. Two 3-hour studios per week, an expected 6-9 hours of outside studio time, and assigned work. Students must complete this course with a grade of 'C' or higher as a prerequisite to future Apparel, Textiles and Design courses.
Prereq: ~~Apparel, Textiles, and Design major; or~~ FCS 124 or Instructor Permission.

Rationale: With the addition of FCS 124 Introduction to Apparel Construction, FCS 224 will now focus on intermediate-level garment construction knowledge deepening students' knowledge of fabrics, fit, and garment development. Both courses will provide ATD students will a full-year of garment construction and solidify their sewing abilities so they can be more innovative and successful in their upper division and senior courses. No additional faculty resources are required.

FCS 270 Scientific Principles of Food Preparation
3 credits
Exploration of the scientific principles, basic concepts, and techniques of food preparation; food safety principles; sensory evaluation of food. ~~; applied sensory evaluation of food. (Fall only)~~
~~**Prereq:** Major in the Department of Family and Consumer Sciences or Permission .~~

Distance Availability: Yes, in the Summer only. Fall and Spring are on campus only.
Rationale: The food course sequence is being revised. This course is the first course in the series and will cover the basic principles needed for future courses. The only changes are removal of the major only restriction and the course description. The major only restriction will allow more students the opportunity to take the course. Most of the students plan to change to a food and nutrition major, but having this requirement often causes delays in registration.

FCS 275 Experimental Foods
2 credits
Exploration of food preparation and application of underlying scientific principles through laboratory experiments. Applied sensory evaluation of food products; recipe modification and testing for special dietary considerations. Two 2-hour lab sessions per week. (Spring only) ~~On-line modules focus on food safety, menu planning, food cost control, and cultural and religious influences on food choices. Hybrid course with one 3-hr lab and one web module a week. (Spring only)~~

Prereq: FCS 270 ~~and a major in the Department of Family and Consumer Sciences; or Permission .~~

Rationale: The pre-requisite is changing to allow more students the opportunity to take the course. Most of the students plan to change to a food and nutrition major, but having this requirement often causes delays in registration.
The course description reflects the new format for this course. The current structure of one lab and one online meal management module each week is confusing to students and the content doesn't relate well together. It also makes it difficult for transfer students who have taken either a foods lab or a meal management course but are still required to take experimental foods because it contains both content areas. Instead the course will focus on hands-on food experiments and projects in the laboratory setting that will be equivalent to a typical foods lab course for food and nutrition students. The previous on-line modules will be moved into a new meal management course which will be equivalent to a typical meal management course for food and nutrition students. This will simplify the pre-requisite requirements for the new Master of Science in Dietetics program.

FCS ~~384~~ 482 Quantity Food Production and Equipment
3 credits
Principles and practices of food production in large volume; foodservice systems and management; use and selection of institutional foodservice equipment. Three hours of lecture per week. (Fall only)
Prereq: ~~FCS 275 or Permission.~~FCS 370 and FCS 375

Rationale: The foods sequence is being revised to prepare students for the new graduate dietetics program. Course content is being updated and rigor increased based on the new competencies and accreditation standards for dietetics education. This will be the final course in the undergraduate foods course sequence, so a 400-level course is proposed to reflect the higher-level content. Proposed changes also reflect changes to pre-requisite courses. The FCS 387 Food Systems Management course is being phased out as an undergraduate course, so some of the management concepts will be incorporated into the new FCS 470. Additionally, some previous content is being moved to the new FCS 370 Meal Management course so students are better prepared to start quantity food production concepts without several weeks dedicated to content that should be foundational for the course.

FCS ~~385~~ 483 Quantity Food Production and Equipment Lab
2 credits
Quantity food production lab and supervised practice experience including equipment training, recipe development and testing, theme meal production, and foodservice facility rotations. (Fall only)
Prereq: ~~FCS 270 and FCS 275~~ FCS 370 and 375
Coreq: FCS ~~384~~ 482.

Rationale: The foods sequence is being revised to prepare students for the new graduate dietetics program. Course content is being updated and rigor increased based on the new competencies and accreditation standards for dietetics education. This will be the final laboratory experience in the undergraduate foods course sequence, so a 400-level course is proposed to reflect the higher-level content. Proposed changes also reflect changes to pre-requisite courses. Some previous content is being moved to FCS 375 Recipe Development and Culinary Exploration so students are better prepared to start quantity food production lab activities without several weeks dedicated to content that should be foundational for the course.

Department of Food Science

1. Change the following courses:

FS 113 Introduction to Vines and Wines
3 credits
The importance of viticulture (grape growing) ~~including world wine regions~~ and enology (winemaking)~~.~~; wine quality. Cooperative: open to WSU degree-seeking students.

Rationale: Updating the course description to more accurately reflect the course content as well as align better with the WSU class description.

FS 301 Food Mycology
3 credits
Survey of the fungi important in food production, storage, and spoilage. Includes two hours of lecture and three hours of lab per week. Cooperative: open to WSU degree-seeking students. **Coreq or Prereq:** BIOL 250 or BIOL 255.

Rationale: Updating the lecture/credit lab credit description to accurately reflect the lecture-to-lab ratio (2 hour lecture, 3 hour lab). Also changing prerequisites to accurately show that students can take microbiology class as a coreq or a prereq to taking FS 301.

Department of Plant Sciences

1. Make the following curricular changes to the B.S.Pl.Sc. in Biotechnology and Plant Genomics:

Biotechnology and Plant Genomics (B.S.Pl.Sc.)

Required course work includes the university requirements (see regulation J-3) and:

~~or POLS 441~~	~~Genes and Justice: Comparative Biotechnology Policy Formation~~	
or AGED 407	Global Agricultural & Life Sciences Systems	
BIOL 115	Cells & the Evolution of Life	3
BIOL 115L	Cells and the Evolution of Life Laboratory	1
ENGL 313	Business Writing	3
or ENGL 317	Technical Writing	
PLSC 102	The Science of Plants in Agriculture	3
PLSC 400	Seminar	1
SOIL 205	The Soil Ecosystem	3
Select one of the following:		4-5
EPPN 154	Microbiology and the World Around Us	
& EPPN 155	Microbiology and the World Around Us: Laboratory	
BIOL 250	General Microbiology	
& BIOL 255	General Microbiology Lab	
Select one of the following:		4
CHEM 101 & 101L	Introduction to Chemistry Introduction to Chemistry Laboratory	
CHEM 111 & 111L	General Chemistry I General Chemistry I Laboratory	
Select one of the following:		3-4
MATH 143	College Algebra	
MATH 160	Survey of Calculus	
MATH 170	Calculus I	
Select one of the following:		3
PLSC 398	Internship	
PLSC 402	Undergraduate Research in Plant Science	
PLSC 499	Directed Study	
Biotechnology and Plant Genomics Courses		
BIOL 380	Biochemistry I	4
BIOL 444	Genomics	3
CHEM 112	General Chemistry II	3
CHEM 112L	General Chemistry II Laboratory	2
CHEM 277	Organic Chemistry I	3
CHEM 278	Organic Chemistry I: Lab	1
GENE 314	General Genetics	3
PLSC 207	Introduction to Biotechnology	3
PLP 415	Plant Pathology	3

PLSC 401	Plant Physiology	3
PLSC 433	Plant Tissue Culture Techniques	3
PLSC 440	Advanced Laboratory Techniques	4
PLSC 446	Plant Breeding	3
PLSC 486	Plant Biochemistry	3
PLSC 488	Genetic Engineering	3
STAT 251	Statistical Methods	3
Select 12 credits of Biotechnology and Genomics of Plants electives from the following:		12
BIOL 213	Principles of Biological Structure and Function	
BIOL 382	Biochemistry I Laboratory	
BIOL 482	Protein Structure and Function	
BIOL 485	Prokaryotic Molecular Biology	
BIOL 487	Eukaryotic Molecular Genetics	
ENT 322	General and Applied Entomology	
PLP 416	Plant Pathology Lab	
PLSC 201	Principles of Horticulture	
PLSC 205	General Botany	
PLSC 338	Weed Control	
PLSC 407	Field Crop Production	
PLSC 410	Invasive Plant Biology	
PLSC 438	Pesticides in the Environment	
PLSC 451	Vegetable Crops	
PLSC 490	Potato Science	
SOIL 206	The Soil Ecosystem Lab	
SOIL 446	Soil Fertility	
Total Hours		90-92

Courses to total 120 credits for this degree

Rationale: We are removing the POLS 441 since it is no longer taught. We are adding AGED 407 to provide international options to our majors. We are adding PLP 416 as an elective since it was not taught for many years and has recently been offered once again, furthermore it is a nice complement to PLP 415, Plant Pathology lecture, which is required. To correct an unintended error EPPN 154 and EPPN 155 are grouped together as are BIOL 250 and BIOL255, select one group or the other.

2. Make the following curricular changes to the B.S.Pl.Sc. in Crop Management:

Crop Management (B.S.Pl.Sc.)

Required course work includes the university requirements (see regulation J-3) and:

AGED 406	Exploring International Agriculture	3
or AGED 407	Global Agricultural & Life Sciences Systems	
PLSC 102	The Science of Plants in Agriculture	3
PLSC 400	Seminar	1
SOIL 205	The Soil Ecosystem	3
~~or POLS 441~~	~~Genes and Justice: Comparative Biotechnology Policy Formation~~	
Select one of the following:		4
BIOL 115	Cells and the Evolution of Life	
& BIOL 115L	Cells and the Evolution of Life Laboratory	
PLSC 205	General Botany	
Select one of the following:		4-5
~~BIOL 154~~	~~Introductory Microbiology~~	
~~& BIOL 155~~	~~Introductory Microbiology Laboratory~~	
BIOL 250	General Microbiology	
& BIOL 255	and General Microbiology Lab	
EPPN 154	Microbiology and the World Around Us	
& EPPN 155	Microbiology and the World Around Us: Laboratory	
Select one of the following:		4
CHEM 101	Introduction to Chemistry	
& 101L	Introduction to Chemistry Laboratory	
CHEM 111	General Chemistry I	
& 111L	General Chemistry I Laboratory	
Select one of the following:		3
~~ENGL 207~~	~~Persuasive Writing~~	
ENGL 313	Business Writing	
~~ENGL 316~~	~~Environmental Writing~~	
ENGL 317	Technical Writing	
Select one of the following:		3-4
MATH 143	College Algebra	
MATH 160	Survey of Calculus	
MATH 170	Calculus I	
Select one of the following:		3

PLSC 398	Internship	
PLSC 402	Undergraduate Research in Plant Science	
PLSC 499	Directed Study	
Crop Management Courses		
AGEC 278	Farm and Agribusiness Management	4
AGEC 289	Agricultural Markets and Prices	3
ASM 305	GPS and Precision Agriculture	3
ASM 315	Irrigation Systems and Water Management	3
ASM 412	Agricultural Safety and Health	2
PLSC 338	Weed Control	4
PLSC 407	Field Crop Production	3
PLSC 408	Cereal Science	3
PLSC 438	Pesticides in the Environment	3
PLSC 444	Forage and Grassland Management	3
PLSC 451	Vegetable Crops	3
PLSC 480	Field Trip	1
PLSC 490	Potato Science	3
SOIL 206	The Soil Ecosystem Lab	1
Select ~~15~~ 12 credits of Crop Management electives from the following:		~~15~~12
AGEC 302	Managerial Economics: Consumption & Markets	
AGEC 356	Agricultural and Rural Policy	
AGEC 447	International Development Economics	
ASM 107	Beginning Welding	
ASM 112	Introduction to Agricultural Systems Management	
ASM 409	Agricultural Tractors, Power Units and Machinery Management	
ECON 202	Principles of Microeconomics	
GENE 314	General Genetics	
PLP 415	Plant Pathology	
PLP 416	Plant Pathology Laboratory	
PLSC 401	Plant Physiology	
PLSC 446	Plant Breeding	
SOIL 425	Microbial Ecology	
SOIL 446	Soil Fertility	
STAT 251	Statistical Methods	
Select 6 credits of Professional Support electives from the following:		6
AGEC 411	The World of International Agribusiness	
AGEC 419	Development and Analysis of Enterprise Budgets	

AVS 109	The Science of Animals that Serve Humanity	
CHEM 275	Carbon Compounds	
CHEM 276	Carbon Compounds Lab	
PLSC 201	Principles of Horticulture	
PLSC 205	General Botany	
PLSC 207	Introduction to Biotechnology	
PLSC 300	Plant Propagation	
PLSC 398	Internship	
PLSC 410	Invasive Plant Biology	
PLSC 433	Plant Tissue Culture Techniques	
PLSC 440	Advanced Laboratory Techniques	
PLSC 488	Genetic Engineering	
~~STAT 251~~	~~Statistical Methods~~	
STAT 431	Statistical Analysis	
Total Hours		88-90

Courses to total 120 credits for this degree

Rationale: The BIOL 115 and BIOL 115L were made a choice with PLSC 205 since this major is now requiring PLSC 444, which has a prerequisite of PLSC 205. We are removing POLS 441 since it is no longer taught. We added AGED 407 to provide international course options to our majors. ENGL 207 and ENGL 316 are being dropped since these two courses no longer count for the General Education Oral Communications requirement. BIOL 154 and 155 are being dropped since the Biology Department no longer teaches these courses. Instead, we have added EPPN 154 and 155 for students to choose as an option for a microbiology course and its corresponding laboratory course. PLSC 444 Forage and Grassland Management is a new course and was added to the required list of classes. The number of Crop Management Electives was decreased from 15 to 12 credits since 3 more credits (PLSC 444) were added to the required courses for this major. We are adding PLP 416 as an elective since it was not taught for many years and has recently been offered once again; furthermore, it is a good compliment to PLP 415, Plant Pathology lecture, which is required. STAT 431 replaced STAT 251 in the Professional Support Electives since STAT 251 is already a choice in the Crop Management Electives. These changes do not affect the faculty teaching loads in any department.

3. Make the following curricular changes to the B.S.Pl.Sc. in Crop Science:

Crop Science (B.S.Pl.Sc.)

Required course work includes the university requirements (see regulation J-3) and:

AGED 406	Exploring International Agriculture	3
~~or POLS 441~~ or AGED 407	~~Genes and Justice: Comparative Biotechnology Policy Formation~~ Global Agricultural & Life Sciences Systems	
BIOL 115	Cells & the Evolution of Life	3
BIOL 115L	Cells and the Evolution of Life Laboratory	1
PLSC 102	The Science of Plants in Agriculture	3
PLSC 400	Seminar	1
SOIL 205	The Soil Ecosystem	3
Select one of the following:		4-5
~~BIOL 154~~ ~~& BIOL 155~~	~~Introductory Microbiology~~ ~~and Introductory Microbiology Laboratory~~	
BIOL 250 & BIOL 255	General Microbiology General Microbiology Lab	
EPPN 154	Microbiology and the World Around Us	
EPPN 155	Microbiology and the World Around Us Laboratory	
Select one of the following:		4
CHEM 101 & 101L	Introduction to Chemistry Introduction to Chemistry Laboratory	
CHEM 111 & 111L	General Chemistry I General Chemistry I Laboratory	
Select one of the following:		3
~~ENGL 207~~	~~Persuasive Writing~~	
ENGL 313	Business Writing	
~~ENGL 316~~	~~Environmental Writing~~	
ENGL 317	Technical Writing	
Select one of the following:		3-4
MATH 143	College Algebra	
MATH 160	Survey of Calculus	
MATH 170	Calculus I	
Select one of the following:		3
PLSC 398	Internship	
PLSC 402	Undergraduate Research in Plant Science	

PLSC 499	Directed Study	
Crop Science Courses		
CHEM 275	Carbon Compounds	3
CHEM 276	Carbon Compounds Lab	1
ENT 322	General and Applied Entomology	4
GENE 314	General Genetics	3
PLSC 207	Introduction to Biotechnology	3
PLSC 338	Weed Control	4
PLSC 401	Plant Physiology	3
PLSC 407	Field Crop Production	3
PLP 415	Plant Pathology	3
PLP 416	Plant Pathology Laboratory	1
PLSC 438	Pesticides in the Environment	3
PLSC 446	Plant Breeding	3
PLSC 480	Field Trip	1
SOIL 206	The Soil Ecosystem Lab	1
SOIL 446	Soil Fertility	1-3
STAT 251	Statistical Methods	3
Select 12 credits of Crop Science electives from the following:		12
PLSC 201	Principles of Horticulture	
PLSC 205	General Botany	
PLSC 300	Plant Propagation	
PLSC 398	Internship	
PLSC 408	Cereal Science	
PLSC 410	Invasive Plant Biology	
PLSC 433	Plant Tissue Culture Techniques	
PLSC 440	Advanced Laboratory Techniques	
PLSC 444	Forage and Grassland Management	
PLSC 451	Vegetable Crops	
PLSC 488	Genetic Engineering	
PLSC 490	Potato Science	
Select 6 credits of Professional Support electives from the following:		6
AGEC 278	Farm and Agribusiness Management	
AGEC 289	Agricultural Markets and Prices	
AGEC 302	Managerial Economics: Consumption & Markets	
AGEC 356	Agricultural and Rural Policy	
AGEC 447	International Development Economics	

ASM 107	Beginning Welding	
ASM 305	GPS and Precision Agriculture	
ASM 315	Irrigation Systems and Water Management	
ASM 412	Agricultural Safety and Health	
STAT 431	Statistical Analysis	
Total Hours		~~88-92~~ 89-93

Courses to total 120 credits for this degree

Rationale: We are removing POLS 441 since it is no longer taught. We are adding AGED 407 to provide international course options to our majors. BIOL 154 and 155 are being dropped since the Biology Department no longer teaches these courses. Instead, we have added EPPN 154 and 155 for students to choose as an option for a microbiology course and its corresponding laboratory course. ENGL 207 and ENGL 316 are being dropped since these two courses no longer count for the General Education Oral Communications requirement. PLP 416 was added to the curriculum because it is a new course, and it is an essential lab course for this major. PLSC 444 was added as an optional course to the curriculum since some of the students in the major may want to enroll in this new course that covers managing forages. These changes do not affect the faculty teaching loads in any department.

4. Make the following curricular changes tot eh B.S.Pl.Sc. in Horticulture and Urban Agriculture:

Horticulture and Urban Agriculture (B.S.Pl.Sc.)

Required course work includes the university requirements (see regulation J-3) and:

AGED 406	Exploring International Agriculture	3
~~or POLS 441~~	~~Genes and Justice: Comparative Biotechnology Policy Formation~~	
or AGED 407	Global Agricultural & Life Sciences Systems	
BIOL 115	Cells & the Evolution of Life	3
BIOL 115L	Cells and the Evolution of Life Laboratory	1
PLSC 102	The Science of Plants in Agriculture	3
PLSC 400	Seminar	1
SOIL 205	The Soil Ecosystem	3
Select one of the following:		4-5
~~BIOL 154~~ ~~& BIOL 155~~	~~Introductory Microbiology~~ ~~Introductory Microbiology Laboratory~~	
BIOL 250 & BIOL 255	General Microbiology General Microbiology Lab	

EPPN 154	Microbiology and the World Around Us	
& EPPN 155	Microbiology and the World Around Us: Laboratory	
Select one of the following:		4
CHEM 101	Introduction to Chemistry	
& 101L	Introduction to Chemistry Laboratory	
CHEM 111	General Chemistry I	
& 111L	General Chemistry I Laboratory	
Select one of the following:		3
~~ENGL 207~~	~~Persuasive Writing~~	
ENGL 313	Business Writing	
~~ENGL 316~~	~~Environmental Writing~~	
ENGL 317	Technical Writing	
Select one of the following:		3-4
MATH 143	College Algebra	
MATH 160	Survey of Calculus	
MATH 170	Calculus I	
Select one of the following:		3
PLSC 398	Internship	
PLSC 402	Undergraduate Research in Plant Science	
PLSC 499	Directed Study	
Horticulture and Urban Agriculture Courses		
CHEM 275	Carbon Compounds	3
CHEM 276	Carbon Compounds Lab	1
ENT 322	General and Applied Entomology	4
PLP 415	Plant Pathology	3
PLSC 201	Principles of Horticulture	3
PLSC 300	Plant Propagation	3
PLSC 401	Plant Physiology	3
PLSC 438	Pesticides in the Environment	3
SOIL 206	The Soil Ecosystem Lab	1
Select 12 credits of Horticulture electives from the following:		12
LARC 288	Plant Materials & Design 1	
PLSC 340	Nursery Management	
PLSC 341	Nursery Management Laboratory	
PLSC 433	Plant Tissue Culture Techniques	
PLSC 451	Vegetable Crops	
PLSC 464	Landscape Maintenance	

PLSC 480	Field Trip	
PLSC 490	Potato Science	
SOIL 417	Market Garden Practicum	
Select 15 credits of Professional Support electives from the following:		15
GENE 314	General Genetics	
PLP 416	Plant Pathology Lab	
PLSC 205	General Botany	
PLSC 207	Introduction to Biotechnology	
PLSC 338	Weed Control	
PLSC 407	Field Crop Production	
PLSC 410	Invasive Plant Biology	
PLSC 446	Plant Breeding	
PLSC 488	Genetic Engineering	
SOIL 446	Soil Fertility	
STAT 251	Statistical Methods	
Total Hours		82-84

Courses to total 120 credits for this degree

Rationale: We are removing POLS 441 since it is no longer taught. We adding AGED 407 to provide international course options to our majors. ENGL 207 and ENGL 316 are being dropped since these two courses no longer count for the General Education Oral Communications requirement. BIOL 154 and 155 are being dropped since the Biology Department no longer teaches these courses. Instead, we have added EPPN 154 and 155 for students to choose as an option for a microbiology course and corresponding laboratory course. We are adding PLP 416 as an elective since it was not taught for many years and has recently been offered once again; furthermore, it is a good compliment to PLP 415, Plant Pathology lecture, which is required. These changes do not affect the faculty teaching loads in any department.

Department of Soil and Water Systems

1. Add the following courses:

SOIL 444 Water Quality in the Pacific Northwest
3 credits
Joint-listed with SOIL 544, Cross-listed with ENVS 444
Qualitative aspects of water are covered in this class. Major topics are qualitative aspects of (1): surface water, (2) groundwater, (3) drinking water, (4) water in the oceans, and (5) the human waste stream. Concepts presented are relevant to world-wide water quality issues and concepts; however, however, an emphasis is placed on issues within the four Pacific Northwest states (ID, AK, OR, WA).

Distance Availability: Yes
Rationale: This course has been developed to support both the new undergraduate and graduate degrees in the water resources program. This course will also support undergraduate and graduate student degrees in both the soil sciences and environmental sciences program. The instructor developing this class has taught at the University of Idaho for 40 years, has received college and university teaching awards, has completed 43 graduate student programs and has taught more than 15,000 students in his career.

SOIL 448 Drinking Water and Human Health
3 credits
Joint-listed with SOIL 548, Cross-listed with ENVS 448
Understand the characterization, testing, and treatment of chemical, microbial, and hazardous compounds and their impact on human health. Be familiar with drinking water standards, regulatory aspects, and protection of municipal, community, and private well systems. (Spring)

Distance Availability: Yes
Rationale: Need to cross list courses between the Environmental Science and Soils programs. Unfortunately, a Soils 446 course already exists – so for successful cross-listing the ENVS numbers need to be changed from 446/546 to 448/548 (on another UCC agenda) and the SOIL classes are being created as 448/548.

SOIL 544 Water Quality in the Pacific Northwest
3 credits
Joint-listed with SOIL 444, Cross-listed with ENVS 544
Qualitative aspects of water are covered in this class. Major topics are qualitative aspects of (1): surface water, (2) groundwater, (3) drinking water, (4) water in the oceans, and (5) the human waste stream. Concepts presented are relevant to world-wide water quality issues and concepts; however, however, an emphasis is placed on issues within the four Pacific Northwest states (ID, AK, OR, WA).

Distance Availability: Yes
Rationale: This course has been developed to support both the new undergraduate and graduate degrees in the water resources program. This course will also support undergraduate and graduate student degrees in both the soil sciences and environmental sciences program. The instructor developing this class has taught at the University of Idaho for 40 years, has received college and university teaching awards, has completed 43 graduate student programs and has taught more that 15,000 students in his career.

SOIL 548 Drinking Water and Human Health
3 credits
Joint-listed with SOIL 448, Cross-listed with ENVS 548

Understand the characterization, testing, and treatment of chemical, microbial, and hazardous compounds and their impact on human health. Be familiar with drinking water standards, regulatory aspects, and protection of municipal, community, and private well systems. (Spring)

Distance Availability: Yes
Rationale: Need to cross list courses between the Environmental Science and Soils programs. Unfortunately, a Soils 446 course already exists – so for successful cross-listing the ENVS numbers need to be changed from 446/546 to 448/548 (on another UCC agenda) and the SOIL classes are being created as 448/548.

SOIL 556 North Idaho Field Trip
1 credit
Joint-listed with SOIL 456.
Soils and land use in northern Idaho ecosystems; emphasis on soil parent materials, soil formation and morphology, and soil-plant community relationships. Graded P/F. One 3-day field trip; additional class meetings and assignments before and after field trip. Cooperative: open to WSU degree-seeking students.
Prereq: SOIL 205 or Permission.

Rationale: We wish to provide additional 500 level credit opportunities, particularly for CALS and CNR students. Adding the 556 students will not add significant workload to the responsible faculty member.

2. Drop the following course:

ASM 105 Survey of Agricultural Mechanics
1-3 credits, max 3
This course is designed to introduce the student to the principles of technology in agriculture. It includes the development of knowledge and skills pertaining to agricultural mechanics, welding, power technology, electricity, and structures. It will provide introductory learning experiences for students in the areas of agricultural systems management.

Rationale: This course number was to be used as a Dual Credit course. Updates to the dual credit program require that courses be the same as courses offered in UI curriculum. There is no equivalent UI course. This course will be dropped.

3. Reactivate and change the following courses:

ASM 240 Computer Applications in ~~Biological~~ Biophysical Systems
3 credits
~~Application of computers in production agriculture; microcomputer principles and operation, disk operating systems; word processing; spreadsheets, database management and other application~~

~~programs; introduction to one program language.~~ This course is designed as an introductory course to computer applications with specific emphasis on applications used in agriculture and life sciences. Content includes spreadsheet management, database management, data analysis, data visualization and presentation applications.~~Two lec and one 2-hr lab a wk.~~ Recommended Preparation: three credits of college math. Two lectures and one 2-hour lab per week.

Rationale: Computers play an important and ever-increasing role in modern agriculture. Agriculture graduates consistently rate computer skills as being important to career success. Yet, we found that recent graduates of the College of Agriculture and Life Sciences at University of Idaho felt they had received less than satisfactory preparation in computer use, rating computers as the area in which they were least prepared for employment. Agricultural employers also place significant importance on computer skills, with more than 80% indicating that computer skills are either an "important" or "very important" factor considered when making employment decisions. Thus, we must ensure that our graduates are competent in computer use.
Our department has recently hired a faculty member (50% teaching, 50% research) who will teach the course and handle the added workload.

SOIL 458 Soil and Site Evaluation
~~1-2 credits, max 8~~ 2 credits
Description and evaluation of soils; emphasis on morphological features and properties that influence land use. Graded P/F. Two to ~~-~~four hours of lab a week (may include local field trips); one 3-day or one 6-day field trip. Recommended Preparation: SOIL 205. Cooperative: open to WSU degree-seeking students.

Rationale: Growing interest in soil profile description and soil judging has resulted in the need to reestablish this course, which is currently dormant. In addition to interest among students at UI, Washington State University no longer offers a similar course, increasing the need. Responsibility for the course will be shared among existing SWS faculty with room in their teaching appointment and the departmental teaching assistant.

4. Change the following courses:

ASM 202 Agricultural Shop Practices
~~2~~ 3 credits
Primarily for agricultural ~~mechanization~~ systems management and agricultural education students. Operation, use, and care of shop tools and equipment. Enrollment limited to 12 per section. One lecture, ~~and~~ one 3-hour lab, and two hours of individual practice a week.

Rationale: Increasing the number of credits from 2 to 3 in this course appropriately reflects the student effort hours required to complete a comprehensive course in Agricultural Shop Practices. As technologic and industry advances have enhanced and broadened the subject area,

the curriculum and student effort has also grown in order to maintain a comprehensive learning experience.
The course description changes reflect current terminology and class size.

SOIL 417 Market Garden Practicum
1-6 credits
Experiential learning based course that covers all aspects of running a small acreage vegetable farm. Topics include farm planning, crop rotation, soil fertility and testing, weed management and food systems. Students satisfy credit hours through participation in lecture/discussion, field work and field trips. Class meets at the ~~Plant Science Farm~~ Soil Stewards Farm and the 6th Street Greenhouse. Recommended preparation: SOIL 205. ~~(Summer only)~~

Rationale: The Soil Stewards farm, overseen by SWS Department, moved from the Plant Sciences Farm to a new location. Change reflects change in physical location.

SOIL 456 North Idaho Field Trip
1 credit
Joint-listed with SOIL 556
Soils and land use in northern Idaho ecosystems; emphasis on soil parent materials, soil formation and morphology, and soil-plant community relationships. Graded P/F. One 3-day field trip; additional class meetings and assignments before and after field trip. Cooperative: open to WSU degree-seeking students.
Prereq: SOIL 205 or Permission.

Rationale: We wish to provide additional 500 level credit opportunities, particularly for CALS and CNR students. Adding the 556 students will not add significant workload to the responsible faculty member.

5. Make the following curricular changes to the B.S.Ag.L.S. in Sustainable Food Systems:

Sustainable Food Systems (B.S.Ag.L.S.)

Required course work includes the university requirements (see regulation J-3) and:

Agricultural and Life Sciences Core		~~33~~ ~~34~~ 13
Sustainable Food Systems Courses		
~~AGED 448~~	~~Foundations of Extension Education~~	~~2~~
ASM 315	Irrigation Systems and Water Management	3
AVS 109	The Science of Animals that Serve Humanity	4

BIOL 115	Cells & the Evolution of Life	3
BIOL 115L	Cells & the Evolution of Life Laboratory	1
CHEM 275	Carbon Compounds	3
or CHEM 277	Organic Chemistry I	
ENT 322	General and Applied Entomology	4
FCS 205	Concepts in Human Nutrition	3
FOR 221	Principles of Ecology	3
FS 110	Introduction to Food Science	3
FS 220	Food Safety and Quality	3
FS 436	Principles of Sustainability	3
PLSC 102	The Science of Plants in Agriculture	3
PLSC 338	Weed Control	4
PLSC 451	Vegetable Crops	3
POLS 364	Politics of the Environment	3
~~SOC 101~~	~~Introduction to Sociology~~	~~3~~
~~SOC 350~~	~~Food, Culture, and Society~~	~~3~~
SOIL 205	The Soil Ecosystem	3
SOIL 206	The Soil Ecosystem Lab	1
SOIL 210	Food Systems and Healthy Lifestyles	3
SOIL 398	Internship	3
SOIL 400	Seminar	1
SOIL 417	Market Garden Practicum [1]	3-6
SOIL 427	Sustainable Food Systems	3
SOIL 446	Soil Fertility [1]	3
Select one of the following:		2-3
COMM 101	Fundamentals of Oral Communication	
COMM 150	Online Oral Communication	
Select one of the following:		3-5
BIOL 154 & BIOL 155	Introductory Microbiology Introductory Microbiology Laboratory	
BIOL 250 & BIOL 255	General Microbiology General Microbiology Lab	
BIOL 300	Survey of Biochemistry	
Select one of the following:		4
CHEM 101 & CHEM 101L	Introduction to Chemistry Introduction to Chemistry Lab	
CHEM 111	General Chemistry I	

& CHEM 111L	General Chemistry I Laboratory	
Select one of the following:		3-4
MATH 143	College Algebra	
MATH 160	Survey of Calculus	
MATH 170	Calculus I	
Select one of the following:		3
ENGL 207	Persuasive Writing	
ENGL 313	Business Writing	
ENGL 316	Environmental Writing	
ENGL 317	Technical Writing	
Total Hours		~~102-123~~ 94-101

[1] Students must complete at least 3 credits in both SOIL 417 and SOIL 446.

Courses to total 128 credits for this degree

Rationale: During the trifurcation the BS in Agricultural and Life Sciences was established. This proposed change accomplishes a modification to the B.S.Ag.L.S. that provides flexibility to the majors while maintaining the B.S.Ag.L.S. The courses that are crucial the Sustainable Food Systems degree were moved from the core into the SFS degree section. Minimal changes were made to the Sustainable Food Systems degree. Most changes were due to changes in course offerings.

Department of Water Resources

1. Change the following course:

WR 506 Interdisciplinary Methods in Water Resources
~~3~~ 2 credits
Student and faculty teams from traditionally disparate disciplines address real issues to develop methods for communicating across disciplines and for solving water resources problems. The course takes a problem-oriented approach using case studies. Faculty will lead students through this integrative process with lectures and working sessions. (Fall only)

Rationale: WR 506 is being reduced to 2 credits. The course is being reduced to 8 weeks, and the credit reduction reflects this.