

Department of

Applied Plant Science

**Ben Romney, Department Chair**

Greg Blaser, Daniel Dewey, Byron John, Reese Nelson, Ben Romney,
Larry Stephens, Jerry Toll, Jared Williams, Blake Willis
Forrest Barnes, Greenhouse/Garden Manager

Alvin Lusk, Ag Resource Manager

<http://www.byui.edu/applied-plant-science/>

Paula Arnold, Office Assistant Ag Engineering Building, Benson
144, (208) 496-4581

Department Description

The Department of Applied Plant Science emphasizes the relationship between the art and science of plant culture. This relationship affects production on thousands of acres as well as on a smaller, more urban scale in residential gardens and in the ornamental use of plants where art is specifically emphasized. In all these areas, plants are an integral part of the human experience. The emphasis on both production and aesthetics in the department's degrees and programs has prophetic roots:

“There is a great work for the Saints to do. Progress, and improve upon and make beautiful everything around you. Cultivate the earth, and cultivate your minds. Build cities, adorn your habitations, make gardens, orchards, and vineyards, and render the earth so pleasant that when you look upon your labors you may do so with pleasure, and that angels may delight to come and visit your beautiful locations.” Brigham Young, Deseret News, Aug. 8, 1860, 177.

Students in these programs apply scientific knowledge to practical, hands-on experience in the Thomas E Ricks Gardens and Greenhouses, the Hill View Farm, the Plant Shop, the Ag Shop (Ag Engineering Building), and The Flower Center. They also provide produce and ornamentation for the BYU Idaho campus, events, community and local farmers markets. The department focuses on learning how plants grow, how to propagate them, and how to prepare them for consumer use. From basic plant science, to artistic embellishments for life events, this department offers a buffet of opportunities to improve the quality of life.

The Horticulture Program is a nationally recognized and accredited leader in horticulture education preparing students for expanding career opportunities in nurseries, garden centers, florist shops, floral wholesalers, plant brokers, landscape contractors, lawn service companies, interior plant companies, greenhouses, golf courses, parks, botanical gardens, landscape management, event planning, design build, plant production, plant breeding, horticulture sales and marketing, and horticulture supply companies.

The Agronomy, Crop, Soil Science Program provides excellent connections with local and international Agricultural companies doing research through the farm on campus, as well as coordinating internship and employment opportunities throughout their network in the industry. Employment opportunities for students with a background in Agriculture are excellent. Examples of career opportunities available are specialists in crop consulting, plant genetics, soil and water, environmental science, GPS/GIS, machinery management, agronomy, education, food processing, plant nutrition, food safety, range resource management, government agency workers and researchers. Internships are an integral component of the various programs in the Applied Plant Science Department. They are a doorway to the industry, and provide students with practical exposure to real world applications of plant studies.

The Agriculture Technology program prepares students for a career in the technical and mechanical world of agriculture. Rapid mechanization of the industry over the past two generations has made shop work a larger and more essential part of agriculture operations. Students will attain skills needed to diagnose, repair, maintain all equipment related to agriculture systems. In addition, learning the technology of global positioning systems and geographical information systems will prepare technicians in all aspects of equipment operation and maintenance.

Students who seek advanced degrees find opportunities in education, research, extension, and government service. Several graduates of this department have gone on to advanced degrees in Landscape Architecture, Agriculture Engineering, Optometry, and other industry certification. Students who like plants, have a desire to improve the world around them, and enjoy applying the law of the harvest will benefit from their time in the programs of Applied Plant Science. From seed to bouquet, from farm to table, the principles of the plant's potential are the core of this Department.

Applied Plant Science

Brigham Young University-Idaho 2013-2014

AAS in Plant Science and Technology (365)

Take Required Foundation Courses (17 credits)

Major Requirements

No Double Counting of Major Courses - No Grade Less Than C- in Major Courses

CORE COURSES	SUPPLEMENTAL COURSES	Cont. from previous column	Program Notes:
<i>Take these courses:</i>	<i>Take 29.5 credits:</i>		
APS 100 .5	AGBUS 210 3	AGRON 455 3	
AGRON 122 3	AGBUS 347 3	AGTEC 132 2	
AGRON 220 3	AGRON 122 3	AGTEC 186 1	
AGRON 220L 1	AGRON 270 3	AGTEC 230 2	
AGTEC 220 3	AGRON 297 2	AGTEC 294 3	
AGTEC 286 3	AGRON 310 3	AGTEC 301 4	
<u>13.5</u>	AGRON 321 3	AGTEC 320 3	
	AGRON 325 3	AGTEC 335 4	
	AGRON 330 3	AGTEC 360 4	
	AGRON 425 3	AGTEC 474 3	
	AGRON 435 3	AGTEC 486 3	
	AGRON 440 3	APS 299R .5	
	AGTEC 122 2	APS 339R 1	
	AGTEC 124 2	APS 412 2	
	<i>Cont. next column</i>	APS 413 2	
		WELD 101 3	
		<u>29.5</u>	

Total Major Credits=43

This major is available on the following tracks:

Fall-Winter---- YES

Winter-Spring---- YES

Spring-Fall---- YES

AAS in Floral Design (373)

Take required Foundations courses (17 credits)

Major Requirements

No Double Counting of Major Courses

CORE COURSES	DESIGN COURSES	ELECTIVE COURSES	Cont. from previous column:	Program Notes:
<i>Take 1 course:</i>	<i>Take 1 course:</i>	<i>Take 4 credits:</i>		
AGRON 122 3	ART 101 3	AGBUS 232 3	HFED 110 2	
HORT 201 3	HFED 140 3	AGRON 220 3	HFED 140 3	
<u>3</u>	HORT 230 3	AGRON 220L 1	HORT 230 3	
	<u>3</u>	APS 290R 1-3	HORT 287R 1	
<i>Take these courses:</i>		APS 339R 1	HORT 334 3	
APS 339R 1	SEMINAR	APS 412 2	HORT 460 2	
HORT 287R 1	<i>Repeat 2 times:</i>	APS 413 2	SPAN 101 4	
HORT 288 0.5	APS 299R 0.5	ART 101 3		
HORT 297R 1	<u>1</u>	ART 102 2		
HORT 324 2		ART 103 2		
HORT 325 2	INTERNSHIP	ART 110 3		
HORT 335 3	<i>Take this course for 1 credit:</i>	ART 160 3		
HORT 336 1	APS 298R 1.5	ART 220 3		
HORT 337 1	<u>1</u>	ART 280 3		
HORT 338A 2		AUTO 100 1		
HORT 338B 2	WEDDING FLOWERS	B 275 3		
HORT 435 3	<i>Repeat this course 1 to 2</i>	B 341 3		
<u>19.5</u>	<i>times for a total of 2 credits:</i>	CA 131 3		
	HORT 338R 1.3	<i>Cont. next column</i>		
	<u>2</u>			

Total Major Credits=33.5

Additional Elective Credits Required for Graduation=9.5

This major is available on the following tracks:

Fall-Winter---- YES

Winter-Spring---- YES

Spring-Fall---- YES

Applied Plant Science

Brigham Young University-Idaho 2013-2014

AAS in Horticulture (372)

Take required Foundations courses (17 credits)

Major Requirements

No Double Counting of Major Courses

CORE COURSES	SEMINAR	ELECTIVE COURSES	Program Notes:
<i>Take these courses:</i>	<i>Repeat 2 times:</i>	<i>Take 6 credits:</i>	
AGRON 220 3	APS 299R 0.5	AGBUS 232 3	
AGRON 220L 1	1	AGTEC 220 3	
APS 412 2		APS 339R 1	
HORT 201 3	INTERNSHIP	APS 413 2	
HORT 230 3	<i>Take this course for 1 credit:</i>	HORT 252 4	
HORT 288 0.5	APS 298R 1.5	HORT 311 2	
HORT 297R 1	1	HORT 325 2	
HORT 319 3		HORT 329 2	
HORT 320 3		HORT 334 3	
HORT 321 2		HORT 335 3	
HORT 322 2		HORT 338A 2	
HORT 324 2		HORT 338R 1-3	
25.5		HORT 340 2	
		HORT 351 2	
		HORT 410 3	
		HORT 420 3	
		HORT 430 3	
		HORT 455 2	
		HORT 460 2	
		HORT 461 2	
		HORT 470 2	
		6	

Total Major Credits=33.5

Additional Elective Credits Required for Graduation=9.5

This major is available on the following tracks:

Fall-Winter---- YES

Winter-Spring---- YES

Spring-Fall---- YES

BS in Agronomy, Crop and Soil Sciences (642)

Take Required Foundation Courses

Major Requirements

No Double Counting of Major Courses - No Grade Less Than C- in Major Courses

CORE COURSES	Take these courses:	AGRONOMY COURSES	Take 11 credits:	Program Notes:
<i>Take these courses during your first 2 semesters:</i>		<i>Take these courses:</i>		
APS 100 .5	AGRON 297 2	AGRON 425 3	AGRON 270 3	
APS 398R 1-5	AGRON 310 3	AGRON 440 3	AGRON 297 2	
AGRON 122 3	AGRON 321 3	AGRON 445 2	AGTEC 186 1	
AGRON 220 3	AGRON 325 3	APS 413 2	AGTEC 220 3	
AGRON 220L 1	AGRON 330 3	10	AGTEC 286 3	
APS 300R 1	AGRON 435 3		AGTEC 320 3	
CHEM 105 4	AGRON 455 3		APS 339R 1	
13.5	20		APS 412 2	
			APS 498R 1	
			FDMAT 112 4	
			11	

Total Major Credits=54.5

Additional Elective Credits Required for Graduation=25.5

This major is available on the following tracks:

Fall-Winter---- YES

Winter-Spring---- YES

Spring-Fall---- YES

Applied Plant Science

Brigham Young University-Idaho 2013-2014

BS in Agriculture Technology (644)

Take Required Foundation Courses

Major Requirements

No Double Counting of Major Courses - No Grade Less Than C- in Major Courses

CORE COURSES		AG TECHNOLOGY COURSES		SUPPLEMENTAL COURSES		Program Notes:
<i>Take these courses during your first 2 semesters:</i>		<i>Take 8 credits:</i>		<i>Take 15 credits:</i>		
AGRON 122	3	AGED 460	2	AGBUS 180A	2	
AGTEC 220	3	AGTEC 286	3	AGBUS 180B	2	
APS 100	.5	AGTEC 335	4	AGBUS 210	3	
	<u>6.5</u>	AGTEC 360	4	AGBUS 347	3	
		AGTEC 474	3	AGRON 330	3	
<i>Take these courses:</i>		APS 398R	1	AGTEC 124	2	
AGTEC 186	1	WELD 101	<u>3</u>	AGTEC 125	3	
AGTEC 320	3		20	AGTEC 486	3	
APS 300	<u>1</u>			B 220	3	
	5			B 370	3	
				CONST 230	3	
				CONST 240	3	
				CONST 250	3	
				ME 231	<u>3</u>	
					15	

Total Major Credits=54.5

Additional Elective Credits Required for Graduation=25.5

This major is available on the following tracks:

Fall-Winter---- YES

Winter-Spring---- YES

Spring-Fall---- YES

Applied Plant Science

Brigham Young University-Idaho 2013-2014

BS in Horticulture Design/Build/Maintain Emphasis (695-14)

Take required Foundations courses

Major Requirements

No Double Counting of Major Courses

CORE COURSES	SEMINAR	EMPHASIS COURSES	ELECTIVE COURSES	<i>Program Notes:</i>
<i>Take 1 course:</i>	<i>Repeat 2 times:</i>	<i>Take these courses:</i>	<i>Take 4 credits:</i>	
AGRON 122 3	APS 299R <u>0.5</u>	HORT 252 4	AGBUS 232 3	
HORT 201 <u>3</u>	1	HORT 319 3	AGTEC 220 3	
3		HORT 321 2	APS 290R 1-3	
<i>Take these courses:</i>	INTERNSHIP	HORT 329 2	APS 339R 1	
AGRON 220 3	<i>Take this course for 1 credit:</i>	HORT 340 2	APS 413 2	
AGRON 220L 1	APS 298R <u>1-5</u>	HORT 351 2	ENG 316 3	
APS 100 .5	1	HORT 410 3	HORT 311 2	
APS 339R 1		HORT 430 3	HORT 325 2	
APS 412 2		HORT 453 <u>3</u>	HORT 334 3	
HORT 230 3		24	HORT 336 1	
HORT 297R 1			HORT 337 1	
HORT 320 3			HORT 338A 2	
HORT 322 2			HORT 338R 1-3	
HORT 324 2			HORT 350R 1	
HORT 335 <u>3</u>			HORT 420 3	
21.5			HORT 455 2	
			HORT 460 2	
			HORT 461 2	
			HORT 470 <u>2</u>	
			4	

Total Major Credits=54.5
Additional Elective Credits Required for Graduation - 25.5

This major is available on the following tracks:

Fall-Winter---- YES

Winter-Spring---- YES

Spring-Fall---- YES

Applied Plant Science

Brigham Young University-Idaho 2013-2014

**BS in Horticulture
Production Emphasis (695-15)**

Take required Foundations courses

Major Requirements

No Double Counting of Major Courses

CORE COURSES	SEMINAR	EMPHASIS COURSES	ELECTIVE COURSES	<i>Program Notes:</i>
<i>Take 1 course:</i>	<i>Repeat 2 times:</i>	<i>Take these courses:</i>	<i>Take 6 credits:</i>	
AGRON 122 3	APS 299R <u>0.5</u>	AGBUS 232 3	AGTEC 220 3	
HORT 201 <u>3</u>	1	HORT 321 2	APS 290R 1-3	
3		HORT 325 2	APS 339R 1	
<i>Take these courses:</i>	INTERNSHIP	HORT 334 3	APS 413 2	
AGRON 220 3	<i>Take this course for 1 credit:</i>	HORT 375 1	HORT 252 4	
AGRON 220L 1	APS 298R <u>1-5</u>	HORT 420 3	HORT 311 2	
APS 100 .5	1	HORT 455 2	HORT 319 3	
APS 339R 1		HORT 460 2	HORT 329 2	
APS 412 2		HORT 461 2	HORT 336 1	
HORT 230 3		HORT 470 <u>2</u>	HORT 337 1	
HORT 297R 1		22	HORT 338A 2	
HORT 320 3			HORT 338R 1-3	
HORT 322 2			HORT 340 2	
HORT 324 2			HORT 350R 1	
HORT 335 <u>3</u>			HORT 351 2	
21.5			HORT 410 3	
			HORT 430 3	
			HORT 453 <u>3</u>	
			6	

Total Major Credits=54.5

Additional Elective Credits Required for Graduation - 25.5

This major is available on the following tracks:

Fall-Winter---- YES

Winter-Spring---- YES

Spring-Fall---- YES

Applied Plant Science

Brigham Young University-Idaho 2013-2014

**BS in Horticulture
Floral Design Emphasis (695-16)**

Take required Foundations courses

Major Requirements

No Double Counting of Major Courses

<p>CORE COURSES</p> <p><i>Take 1 course:</i></p> <p>AGRON 122 3</p> <p>HORT 201 <u>3</u></p> <p> 3</p> <p><i>Take these courses:</i></p> <p>AGRON 220 3</p> <p>AGRON 220L 1</p> <p>APS 100 .5</p> <p>APS 339R 1</p> <p>APS 412 2</p> <p>HORT 230 3</p> <p>HORT 297R 1</p> <p>HORT 320 3</p> <p>HORT 322 2</p> <p>HORT 324 2</p> <p>HORT 335 <u>3</u></p> <p> 21.5</p>	<p>SEMINAR</p> <p><i>Repeat 2 times:</i></p> <p>APS 299R <u>0.5</u></p> <p> 1</p> <p>INTERNSHIP</p> <p><i>Take this course for 1 credit:</i></p> <p>APS 298R <u>1.5</u></p> <p> 1</p> <p>EMPHASIS COURSES</p> <p><i>Take these courses:</i></p> <p>APS 339R 1</p> <p>HORT 325 2</p> <p>HORT 336 1</p> <p>HORT 337 1</p> <p>HORT 338A 2</p> <p>HORT 338B 2</p> <p>HORT 338C 2</p> <p>HORT 435 3</p> <p>HORT 436 1</p> <p>HORT 437 1</p> <p>HORT 460 <u>2</u></p> <p> 18</p>	<p>ELECTIVE COURSES</p> <p><i>Take 4 credits:</i></p> <p>AGBUS 232 3</p> <p>AGTEC 220 3</p> <p>APS 290R 1-3</p> <p>APS 339R 1</p> <p>APS 413 2</p> <p>HORT 252 4</p> <p>HORT 287R 1</p> <p>HORT 311 2</p> <p>HORT 319 3</p> <p>HORT 321 2</p> <p>HORT 329 2</p> <p>HORT 334 3</p> <p>HORT 340 2</p> <p>HORT 351 2</p> <p>HORT 410 3</p> <p>HORT 420 3</p> <p>HORT 430 3</p> <p>HORT 453 3</p> <p>HORT 455 2</p> <p>HORT 461 2</p> <p>HORT 470 <u>2</u></p> <p> 4</p>	<p>SPECIAL PROBLEMS</p> <p><i>Take this course for 1 credit:</i></p> <p>APS 290R <u>1.3</u></p> <p> 1</p> <p>WEDDING FLOWERS</p> <p><i>Repeat this course 1 time for 3 credits:</i></p> <p>HORT 338R <u>1.3</u></p> <p> 3</p> <p>FLORAL COURSES</p> <p><i>Repeat this course 2 times:</i></p> <p>HORT 287R <u>1</u></p> <p> 2</p>	<p><i>Program Notes:</i></p>
--	---	---	--	------------------------------

Total Major Credits=54.5

Additional Elective Credits Required for Graduation - 25.5

This major is available on the following tracks:

Fall-Winter---- YES

Winter-Spring---- YES

Spring-Fall---- YES

Applied Plant Science

Brigham Young University-Idaho 2013-2014

BS in Agriculture Education Composite (825)

Take Required Foundation Courses

Major Requirements

No Double Counting of Major Courses - No Grade Less Than C- in Major Courses

EDUCATION CORE	CORE COURSES	AG TECHNOLOGY COURSES	Program Notes:
<i>Take these courses:</i>	<i>Take 1 course:</i>	<i>Take 4 credits:</i>	
ED 200 2	ACCTG 180 3	AGTEC 124 2	
ED 304 3	AGBUS 201 3	AGTEC 220 3	
ED 461 3		AGTEC 335 4	
ED 492 10		AGTEC 360 4	
SPED 360 2	<i>Take these courses:</i>		
20	AGBUS 210 3		
	AGBUS 347 3		
	AGED 297 2	ANIMAL SCIENCE	
	AGED 380 3	COURSES	
	AGED 450 2	<i>Take 1 course:</i>	
	AGED 452 3	AS 340 4	
	AGED 460 2	AS 360 4	
	AGRON 122 3	AS 370 4	
	AGRON 220 3	4	
	AGRON 220L 1		
	AGTEC 122 2		
	AGTEC 286 3		
	AS 150 3		
	AS 220 3		
	AS 336 3		
	HORT 320 3		
	HORT 334 3		
	WELD 101 3		
	48		

Total Major Credits=59

Education Core Credits=20

Additional Elective Credits Required for Graduation=1

This major is available on the following tracks:

Fall-Winter---- YES

Winter-Spring--- YES

Spring-Fall---- NO

Minor in Plant Science and Technology (243)

Minor Requirements

No Double Counting of Minor Courses - No Grade Less Than C- for Minor Courses

CORE COURSES	SUPPLEMENTAL COURSES	Continued from previous column	Program Notes:
<i>Take these courses:</i>	<i>Take 14 credits:</i>		
APS 100 .5	AGRON 122 3	AGTEC 186 1	
AGRON 122 3	AGRON 310 3	AGTEC 230 2	
AGRON 220 3	AGRON 321 3	AGTEC 294 3	
AGRON 220L 1	AGRON 330 3	AGTEC 301 4	
AGTEC 220 3	AGRON 425 3	AGTEC 335 4	
10.5	AGRON 440 3	AGTEC 360 4	
	AGTEC 132 2	14	
	<i>Continued next column</i>		

Total Minor Credits=24.5

This minor is available on the following tracks:

Fall-Winter---- YES

Winter-Spring--- YES

Spring-Fall---- YES

Applied Plant Science

Brigham Young University-Idaho 2013-2014

Minor in Horticulture (204)

Minor Requirements

CORE COURSES <i>Take 1 course:</i> AGRON 122 3 HORT 201 3 <hr style="width: 50px; margin-left: 0;"/> 3 <i>Take 1 course:</i> HORT 230 3 HORT 335 3 <hr style="width: 50px; margin-left: 0;"/> 3	ELECTIVE COURSES <i>Take 19 credits:</i> APS 299R .5 APS 339R 1 APS 412 2 APS 413 2 HORT 230 3 HORT 252 4 HORT 287R 1 HORT 311 2 HORT 319 3 HORT 320 3 HORT 321 2 HORT 322 2 HORT 324 2 HORT 325 2 HORT 329 2 <i>Continued next column</i>	<i>Continued from previous column</i> HORT 334 3 HORT 335 3 HORT 336 1 HORT 337 1 HORT 338A 2 HORT 338B 2 HORT 338R 1-3 HORT 340 2 HORT 410 3 HORT 420 3 HORT 430 3 HORT 455 2 HORT 460 2 HORT 461 2 HORT 470 2 <hr style="width: 50px; margin-left: 0;"/> 19	Program Notes: No double counting of minor courses.
---	---	--	---

Total Minor Credits=25

This minor is available on the following tracks:

Fall-Winter---- YES

Winter-Spring---- YES

Spring-Fall---- YES

Geographical Information Systems (GIS) Technology Minor (222)

Minor Requirements

No Double Counting of Minor Courses

Core Courses <i>Take this course:</i> CIT 111 3 MATH 221A, 221B or 221C 3 GEOG 140 1 GEOG 230 3 <hr style="width: 50px; margin-left: 0;"/> 10 Advanced/Applied Courses <i>Take 1 course:</i> AGTEC 286 3 GEOG 340 3 GEOL 340 3 <hr style="width: 50px; margin-left: 0;"/> 3	GIS Project <i>Take 1 course*:</i> AGTEC 486 3 GEOL 440R 3 <hr style="width: 50px; margin-left: 0;"/> 3 <i>*A directed studies or other project oriented class in a students chosen discipline may be substituted for this require- ment with the Geography Chairs permission.</i>	Supplemental Courses <i>Take 2 courses:</i> AGRON 425 3 CIT 160 3 CIT 260 3 COMM 130 3 GEOG 240 3 <hr style="width: 50px; margin-left: 0;"/> 6	Program Notes: (Empty)
--	--	--	--------------------------------------

Total Major Credits=22

This major is available on the following tracks:

Fall-Winter---- YES

Winter-Spring---- YES

Spring-Fall---- YES

Applied Plant Science

Brigham Young University-Idaho 2013-2014

Applied Plant Science Pre-approved Clusters

Event Planning Cluster 1500

Take these courses:

AGBUS 232	Ag Sales and Merchandising	3
HORT 325	Interiorscaping	2
HORT 335	Flower Arranging	3
HORT 338A	Wedding Flowers Lab A	2
HORT 338R	Wedding Flowers	1-3

Take 1 course:

APS 290R	Special Problems	1-3
HORT 287R	Flower Center	1
	Total Credits	12

Horticulture 1501

Take 12 credits:

APS 299R	Seminar (repeatable)	.05
APS 412	Landscape Pest Control	2
APS 413	Pesticide Application	2
HORT 103	Home Gardening	3
HORT 201	Plant Culture	3
HORT 230	Introduction to Architecture/Landscape Design	3
HORT 252	Landscape Construction	4
HORT 287R	Flower Center (repeatable)	1
HORT 311	Introduction to Arboriculture	2
HORT 319	Landscape Management	3
HORT 320	Plant Propagation	3
HORT 321	Landscape Plant Materials 1	2
HORT 322	Landscape Plant Materials 2	2
HORT 324	Flower Identification	2
HORT 325	Interiorscaping	2
HORT 329	Irrigation	2
HORT 334	Greenhouse Operations	3
HORT 335	Flower Arranging	3
HORT 336	Asian Design Influence	1
HORT 337	European Design Influence	1
HORT 338A	Wedding Flowers Lab A	2
HORT 338B	Wedding Flowers Lab B	2
HORT 338R	Wedding Flowers	1-3
HORT 340	Landscape Computer	2
HORT 410	Turfgrass Management	3
HORT 420	Advanced Propagation	3
HORT 430	Intermediate Landscape Design	3
HORT 455	Nursery Management	2
HORT 460	Cut Flower Production	2
HORT 461	Potted Crop Production	2
HORT 470	Landscaping with Fruit and Vegetables	2
	Total Credits	12

Natural Resources 1502

Take 4 courses:

BIO 225	Range Ecology 1	3
BIO 302	Ecology	4
BIO 325	Range Ecology 2	3
BIO 455	Rangeland Inventory & Analysis Lab	3
BIO 466	Rangeland Vegetation Manipulation & Improvement	3
	Total Credits	12

Soil Management 1503

Take these courses:

AGRON 220	Introduction to Soils	3
AGRON 321	Soil Fertility and Plant Nutrition	3
AGRON 325	Irrigation and Drainage	3
AGRON 425	Soil Management	3
	Total Credits	12

Crop Production 1504

Take these courses:

AGRON 310	Tree, Fruit and Vegetable Management	3
AGRON 330	Forage Crops	3
AGRON 435	Potato Science	3
AGRON 455	Cereal Science	3
	Total Credits	12

Crop Protection 1505

Take these courses:

AGRON 321	Soil Fertility and Plant Nutrition	3
AGRON 325	Irrigation and Drainage	3
AGRON 445	Crop Advisor Certification	2
APS 412	Integrated Pest Management	2
APS 413	Crop Protection	2
	Total Credits	12

GIS in Agriculture and Natural Resources 1506

Take these courses:

AGTEC 286	Introduction to GIS	3
AGTEC 474	Mechanical Systems Analysis	3
AGTEC 486	Advanced GIS in Agriculture and Natural Resources	3

Take one course:

CIT 225	Database Design and Development	3
GEOG 240	Maps and Remote Sensing	3
GEOG 340	Advanced GIS and Spatial Analysis	3
	Total Credits	12

Agriculture Technology 1507

Take these courses:

AGTEC 320	Agricultural Machinery	3
AGTEC 335	Electronic Systems Diagnostics and Repairs	4
AGTEC 360	Agricultural Hydraulics	4
AGTEC 474	Mechanical Systems Analysis	3
	Total Credits	14

GIS 6801

Take this course:

GEOG 140	Introduction to GPS	1
----------	---------------------	---

Take 1 course:

AGTEC 286	Introduction to GIS	3
GEOG 230	Introduction to GIS	3

Take 1 course:

MATH 221A	Business Statistics	3
MATH 221B	Biostatistics	3
MATH 221C	Social Studies Statistics	3

Take 1 course:

AGTEC 486	Advanced GIS in Agriculture and Natural Resources	3
GEOG 340	Advanced GIS and Spatial Analysis	3
GEOG 340	Introduction to GIS for Geoscientists	3

Take 1 course:

CIT 111	Introduction to Databases	3
CIT 160	Introduction to Programming	3
COMM 130	Visual Media	3
	Total Credits	13

Some courses may have a prerequisite that must be met in order to take that course.

Applied Plant Science

Brigham Young University–Idaho 2013-2014

Course Descriptions

Credits*

AGED 297 Ag Education Practicum	(2:1:2)
The purpose of this course is to allow those students interested in teaching high school agriculture to gain an early field experience. Students will be required to spend at least 40 hours in the semester observing and participating in lecture and laboratory activities. (Fall, Winter)	
AGED 380 Connecting Education and Employment	(3:3:0)
Prepares future Agricultural educators to teach school and career options to secondary students who desire a career in agriculture or related field of endeavor. (Fall, Spring)	
AGED 450 Curriculum Development and Assessment in Occupational Education	(2:2:0)
This course will help students develop an understanding of the basic techniques of identifying and selecting instructional materials and methods to effectively teach agriculture at the secondary level. This course mainly focuses on course construction in professional-technical curriculum development in agriculture and its related fields. (Fall, Winter)	
AGED 452 Methods of Teaching Agriculture	(3:3:0)
Competence in teaching methods, along with competence in the technical subject matter is essential to be effective as a teacher of agriculture. (Fall, Winter)	
AGED 460 Experiential Laboratory Methods	(2:1:2)
This course is to help students develop specific skill sets in agricultural curriculum laboratory exercises. The course will focus on the experiential method of teaching and developing skills that can be transferred to secondary students relative to agricultural course work. (Fall, Spring)	
AGRON 115 Feeding the World	(3:3:0)
Insight into world populations, world food production, and an understanding of the need to educate those throughout the world, so that they might have the opportunity to become self-sufficient.	
AGRON 122 Introduction to Plant Science	(3:3:0)
The basic principles of structure, form and function of plants in both the higher and lower plant kingdoms. (Fall, Winter, Spring)	
AGRON 220 Introduction to Soils	(3:3:0)
A basic course dealing with the formation of soils as well as the physical, chemical and biological properties of soils. (Fall, Winter, Spring)	
AGRON 220L Introduction to Soils Lab	(1:0:2)
Hands on experience determining soil texture, structure, color, measuring soil pH, nitrates, and fertilizers. (Fall, Winter, Spring)	
AGRON 270 Agro-Ecology	(3:2:2)
Total Course Fees: \$25.00 This course is to help students become aware of environmental issues around the world. These issues will be addressed multi dimensionally. We will want a holistic approach, "How does man interact with these issues?" (Fall, Spring)	
AGRON 297 Ag Research Practicum	(2:2:0)
Development and improvement of selected occupational competencies. (Fall)	
AGRON 310 Tree, Fruit and Vegetable Management	(3:3:1)
Shows the importance of fruit and vegetable crops in U.S. agriculture, and their contribution to the national economy and the human diet. (Fall, Spring)	
AGRON 321 Soil Fertility and Plant Nutrition	(3:2:2)
Prerequisites: AGRON 122; AGRON 220 Field identification and measurement of plant nutrient deficiencies, petiole analysis and crop fertilization methods. (Winter, Spring)	

AGRON 325 Irrigation and Drainage	(3:3:0)
Total Course Fees: \$25.00 Principles and application of soil, water and plant relations, agricultural meteorology, and irrigation. (Fall, Spring)	
AGRON 330 Forage Crops	(3:3:0)
Total Course Fees: \$25.00 A composite study of an important field of agronomy, forage crops used in the livestock industry. Applied production principles and management requirements will be emphasized for each crop. History and biology of major crops. (Fall, Spring)	
AGRON 425 Soil Management	(3:3:1)
Examine the science and application of soil taxonomy, genesis, chemistry physics and microbiology to better manage soils for improving environmental quality and agricultural suitability. (Fall, Winter, Spring)	
AGRON 435 Potato Science	(3:3:1)
Total Course Fees: \$25.00 Examine the science and application of soil taxonomy, genesis, chemistry physics and microbiology to better manage soils for improving environmental quality and agricultural suitability. (Winter)	
AGRON 440 Crop Physiology	(3:3:1)
Prerequisites: AGRON 122; CHEM *****; BIO 100 The science and application of crop science and physiology. Apply cellular and biochemical analysis of plant physiology to the more applied aspects of plant growth specifically agricultural crops. (Fall, Winter)	
AGRON 445 Crop Advisor Certification	(2:2:0)
This course is a capstone class for all Agronomy majors. The international Certified Crop Advisor program is designed to provide qualified credentials to professionals in Agriculture who consult and make nutrient and pesticide recommendations to Grower/Producers. Completion of the course prepares students to take two required examinations for CCA certification. (Winter, Spring)	
AGRON 455 Cereal Crops	(3:3:0)
Total Course Fees: \$25.00 Crop history and biology of major cereal crops. Class will cover both warm and cool season cereal crops. Introduction of principles involved in cereal chemistry, development and processing. (Winter, Spring)	
AGTEC 122 Small Engines	(2:1:2)
Total Course Fees: \$10.00 Selection, adjustment, and care of small engines. Small engine theory and procedures for complete small engine overhaul. (Fall, Winter, Spring)	
AGTEC 124 Compact Equipment	(2:1:2)
Total Course Fees: \$10.00 Test and repair procedures for engines, electrical, power trains, and hydraulics found on compact equipment. (Fall, Winter, Spring)	
AGTEC 125 Agricultural Maintenance Welding	(3:2:2)
An overview in the use of electric arc and oxy acetylene welding equipment with an emphasis upon maintenance welding as it pertains to farm and ranch applications. (Winter)	
AGTEC 132 Climate Control	(2:1:3)
System theory, diagnosis, and repair of air conditioning and heating systems in agricultural equipment. (Winter)	
AGTEC 186 GPS Applications in Agriculture	(1:0:2)
This course will examine the technology and application of global positioning systems (GPS) in agriculture. (Fall, Spring)	

Applied Plant Science

Brigham Young University–Idaho 2013-2014

<p>AGTEC 220 Preventive Maintenance and Machine (3:2:3) Total Course Fees: \$10.00 An overview of preventive maintenance and care and operation of Agricultural equipment. (Fall, Spring)</p>	<p>APS 290R Special Problems (1-3:0:0) Repeatable Course: may earn maximum of 5 credits The student may pursue a subject of interest through independent study under personal direction of a faculty specialist. (Fall, Winter, Spring)</p>
<p>AGTEC 230 Agriculture Electrification - AC (2:1:3) Principles, systems and applications of electrical energy in agriculture. (Winter)</p>	<p>APS 298R Internship (1:5:0:0) Repeatable Course: may earn maximum of 5 credits Work experience in the plant science industry. (Fall, Winter, Spring)</p>
<p>AGTEC 286 Introduction to Geography Information Systems (3:2:2) This course is designed to teach the basics of geographical information systems in agriculture and natural resources and how global positioning systems and geographical information systems can be used to improve agricultural and natural resource management. (Fall, Spring)</p>	<p>APS 299R Seminar (0:5:1:0) Repeatable Course: may earn maximum of 1 credit Guest lectures from industry leaders. (Fall, Winter, Spring)</p>
<p>AGTEC 290 Individual Study (2:0:0) Independent study, special assignment and/or advanced inquiry in an area of special interest, approved after consultation with instructor in charge. (Fall, Winter, Spring)</p>	<p>APS 300R Seminar (1:1:0) Total Course Fees: \$25.00 Repeatable Course: may earn maximum of 4 credits This class will help ensure students they are on track for graduation with a review of student grad reports and internship experiences. (Fall, Winter, Spring)</p>
<p>AGTEC 294 Agriculture Fabrication (3:1:4) Prerequisites: ME 105 Rapid mechanization of agriculture over the past generation has made shop work a larger and more essential part of agriculture operations. This course will help develop specific skills used in agriculture mechanics and improve the ability to perform at high productive levels. (Winter)</p>	<p>APS 339R APS Portfolio (1:1:1) Total Course Fees: \$30.00 Portfolio is a course to help students develop a personal portfolio of the skills acquired during their studies at BYU Idaho in preparation for employment or additional graduate school study. Students are taught to document their learning with digital photography, web design, letters of introduction, presentation of résumé and personal vitae. (Fall, Winter, Spring)</p>
<p>AGTEC 301 Engine Repair (4:2:4) Practical application and use of the principles and practices of major diesel engine repair. The mechanic's and operational procedures and repair of tractors and other forms of farm power units with emphasis on adjustments, operations, and care of the power unit. (Winter)</p>	<p>APS 398R Internship (1:5:0:0) Repeatable Course: may earn maximum of 5 credits Work experience in the plant science industry. (Fall, Winter, Spring)</p>
<p>AGTEC 320 Agricultural Machinery (3:2:2) Total Course Fees: \$10.00 Selection, servicing, maintenance, operation, testing, repair, use and general management of agricultural equipment. (Fall, Winter)</p>	<p>APS 412 Integrated Pest Management (2:1:2) Total Course Fees: \$20.00 Identification and control of insects, weeds and diseases of ornamental plants. The use, limitation and methods of applying pesticides including laws concerning their use. (Fall, Spring)</p>
<p>AGTEC 335 Electronic Systems Diagnostic and Repair (4:3:3) Basic electricity in farm power electrical circuits, with emphasis in starting systems, charging systems, lighting systems and accessory systems. Advanced electronics used in farm power; fuel injection systems, monitors and controllers. (Fall, Winter)</p>	<p>APS 413 Pesticide Application (2:1:2) This course will examine crop protection through the use of pesticides, cultural and biological control methods. (Fall, Spring)</p>
<p>AGTEC 360 Agricultural Hydraulics (4:3:3) A study of fundamental and advanced principles governing and regulating the transmission and control of fluid power hydraulics. Trouble shooting and system repairs. (Fall, Winter)</p>	<p>APS 498R Internship (1:5:0:0) Repeatable Course: may earn maximum of 5 credits (Work experience in the plant science industry. Fall, Winter, Spring)</p>
<p>AGTEC 465 Machinery Management (3:3:0) A study of machinery efficiency, matching machines, and horsepower. Analyzing and estimating costs associated with keeping machines running.</p>	<p>HORT 103 Home Gardening (3:2:2) Total Course Fees: \$20.00 Learn basic principles, culture and production of vegetables, fruits, flowers, trees, shrubs, and turf, as it relates to the home garden and self-reliance. (For non-Hort majors only) This course includes a lecture and lab experience. (Fall, Spring)</p>
<p>AGTEC 474 Mechanical Systems Analysis (3:2:3) Prerequisites: AGTEC 220; AGTEC 335 Testing and diagnosis for various pieces of equipment related to agriculture systems pertaining to the production of food. (Fall, Spring)</p>	<p>HORT 201 Plant Culture (3:2:3) Total Course Fees: \$105.00 Planting and establishment of horticultural plants in the landscape including lawns, trees, shrubs, vegetables, fruits and flowers. (Winter, Spring)</p>
<p>AGTEC 486 Advanced GIS in Agriculture and Natural Resources (3:2:2) Prerequisites: AGTEC 286 This course is designed to apply geographical information systems (GIS) to agriculture and natural resource disciplines. The course will focus on collecting, analyzing, interpolating, and decision making using GIS software and GPS equipment. (Fall, Winter)</p>	<p>HORT 230 Introduction to Architecture and Landscape Design (3:3:1) Total Course Fees: \$10.00 Enhances the student's understanding of the outdoor environment and how they can contribute to the quality of that environment through design and planning. Also a study of the history of landscape architecture and its effect on man. (Fall, Winter, Spring)</p>
<p>APS 100 Orientation to APS (0:5:1:0) A survey of career opportunities and skills needed in the horticulture industry. Emphasis is placed on gaining familiarity with the BYU-Idaho campus and systems of learning at the university level. (Fall, Winter, Spring)</p>	

Applied Plant Science

Brigham Young University–Idaho 2013-2014

<p>HORT 252 Landscape Construction (4:3:4) Total Course Fees: \$40.00 Prerequisites: HORT 230 A practical course of layout and construction techniques for landscape projects. Considered are masonry, wood structures, irrigation and plant installations. (Fall, Spring)</p>	<p>HORT 329 Irrigation (2:1:2) Total Course Fees: \$15.00 Prerequisites: HORT 230 Irrigation of turf and landscape plants. Design of irrigation and landscape lighting systems, with selection and assembly of components. (Winter)</p>
<p>HORT 287R Flower Center (1:0:2) Repeatable Course: may earn maximum of 8 credits Total Course Fees: \$20.00 Prerequisites: HORT 335 This course provides training and experience in presentation of flowers in: display windows and coolers, large banquet halls, auditoriums, custom design in residential and commercial settings. Florals skills, shop management techniques, and floral nomenclature are all emphasized. The class is provided as an opportunity to reinforce principles learned in the various floral classes, and to prepare students for internship and retail employment. (Fall, Winter, Spring)</p>	<p>HORT 334 Greenhouse Operations (3:2:3) Total Course Fees: \$15.00 Prerequisites: HORT 320 Greenhouse construction, environmental control, pest control and plant culture including production of greenhouse floral crops. (Fall, Spring)</p>
<p>HORT 288 Occupational Internship Preparation (0.5:1:0) Prerequisites: HORT 201 Class preparation for work experience in the florist, landscape or nursery industry. (Fall, Winter, Spring)</p>	<p>HORT 335 Flower Arranging (3:3:1) Total Course Fees: \$95.00 Instruction and care in handling of flowers, historical and current application, identification and use. (Fall, Winter, Spring)</p>
<p>HORT 297R Practicum in Horticulture (1:1:1) Repeatable Course: may earn maximum of 3 credits Horticulture Majors. Supervised practical experience for the development and improvement of horticultural skills. Repeatable up to 2 times. (Fall, Winter, Spring)</p>	<p>HORT 336 Asian Design Influence (1:1:1) Total Course Fees: \$25.00 Prerequisites: HORT 335; HORT 337 This course helps students understand the theories of Asian design influence, with particular emphasis on the use of line. Principles of Asian design and their influence on modern American Floral design. (Winter)</p>
<p>HORT 311 Introduction to Arboriculture (2:0:0) Total Course Fees: \$15.00 Establishment, culture and maintenance of trees and shrubs in the landscape. (Fall, Spring)</p>	<p>HORT 337 European Design (1:1:1) Total Course Fees: \$25.00 Prerequisites: HORT 335; HORT 336 This course establishes a historical understanding of floral design primarily from the influences of Europe. (Winter)</p>
<p>HORT 319 Landscape Management (3:2:3) Total Course Fees: \$25.00 Prerequisites: HORT 201 Maintenance of trees, shrubs and turf in landscape, park, golf and athletic areas. (Fall, Spring)</p>	<p>HORT 338A Wedding/Event Design Consultation (2:2:0) Repeatable Course: may earn maximum of 3 credits Total Course Fees: \$75.00 Prerequisites: HORT 335; HORT 338R Provides the first year student with an understanding of the requirements for wedding and event designing. Basic bouquet construction, consultation. (Winter)</p>
<p>HORT 320 Plant Propagation (3:2:3) Total Course Fees: \$15.00 Prerequisites: HORT 201; AGRON 122 Principles and practices used in commercial propagation of plants with emphasis on landscape nursery stock. Includes tissue culture, seed germination, grafting, layering, budding, cuttings and other specialized techniques. (Fall, Spring)</p>	<p>HORT 338B Wedding/Event Design Organization (2:2:0) Total Course Fees: \$75.00 Prerequisites: HORT 335; HORT 338R; HORT 338C Provides the second year student with training in advanced bouquet construction, leadership, team building, and management of event planning. (Winter)</p>
<p>HORT 321 Deciduous Plant Identification (2:1:2) Total Course Fees: \$10.00 Identification, landscape value and cultural requirements of deciduous trees, shrubs, and ground covers. (Fall, Spring)</p>	<p>HORT 338C Wedding/Event Group Design (2:2:0) Total Course Fees: \$75.00 Prerequisites: HORT 335; HORT 338R; HORT 338B Provides the third year student with training in freestyle bouquet design, group designing for events, supervisory leadership. (Winter)</p>
<p>HORT 322 Evergreen Plant Identification (2:1:2) Total Course Fees: \$410.00 Identification, landscape value, and special cultural requirements of evergreen trees, shrubs and ground covers. This course includes a lecture and lab experience. (Fall, Spring)</p>	<p>HORT 338R Wedding and Event Planning (1-3:3:0) Prerequisites: HORT 335; HORT 338A; HORT 338B; HORT 338C Theories, methods and materials involved in wedding and special occasion arrangements in preparation for the Spring Flower and Bridal Open House. To prepare floral majors for opportunities to plan and design floral products for weddings. (Winter)</p>
<p>HORT 324 Flower Identification (2:1:2) Total Course Fees: \$10.00 Identification, landscape value, and special cultural requirements of annual and perennial flowers. (Fall, Spring)</p>	<p>HORT 340 Landscape Computer Operations (2:1:2) Total Course Fees: \$10.00 Prerequisites: HORT 230 Application of specific computer software programs that are commonly used in the horticulture industry; including sprinkler design, landscape design, bidding and estimating, GPS, and the internet. (Winter)</p>
<p>HORT 325 Interiorscaping (2:1:2) Total Course Fees: \$25.00 Identification of indoor plants and their culture. Principles of design as applied to the placement and use of plants. This course includes a lecture and lab experience. (Fall, Spring)</p>	

Applied Plant Science

Brigham Young University–Idaho 2013-2014

HORT 350R ALCA Career Days Repeatable Course: may earn maximum of 3 credits Total Course Fees: \$1000.00 This course for students selected to participate in the yearly ALCA Career Days field excursion with the Horticulture Department. The course is designed to assist students with their preparations to communicate with potential employers during the career day events. Students also are given special attention in perfecting practical skills that they have been taught throughout their tenure at the University. (Fall, Winter)	(1:1:0)	HORT 455 Nursery Management Total Course Fees: \$200.00 Prerequisites: HORT 320 This course will focus on the development, organization, infrastructure, and operation of a production nursery. This will cover production principles and practices and strategies for wholesale and retail marketing of nursery crops. The laboratory will concentrate on the development of skills associated with the production and marketing of nursery crops. (Winter)	(2:1:2)
HORT 351 Landscape Contracting Total Course Fees: \$10.00 Prerequisites: HORT 230 Estimating, bidding, and contracting procedures for landscape construction, and maintenance projects. A hands-on approach to bidding and estimating jobs for the Green Industry. (Winter)	(2:1:2)	HORT 460 Cut Flower Crops Prerequisites: HORT 320 Commercial production, harvesting, marketing and scheduling of cut flower and crops. (Winter)	(2:1:2)
HORT 375 Floriculture Applications Total Course Fees: \$1000.00 Prerequisites: HORT 320 Case Studies of plant growth in relation to the floriculture industry with emphasis on the physiological interactions of plant growth resulting from fertilization, plant growth regulators, growing structures, irrigation and container media. (Fall, Spring)	(1:1:0)	HORT 461 Potted Plants Total Course Fees: \$10.00 Prerequisites: HORT 320 Commercial production, harvesting, marketing, and scheduling of bedding plants and potted commercial crops. (Winter)	(2:1:2)
HORT 410 Turfgrass Management Total Course Fees: \$40.00 Prerequisites: HORT 320 Establishment, culture, and maintenance of turf grass and trees in the landscape. (Fall, Spring)	(3:2:3)	HORT 470 Landscaping with Vegetables and Fruit Prerequisites: HORT 320 Principles and practical applications for fruit and vegetable establishment, culture, production, storage, and economics. (Winter)	(2:1:2)
HORT 420 Advanced Propagation Total Course Fees: \$40.00 Advanced study of the principles, techniques, and applications of plant propagation with emphasis on tissue culture and micropropagation. (Fall, Winter)	(3:2:3)		
HORT 430 Advanced Landscape Design Total Course Fees: \$10.00 Prerequisites: HORT 340; HORT 321; HORT 322 Artistic and functional design of landscapes. (Winter)	(3:3:1)		
HORT 435 Advanced Floral Design Total Course Fees: \$700.00 Prerequisites: HORT 335; HORT 298B Professional floral design with emphasis on retail flower shop operation, products, and materials. Particular attention is given to developing speed, proficiency, and quality after students have completed a floral internship experience. (Winter)	(3:2:2)		
HORT 436 Competition Design and Commentation Total Course Fees: \$30.00 Prerequisites: HORT 336; HORT 337; HORT 338; HORT 435 Developing freestyle and structured designs from various materials for competitive design-ing and judging. (Winter)	(1:1:1)		
HORT 437 Interpretive Design Total Course Fees: \$50.00 Prerequisites: HORT 336; HORT 337; HORT 338; HORT 435 Final evaluation of the student's ability to assess proper design interpretations, artistic dimensions of the student's preparation and training, fluency with the language of flowers, and product knowledge. (Winter)	(1:1:1)		
HORT 453 Land Construction Material Total Course Fees: \$10.00 Prerequisites: HORT 340; HORT 321; HORT 322 A study of the construction and design use of typical landscape construction materials including pavers, concrete, wood, and rock. (Winter)	(3:2:2)		