

# College of Agriculture, Nursing, Science and Engineering

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The College of Agriculture, Nursing, Science and Engineering is comprised of the Division of Agriculture, the Department of Life, Earth and Environmental Sciences, the Department of

Mathematics, Physical Sciences and Engineering, and the Division of Nursing. In addition to providing expertise to the University's general education curriculum via faculty participation in teaching courses in analytical reasoning, the college also offers, by its various components, a variety of undergraduate and graduate programs and majors. All are directed toward preparing individuals who will be competent and competitive in scientific, technical, educational and professional occupations.

## Division of Agriculture

**Dr. Donald R. Topliff**, division head

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Faculty: Almas, Baker, Brown, Clark, Colette, DeOtte, Herrington, Kieth, Lawrence, Loneragan, Lust, MacDonald, Moss, Parker, Pendleton, Pipkin, C. Robinson, R. Robinson, Schuster, Stewart, Sweeten, Thomason, Topliff, Williams

The Division of Agriculture provides students the opportunity for personal development and preparation for careers in agriculture and related industries. One out of every five jobs in the United States is related to production, processing, distribution, or consumption of feed grains, food and fiber. Professions in the agricultural sector are available to trained personnel. Students may pursue a bachelor of science degree in agriculture or in agribusiness. The agriculture degree program includes majors in agricultural business and economics, teacher certification in agriculture, animal science, integrated pest management, and plant, soil and environmental science. The agribusiness degree program includes majors in agribusiness, and equine industry and business. A preprofessional program leading to veterinary school admission also is available. Possibilities for post-baccalaureate study include a master of science in agriculture degree with thesis and non-thesis options, and a Ph.D. degree in systems agriculture.

The excellent faculty in agriculture provides a rigorous and comprehensive approach to understanding agriculture and related businesses. The faculty's diversity of experience and training provides the student an educational opportunity rarely found at a regional university.

In addition to classrooms and laboratories, the Division of Agriculture utilizes the 2,500-acre Nance Ranch, Feedyard, Feedmill, Horse Center, federally inspected meat science

laboratory, and greenhouse complex to provide hands-on experience for students.

Discipline	Course Prefix
Agriculture Business and Economics .....	AGBE
Agriculture .....	AGRI
Animal Science .....	ANSC
Integrated Pest Management .....	IPM
Plant, Soil and Environmental Science .....	PSES

NOTE: See the "Academic Courses and Abbreviations" and "Course Descriptions" sections of this catalog for a complete list of courses offered by the University.

### University Core Curriculum Requirements

Refer to the "University Core Curriculum" section of this catalog.

### Bachelor of Science (B.S.) Degree

#### Majors in Agriculture

- Agricultural Business and Economics
- Agriculture—Teacher Certification/Non-Certification
- Animal Science
- Integrated Pest Management
- Plant, Soil and Environmental Science

Majors in agriculture include University core requirements, division core requirements, agricultural science core requirements, and major requirements specified under each degree option and total either 125 or 131 semester credit hours (see each degree for

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specific requirements). Students must maintain at least a 2.0 grade point average (GPA) for all courses at WTAMU counted toward the degree; at least a 2.0 GPA for all courses in the division and agricultural core, 2.0 GPA in major requirements and 2.0 GPA in the major subject. At least 36 semester hours of credit must be earned from upper-level (3000- and 4000-level) courses. In addition, students in the teacher certification option of the agriculture major must meet professional development standards set by the Division of Education. For specific requirements, see the "Division of Education" section of this catalog.

## Majors in Agribusiness

- Agribusiness
- Equine Industry and Business

The bachelor of science degree in agribusiness is a cooperative program of the Division of Agriculture and the College of Business. These two academic units coordinate the program through an agribusiness curriculum committee composed of faculty and administrators from the Division of Agriculture and the College of Business. The degree program is administered by the Division of Agriculture. A student must complete a minimum of 125 or 126 semester credit hours and maintain at least a 2.0 grade point average (GPA) for all courses at WTAMU counted toward the degree; at least a 2.0 GPA for all courses in the division and agribusiness core, 2.0 GPA in major requirements and 2.0 GPA in the major subject. At least 36 semester hours of credit must be earned from upper-level courses. Course requirements include core curriculum requirements, an agricultural component, a business component, physical education requirements and requirements specified under one of the degree options and totals 125 semester credit hours.

## Major in Agricultural Business and Economics (Major Code: 522)

Select BIOL 1413 or 1411, CHEM 1411 or 1405, MATH 1314 and ECON 2301 to satisfy core curriculum requirements.

### Division Core (16 hours)

- IDS 1071.
- AGBE 2317.
- AGRI or BIOL 3301.
- AGRI 3318.
- ANSC 1319.
- PSES 1307.

### Agricultural Science Core (23 hours)

- AGBE 3301 or 3304, 3302.
- AGRI 3330, 4103.
- ANSC 1329, 3374.
- IPM 2313.
- PSES 3411.

### Major Requirements (36 hours)

- ACCT 2301, 2302.
- AGBE 3301 or 3304, 3320, 4301 or 4311, 4310, 4312, 4313, 4316, 4328 or 4354, 4365.
- BUSI 3312.

### Electives (8 hours)

Curriculum Guide (Suggested Course Sequence)			
Major in Agricultural Business and Economics			
First Year		Second Year	
Semester 1	Semester 2	Semester 1	Semester 2
ANSC 1319 .....3 hrs. ENGL 1301 .....3 hrs. SCOM 1315 .....3 hrs. POSC 2305 .....3 hrs. MATH 1314 .....3 hrs. IDS 1071 .....1 hr. 16 hrs.	PSES 1307 .....3 hrs. ENGL 1302 .....3 hrs. POSC 2306 .....3 hrs. ACCT 2301 .....3 hrs. ENGL 2371/ HIST 2372/ PHIL 1301 .....3 hrs. PHED 1111 .....1 hr. 16 hrs.	ANSC 1329 .....3 hrs. BIOL 1411 or 1413 .....4 hrs. ECON 2301 .....3 hrs. Elective .....3 hrs. ENGL 2332/ 2333 .....3 hrs. 16 hrs.	AGBE 2317 .....3 hrs. CHEM 1411 .....4 hrs. Visual/Performing arts core .....3 hrs. ACCT 2302 .....3 hrs. HIST 1301 .....3 hrs. PHED elective .....1 hr. 17 hrs.
Third Year		Fourth Year	
Semester 1	Semester 2	Semester 1	Semester 2
AGBE 3301 .....3 hrs. AGBE 3302 .....3 hrs. AGRI 3318 .....3 hrs. AGRI 3330 .....3 hrs. HIST 1302 .....3 hrs. BUSI 3312 .....3 hrs. 18 hrs.	AGBE 3304 .....3 hrs. AGBE 4328 .....3 hrs. AGRI or BIOL 3301 .....3 hrs. AGBE 3320 .....3 hrs. ANSC 3374 .....3 hrs. Elective .....2 hrs. 17 hrs.	AGBE 4301 or 4311 .....3 hrs. AGBE 4313 .....3 hrs. AGBE 4316 .....3 hrs. AGRI 4103 .....1 hr. AGBE 4365 .....3 hrs. 13 hrs.	AGBE 4310 .....3 hrs. AGBE 4312 .....3 hrs. PSES 3411 .....4 hrs. AGBE 4328 or 4354 .....3 hrs. Elective .....3 hrs. 16 hrs.

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## Major in Agriculture—Teacher Certification (Major Code: 497)

Select BIOL 1413 or 1411, CHEM 1411 or 1405, MATH 1314 and ECON 2301 to satisfy core curriculum requirements.

### Education Component (24 hours)

- AGRI 2371, 4305.
- EDPD 3340, 4340.
- EDSE 4321, 4340, 4341.
- EDRD 4386.

### Division Core (16 hours)

- IDS 1071.
- AGBE 2317.
- AGRI or BIOL 3301.
- AGRI 3318.
- ANSC 1319.
- PSES 1307.

### Major Requirements (29 hours)

- AGRI 2372, 3303, 3304, 3306, 4103, 4302.
- AGBE 3301 or 3302 or 3304.
- ANSC 3374.
- PSES 1301, 3411.

### Miscellaneous Requirements (9 hours)

- EPSY 3341, 3350.
- EDT 3343.

### Agricultural Electives (9 hours)

- Six hours must be a 3000- or 4000-level course.

### Free Electives (2 hours)

Curriculum Guide (suggested course sequence) Major in Agriculture—Teacher Certification			
First Year		Second Year	
Semester 1	Semester 2	Semester 1	Semester 2
PSES 1307 .....3 hrs. IDS 1071 .....1 hr. ENGL 1301 .....3 hrs. Visual/Performing arts core .....3 hrs. MATH 1314 .....3 hrs. POSC 2305 .....3 hrs. 16 hrs.	ANSC 1319 .....3 hrs. SCOM 1315 or 1321 .....3 hrs. ENGL 1302 .....3 hrs. ECON 2301 .....3 hrs. PHED 1111 .....1 hr. POSC 2306 .....3 hrs. 16 hrs.	PSES 1301 .....3 hrs. HIST 1301 .....3 hrs. AGRI 2371 .....3 hrs. BIOL 1413 or 1411 .....4 hrs. 16 hrs.	AGBE 2317 .....3 hrs. CHEM 1405 or 1411 .....4 hrs. HIST 1302 .....3 hrs. AGRI/BIO 3301 .....3 hrs. 13 hrs.
Third Year		Fourth Year	
Semester 1	Semester 2	Semester 1	Semester 2
PSES 3411 .....4 hrs. AGRI 3303 .....3 hrs. AGRI 3304 .....3 hrs. EDPD 3340 .....3 hrs. ANSC 3374 .....3 hrs. 16 hrs.	AGRI 3318 .....3 hrs. AGRI 3306 .....3 hrs. EDSE 4320 .....3 hrs. ENGL 2371, Humanities core .....3 hrs. EDRD 4386 .....3 hrs. 15 hrs.	AGBE 3301, 3302 or 3304 .....3 hrs. EPSY 3341 .....3 hrs. Adv. ag elective .....3 hrs. Ag elective .....3 hrs. Elective .....2 hrs. 14 hrs.	EPSY 3350 .....3 hrs. AGRI 4302 .....3 hrs. AGRI 4305 .....3 hrs. AGRI 4103 .....1 hr. Adv. ag elective .....3 hrs. 13 hrs.
Fifth Year			
Semester 1			
EDPD 4340 .....3 hrs. EDT 3343 .....3 hrs. EDSE 4340 .....3 hrs. EDSE 4341 .....3 hrs. 12 hrs.			

## Major in Agriculture—Non-certification Option (Major Code: 501)

Select BIOL 1413 or 1411, CHEM 1411 or 1405, MATH 1314 and ECON 2301 to satisfy core curriculum requirements.

### Education Component (9 hours)

- AGRI 2371, 3303.
- EDT 3343.

### Division Core (16 hours)

- IDS 1071.
- AGBE 2317.
- AGRI or BIOL 3301.
- AGRI 3318.
- ANSC 1319.
- PSES 1307.

### Major Requirements (35 hours)

- AGRI 2372, 3304, 3306, 4103, 4302.
- ANSC 3374, 2376.
- PSES 1301, 3411.
- AGBE 3301 or 3302 or 3304.
- Six hours internship.

### Agricultural Electives (18 hours)

- At least nine semester credit hours from any 3000- or 4000-level course from AGRI, AGBE, ANSC, IPM or PSES.

### Free Electives (5 hours)

Curriculum Guide (suggested course sequence) Major in Agriculture—Non-Certification			
First Year		Second Year	
Semester 1	Semester 2	Semester 1	Semester 2
PSES 1307 .....3 hrs. IDS 1071 .....1 hr. ENGL 1301 .....3 hrs. MATH 1314 .....3 hrs. Visual/Performing arts core .....3 hrs. POSC 2305 .....3 hrs. 16 hrs.	ANSC 1319 .....3 hrs. SCOM 1315 or 1321 .....3 hrs. ENGL 1302 .....3 hrs. ECON 2301 .....3 hrs. PHED 1111 .....1 hr. POSC 2306 .....3 hrs. 16 hrs.	PSES 1301 .....3 hrs. HIST 1301 .....3 hrs. AGRI 2371 .....3 hrs. AGRI 2372 .....3 hrs. BIOL 1411 or 1413 .....4 hrs. 16 hrs.	AGBE 2317 .....3 hrs. CHEM 1405 or 1411 .....4 hrs. HIST 1302 .....3 hrs. ANSC 2376 .....3 hrs. 13 hrs.
Third Year		Fourth Year	
Semester 1	Semester 2	Semester 1	Semester 2
AGRI/BIO 3301 .....3 hrs. PSES 3411 .....4 hrs. ANSC 3374 .....3 hrs. AGRI 3304 .....3 hrs. Ag elective .....3 hrs. 16 hrs.	AGRI 3318 .....3 hrs. AGRI 3306 .....3 hrs. Humanities core .....3 hrs. EDT 3343 .....3 hrs. Ag elective .....3 hrs. Elective .....2 hrs. 17 hrs.	AGBE 3301, 3302 or 3304 .....3 hrs. Ag elective .....3 hrs. Ag elective .....3 hrs. Adv. ag elective .....3 hrs. Adv. ag elective .....3 hrs. 15 hrs.	AGRI 4103 .....1 hr. AGRI 4302 .....3 hrs. Adv. ag elective .....3 hrs. Elective .....3 hrs. Internship .....6 hrs. 16 hrs.

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## Major in Animal Science (Major Code: 523)

Select BIOL 1413, CHEM 1411 or 1405, MATH 1314, ECON 2301 or PSYC 2301 to satisfy core curriculum requirements.

### Division Core (16 hours)

- IDS 1071.
- AGBE 2317.
- AGRI or BIOL 3301.
- AGRI 3318.
- ANSC 1319.
- PSES 1307.

### Agricultural Science Core (23 hours)

- AGBE 3301 or 3304, 3302.
- AGRI 3330, 4103.
- ANSC 1329, 3374.
- IPM 2313.
- PSES 3411.

### Major Requirements (35–36 hours)

- CHEM 1412.
- BIOL 2420 or 2572.
- ANSC 2376, 2371, 3317, 3340, 3355, 3375.
- Three courses from ANSC 4320, 4321, 4322, 4324, 4328, 4370. No more than two of the following (4320, 4321, 4322, 4328) may be taken to meet major requirements.

### Electives (8–9 hours)

## Major in Integrated Pest Management (Major Code: 531)

Select BIOL 1413 or 1411, CHEM 1411 or 1405, MATH 1314 and ECON 2301 to satisfy core curriculum requirements.

### Division Core (16 hours)

- IDS 1071.
- AGBE 2317.
- AGRI or BIOL 3301.
- AGRI 3318.
- ANSC 1319.
- PSES 1307.

### Agricultural Science Core (23 hours)

- AGBE 3301 or 3304, 3302.
- AGRI 3330, 4103.
- ANSC 1329, 3374.
- IPM 2313.
- PSES 3411.

### Major Requirements (41–42 hours)

- BIOL 3510 or 4510.
- CHEM 1412, 2533.
- IPM 3343, 4343, 4351, 4361, 4371.
- PSES 3342, 4330, 4342.
- One course from PSES 2371, 4302, 4331, AGRI 4310, BIOL 3411 or IPM 4398.

### Electives (2–3 hours)

Curriculum Guide (suggested course sequence)			
Major in Animal Science			
First Year		Second Year	
Semester 1	Semester 2	Semester 1	Semester 2
IDS 1071 .....1 hr. BIOL 1413 .....4 hrs. ENGL 1301 .....3 hrs. MATH 1314 .....3 hrs. ANSC 1319 .....3 hrs. PHED 1111 .....1 hr. 15 hrs.	CHEM 1411/ 1405 .....4 hrs. SCOM 1315/ 1321 .....3 hrs. PSES 1307 .....3 hrs. HIST 1301 .....3 hrs. ENGL 1302 .....3 hrs. 16 hrs.	ANSC 2376 .....3 hrs. ECON 2301 or PSYC 2301 .....3 hrs. HIST 1302 .....3 hrs. Visual/performing arts core .....3 hrs. POSC 2305 .....3 hrs. 15 hrs.	BIOL 2420, 2572, CHEM 4323, 4223L .....4-5 hrs. ANSC 1329 .....3 hrs. CHEM 1412 .....4 hrs. AGBE 2317 .....3 hrs. IPM 2313 .....3 hrs. 17-18 hrs.
Third Year		Fourth Year	
Semester 1	Semester 2	Semester 1	Semester 2
AGRI 3301 .....3 hrs. ANSC or BIOL 3340 .....3 hrs. AGBE 3302 .....3 hrs. AGRI 3330 .....3 hrs. ANSC 3374 .....3 hrs. 15 hrs.	ANSC 3355 .....3 hrs. AGRI 3318 .....3 hrs. CHEM 2533 .....5 hrs. ANSC 3375 .....3 hrs. 14 hrs.	ANSC 4317, 4320, 4322, 4324, 4328 or 4370 .....6 hrs. AGBE 3301/ 3304 .....3 hrs. PSES 3411 .....4 hrs. AGRI 4103 .....1 hr. Elective(s) .....3 hrs. 17 hrs.	ANSC 4317, 4320, 4322, 4324, 4328 or 4370 .....3 hrs. Humanities core .....3 hrs. POSC 2306 .....3 hrs. Elective(s) .....6-7 hrs. 15-16 hrs.

Curriculum Guide (suggested course sequence)			
Major in Integrated Pest Management			
First Year		Second Year	
Semester 1	Semester 2	Semester 1	Semester 2
PSES 1307 .....3 hrs. ENGL 1301 .....3 hrs. HIST 1301 .....3 hrs. MATH 1314, 1324 .....3 hrs. Visual/Performing arts core .....3 hrs. IDS 1071 .....1 hr. 16 hrs.	ANSC 1319 .....3 hrs. ENGL 1302 .....3 hrs. ANSC 1329 .....3 hrs. BIOL 1411 or 1413 .....4 hrs. POSC 2305 .....3 hrs. PHED 1111 .....1 hr. 17 hrs.	CHEM 1411 .....4 hrs. AGBE 2317 .....3 hrs. ENGL 2332 or other humanity .....3 hrs. SCOM 1315 or 1321 .....3 hrs. HIST 1302 .....3 hrs. 16 hrs.	CHEM 1412 .....4 hrs. AGRI/BIOL 3301 .....3 hrs. IPM 2313 .....3 hrs. POSC 2306 .....3 hrs. ECON 2301 .....3 hrs. 16 hrs.
Third Year		Fourth Year	
Semester 1	Semester 2	Semester 1	Semester 2
AGRI 3330 or IPM 4351* .....3 hrs. IPM 3343 or 4371 .....3 hrs. PSES 334 or 4342 .....3 hrs. BIOL 3510 or 4510 .....5 hrs. PSES 3411 .....4 hrs. 18 hrs.	PSES 4330* or AGBE 3304 .....3 hrs. IPM 3343 or 4361 .....3 hrs. AGBE 3302 .....3 hrs. AGRI 3318 .....3 hrs. PSES 2371, 4302, AGRI 4310, BIOL 3411 or IPM 4398 .....3-4 hrs. 15-16 hrs.	AGRI 3330* or IPM 4351* .....3 hrs. IPM 3343 or 4371 .....3 hrs. CHEM 2533 .....5 hrs. PSES 3342 or 4342 .....3 hrs. 14 hrs.	AGRI 4103 .....1 hr. PSES 4330* or AGBE 3304 .....3 hrs. IPM 4343 or 4361 .....3 hrs. ANSC 3374 .....3 hrs. Electives .....2-3 hrs. 12-13 hrs.

\*Take this course the semester it is offered.

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## Major in Plant, Soil and Environmental Science (Major Code: 524)

Select BIOL 1411, CHEM 1411, MATH 1314 and ECON 2301 to satisfy core curriculum requirements.

### Division Core (16 hours)

- IDS 1071.
- AGBE 2317.
- AGRI or BIOL 3301.
- AGRI 3318.
- ANSC 1319.
- PSES 1307.

### Agricultural Science Core (23 hours)

- AGBE 3301 or 3304, 3302.
- AGRI 3330, 4103.
- ANSC 1329, 3374.
- IPM 2313.
- PSES 3411.

### Major Requirements (37–38 hours)

- AGRI 4310.
- One course from BIOL 2420, 2572, 4510 or 4513.
- CHEM 1412, 2533.
- PSES 3342, 4330, 4331, 4342.
- Three courses from PSES 1301, 2371, 4302, 4311, 4398, IPM 3343, 4343, 4351, 4371.

### Electives (6–7 hours)

Curriculum Guide (suggested course sequence)			
Major in Plant, Soil and Environmental Science			
First Year		Second Year	
<b>Semester 1</b> PSES 1307 .....3 hrs. ENGL 1301 .....3 hrs. BIOL 1411 .....4 hrs. HIST 1301 .....3 hrs. MATH 1314, 1324 .....3 hrs. IDS 1071 .....1 hr. 17 hrs.	<b>Semester 2</b> ANSC 1319 .....3 hrs. ENGL 1302 .....3 hrs. ANSC 1329 .....3 hrs. POSC 2305 .....3 hrs. Visual/Performing arts core .....3 hrs. PHED 1111 .....1 hr. 16 hrs.	<b>Semester 1</b> CHEM 1411 .....4 hrs. HIST 1302 .....3 hrs. AGBE 2317 .....3 hrs. ENGL 2332 or other humanity .....3 hrs. SCOM 1315 or 1321 .....3 hrs. 16 hrs.	<b>Semester 2</b> CHEM 1412 .....4 hrs. PSES 3411 .....4 hrs. IPM 2313 .....3 hrs. AGRI 3301 .....3 hrs. POSC 2306 .....3 hrs. 17 hrs.
Third Year		Fourth Year	
<b>Semester 1</b> CHEM 2533 .....5 hrs. AGRI 3330 .....3 hrs. PSES 1301, 2371, IPM 3343, 4351 or 4371* .....3 hrs. PSES 3342 or 4342 .....3 hrs. 14 hrs.	<b>Semester 2</b> ANSC 3374 .....3 hrs. AGRI 3318 .....3 hrs. AGBE 3302 .....3 hrs. PSES 4330 or 4331 .....3 hrs. PSES 4311, IPM 4343*, BIOL 2420, 2572, 4510 or 4513** .....3-5 hrs. 15-17 hrs.	<b>Semester 1</b> PSES 3342 or 4342 .....3 hrs. AGRI 4310 .....3 hrs. ECON 2301 .....3 hrs.  PSES 1301, 2371, IPM 3343, 4351 or 4371* .....3 hrs. Elective .....3 hrs. 15 hrs.	<b>Semester 2</b> PSES 4330 or 4331 .....3 hrs. AGRI 4103 .....1 hr. AGBE 3301 or 3304 .....3 hrs. PSES 4311, IPM 4343*, BIOL 2420, 2572, 4510 or 4513** .....3-5 hrs. Electives .....3-4 hrs. 12-16 hrs.

\*Minimum of three courses from these groups.  
\*\*Minimum of one course from this group.

## Major in Agribusiness (Major Code: 515)

Select BIOL 1413 or 1411, CHEM 1411 or 1405, MATH 1324, and ECON 2301 to satisfy core curriculum requirements.

### Division Core (16 hours)

- IDS 1071.
- AGBE 2317.
- AGRI or BIOL 3301.
- AGRI 3318.
- ANSC 1319.
- PSES 1307.

### Agribusiness Core (36 hours)

- ACCT 2301, 2302.
- BUSI 3312.
- AGBE 3302, 3304, 4316.
- AGRI 3330.
- FIN 3320.
- MGT 3330.
- MKT 3340.
- MATH 1325.
- One course from BUSI 3319, MKT 4340, ECON 4341, 4342, FIN 4323.

### Major Requirements (28–29 hours)

- AGBE 3320, 4312, 4313, AGBE 4365 or MGT 4315, AGRI 4103, MGT 3335, FIN 4328, ANSC 1329 or 3374.
- One course from AGBE 3301, 4301, 4310, 4311.
- One course from ANSC 4320, 4322, 4324, 4328, 4370, IPM 2313, PSES 3411, 4302.

### Electives (2–3 hours)

Curriculum Guide (suggested course sequence)			
Major in Agribusiness			
First Year		Second Year	
<b>Semester 1</b> ANSC 1319 .....3 hrs. ENGL 1301 .....3 hrs. SCOM 1315 or 1321 .....3 hrs. POSC 2305 .....3 hrs. MATH 1324 .....3 hrs. IDS 1071 .....1 hr. 16 hrs.	<b>Semester 2</b> PSES 1307 .....3 hrs. ENGL 1302 .....3 hrs. POSC 2306 .....3 hrs. MATH 1325 .....3 hrs. AGBE 2317 .....3 hrs. PHED 1111 .....1 hr. 16 hrs.	<b>Semester 1</b> ANSC 1329 or 3374 .....3 hrs. BIOL 1411 or 1413 .....4 hrs. ECON 2301 .....3 hrs. ACCT 2301 .....3 hrs. Humanities core .....3 hrs. 16 hrs.	<b>Semester 2</b> AGBE 2317 .....3 hrs. CHEM 1405 or 1411 .....4 hrs. Visual/performing arts core .....3 hrs. ACCT 2302 .....3 hrs. HIST 1301 .....3 hrs. 16 hrs.
Third Year		Fourth Year	
<b>Semester 1</b> AGBE 3302 .....3 hrs. AGRI 3330 .....3 hrs. HIST 1302 .....3 hrs. BUSI 3312 .....3 hrs. MKT 3340 .....3 hrs. 15 hrs.	<b>Semester 2</b> AGBE 3304 .....3 hrs. AGRI/BIOL 3301 .....3 hrs. AGRI 3318 .....3 hrs. MGT 3330 .....3 hrs. Elective .....2-3 hrs. 14-15 hrs.	<b>Semester 1</b> AGBE 3301, 4301, 4310 or 4311 .....3 hrs. AGBE 4313 .....3 hrs. AGBE 4316 .....3 hrs. AGRI 4103 .....1 hr. FIN 3320 .....3 hrs. MGT 3335 .....3 hrs. 16 hrs.	<b>Semester 2</b> FIN 4328 .....3 hrs. ANSC 4320, 4332, 4324, 4328, 4370, IPM 2313, PSES 3411, 4302 .....3-4 hrs. AGBE 4365 or MGT 4315 .....3 hrs. MKT 4340 .....3 hrs. BUSI 3319, MKT 4340, ECON 4341, 4342 or FIN 4323 .....3 hrs. 15-16 hrs.

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## Major in Equine Industry and Business

(Major Code: 534)

Select BIOL 1413 and CHEM 1411 or 1405, MATH 1314 and ECON 2301 to satisfy core curriculum requirements.

### Division Core (16 hours)

- IDS 1071.
- AGBE 2317.
- AGRI or BIOL 3301.
- AGRI 3318.
- ANSC 1319.
- PSES 1307.

### Business Component (24 hours with a minimum of two AGBE courses)

- ACCT 2301, 2302.
- BUSI 3312.
- One course from AGBE 3302 or MKT 3340.
- One course from AGBE 3301, 3304 or MGT 3330.
- One course from AGBE 4313 or FIN 3320.
- Two courses from AGBE 2375, 3301, 3302, 3304, 4301, 4311, 4312, 4313, 4316, 4328, 4354, or 4365; ECON 4312; FIN 3320 or 3350; BUSI 3319; MGT 3330, 3332, or 3333; MKT 3340, 3342, 4340, or 4342.

### Agriculture Component (16 hours)

- AGRI 3330, 4103.
- ANSC 3355, 3374, 3375.
- ANSC or BIOL 3340.

### Equine Component (18 hours)

- ANSC 1178, 1274 or 1275, 2374, 2375, 2377, 4370, 4473.

### Electives (9 hours)

## Preprofessional Program Requirements

### Pre-Veterinary Medicine

Students may complete a bachelor of science degree in animal science, which includes pre-veterinary medicine requirements. Students do not have to complete the bachelor of science degree to apply for admission to a veterinary college. Once students have completed the preprofessional requirements, they may apply. Completion of the preprofessional requirements can be done in as little as two years but usually takes three or four years of undergraduate study. Preprofessional requirements of the 27 schools and colleges of veterinary medicine in the United States vary. Students interested in applying to a school or college of veterinary medicine outside Texas should contact the school or college to obtain information on preprofessional requirements. To meet Texas A&M University College of Veterinary Medicine preprofessional requirements, suggested curriculum includes:

- AGRI 3301, 3318.
- ANSC 3310, or 3374.
- BIOL 1413, 2572.
- CHEM 1411, 1412, 2523, 2525, 4323.
- ENGL 1301; 2332 or 2333 or 2371 or 3304.
- PHYS 1401, 1402.
- SCOM 1321.

Prerequisite for the above courses include:

- ANSC 1319.
- ENGL 1302.
- MATH 1314.

In addition, to meet requirements for a bachelor of science degree in agriculture, animal science option, suggested curriculum also includes:

- ANSC 2376, 1329, 4317, 3355, 3375.
- Three courses from ANSC 4320, 4324, 4328, 4370.
- AGBE 2317, 3301, 3302.
- AGRI 3330, 4103.
- Demonstrated computer competency or CIS 1301.
- ECON 2301.
- HIST 1301, 1302.
- IDS 1071.
- PSES 1307, 3411.
- POSC 2305, 2306.
- Three hours from MUS 1306, THRE 1310, HUMA 1315, ARTS 1303 or 1304.
- PHED 1111, PHED activity course.

For information about the master of science (M.S.) degree or doctor of philosophy (Ph.D.) degree, refer to the "Graduate School" section of this catalog.

Curriculum Guide (suggested course sequence)			
Major in Equine Industry and Business			
First Year		Second Year	
Semester 1	Semester 2	Semester 1	Semester 2
IDS 1071 .....1 hr. BIOL 1413 .....4 hrs. MATH 1314 or 1324 .....3 hrs. ENGL 1301 .....3 hrs. PHED 1111 .....1 hr. Visual/Performing arts core .....3 hrs. ANSC/PHED 1178 .....1 hr. 16 hrs.	CHEM 1411 or 1405 .....4 hrs. ENGL 1302 .....3 hrs. PSES 1307 .....3 hrs. HIST 1301 .....3 hrs. ANSC 1319 .....3 hrs. 16 hrs.	SCOM 1315 or 1321 .....3 hrs. ACCT 2301 .....3 hrs. ECON 2301 .....3 hrs. ANSC 2374 .....3 hrs. Humanities core .....3 hrs. ANSC/PHED 1274 or 1275 .....2 hrs. 17 hrs.	ANSC 2375 .....3 hrs. ACCT 2302 .....3 hrs. AGBE 2317 .....3 hrs. ANSC 2377 .....3 hrs. HIST 1302 .....3 hrs. 15 hrs.
Third Year		Fourth Year	
Semester 1	Semester 2	Semester 1	Semester 2
AGRI/BIOL 3301 .....3 hrs. ANSC 3374 .....3 hrs. ANSC or BIOL 3340 .....3 hrs. POSC 2305 .....3 hrs. BUSI 3312 .....3 hrs. Elective or ANSC 3240 .....2 hrs. 17 hrs.	AGBE 3301, 3304 or MGT 3330 .....3 hrs. ANSC 3355 .....3 hrs. ANSC 3375 .....3 hrs. POSC 2306 .....3 hrs. AGBE 4313 or FIN 3320 .....3 hrs. 15 hrs.	AGBE 3302 or MKT 3340 .....3 hrs. AGRI 3330 .....3 hrs. AGRI 3318 .....3 hrs. AGBE or BUSI elective .....3 hrs. Elective .....3 hrs. 15 hrs.	ANSC 4370 .....3 hrs. ANSC 4473 .....4 hrs. AGRI 4103 .....1 hr. AGBE or BUSI elective .....3 hrs. Electives .....4 hrs. 15 hrs.