Department of Agricultural Education and Communication

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Students seeking knowledge in education, communication, and human interactions across all segments of the agricultural industry will find interest in the department's offerings. Included are programs in Agricultural Communication, Agricultural Extension/Industry, and Agribusiness. Internships are a part of all programs.

The Department of Agricultural Education and Communication administers two Bachelor of Science degrees with the following degrees and support areas:

Bachelor of Science in Agricultural Services and Development

- Agri-Industries and Agencies. Prepares students for a career in agricultural business, industry, agriculture extension, and government agency settings. The degree provides a broad-based agricultural experience and allows the student to specialize in an area of agriculture or business.
- Interdisciplinary Agriculture. Flexible degree program to prepare students for a variety of agricultural careers. Provides broad exposure to agriculture and allows students to select a specialized focus area in the various agricultural disciplines.

The Bachelor of Science Degree in Agricultural Services and Development

Required Courses		
General Education Requirements (http://catalog.tarleton.edu/academicaffairs/)		42
ENGL 1301 [shared] [WI (http://catalog.tarleton.edu/academicaffairs/)]	Composition I	
ENGL 1302 [shared] [WI (http://catalog.tarleton.edu/academicaffairs/)]	Composition II	
HORT 1301	Horticulture	3
AGRI 1307	Agronomy	3
AGRI 1419	General Animal Science	4
Choose one of the following:		3
AGSD 3301	Advanced Agricultural Power Units	
AGRI 2303	Agricultural Construction I	
AGRI 2304	Introductory Metals and Welding	
AGSD 2306	Introduction to Mechanical Agriculture	
AGEC 2317 [shared]	Introductory Agricultural Economics	
AGSD 2307	SAE Development in Agricultural Education	3
or AGSD 2311	Applied Agricultural Analysis	
AGSD 4310	Leadership Development	3
Choose one of the following:		3
ACOM 3314 [WI (http://catalog.tarleton.edu/academicaffairs/)]	Writing and Editing for Agricultural Publications	
ACOM 3321 [WI (http://catalog.tarleton.edu/academicaffairs/)]	Communicating Agriculture to the Public	
AGSD 3302 [WI (http://catalog.tarleton.edu/academicaffairs/)]	Agricultural Sales and Services	
ANSC 4300 [WI (http://catalog.tarleton.edu/academicaffairs/)]	Research and Writing in Animal Science	
ENGL 3309 [WI (http://catalog.tarleton.edu/academicaffairs/)]	Professional Writing	
Total Hours		**64**

Additional Required Courses for Concentrations

Agricultural Science with Teacher Certification

COMM 1311 [shared]	Introduction to Speech Communication	
or COMM 1315	Public Speaking	
Sophomore English Literature [shared]		
Choose two of the following [shared]:		
BIOL 1406	Biology for Science Majors	

BIOL 1407	Biology for Science Majors II	
CHEM 1407	Fundamentals of Chemistry	
CHEM 1311 & CHEM 1111	College Chemistry I (Lecture) and College Chemistry I (Laboratory)	
AGSD 3307 [WI (http://catalog.tarleton.edu/academicaffairs/)]	Premier Leadership in Agriculture	3
ANSC 3301	Livestock Management	3
AGSD 3101	Analysis of Agricultural Occupations	1
AGSD 1110	Introduction to Agricultural Services & Development	1
HORT 3300	Plant Propagation	3
or HORT 3370	Floriculture Operations and Management	
AGSD 4350	Animal Related Systems	3
AGSD 4306	Agricultural Mechanical Services and Instruction	3
AGSD 4307	Program Methods	3
READ 3351 [WI (http://catalog.tarleton.edu/academicaffairs/)]	Content Area Literacy	3
PSYC 3303	Educational Psychology	3
AGSD 4601	Clinical Teaching	6
AGSD 4320	Agriscience Course Building	3
EDUC 3321 [WI (http://catalog.tarleton.edu/academicaffairs/)]	Foundations of Teaching: Middle and Secondary Classrooms	3
EDUC 4331	Instructional Strategies for Middle and Secondary Classrooms	3
EDSP 4361	Teaching Strategies for Adolescent Students with Learning Disabilities	3
Additional Hours from ACOM, AGEC, AGRI, AGSD, ANSC, ENTO, ENVS, FDSC, HORT, NUTR, RNRM, SOIL, VETE, or WSES *		12
Total Hours		**56**

Agri-Industries and Agencies

AGSD 1110	Introduction to Agricultural Services & Development	1
Choose two of the following: [shared]		
BIOL 1406	Biology for Science Majors	
BIOL 1407	Biology for Science Majors II	
CHEM 1407	Fundamentals of Chemistry	
CHEM 1311 & CHEM 1111	College Chemistry I (Lecture) and College Chemistry I (Laboratory)	
AGSD 2330	History and Philosophy of the Cooperative Extension Service	3
AGEC 3314	The Agricultural Marketing System	3
or MKTG 3312	Marketing	
AGSD 4185	Seminar	1
AGSD 4330	Agricultural Extension and Industry Methods	3
AGSD 4684	Internship	6
Choose one of the following:		3
ENGL 3309 [WI (http://catalog.tarleton.edu/academicaffairs/)]	Professional Writing	
ACOM 3314 [WI (http://catalog.tarleton.edu/academicaffairs/)]	Writing and Editing for Agricultural Publications	
ACOM 3321 [WI (http://catalog.tarleton.edu/academicaffairs/)]	Communicating Agriculture to the Public	
AGSD 3302 [WI (http://catalog.tarleton.edu/academicaffairs/)]	Agricultural Sales and Services	
AGSD 3307 [WI (http://catalog.tarleton.edu/academicaffairs/)]	Premier Leadership in Agriculture	
AGSD 4305	Agricultural Mechanical Services	3
Choose one of the following:		3
AGSD 4350	Animal Related Systems	
ANSC 3301	Livestock Management	
ANSC 4440	Modern Livestock Production Systems	
AGSD 3101	Analysis of Agricultural Occupations	1
General Electives		5
AGSD Elective		3
Advanced Elective Hours from ACOM, AGEC, AGRI, AGSD, ANSC, ENTO, ENVS, FDSC, HORT, NUTR, RNRM, SOIL, VETE, or WSES		15
Advanced Electives		6
Total Hours		**56**

Interdisciplinary Agriculture

AGSD 4330	Agricultural Extension and Industry Methods	3
AGSD 4684	Internship	6

AGSD 4185	Seminar	1
AGSD 3101	Analysis of Agricultural Occupations	1
Choose one of the following:		3
ACOM 3314 [WI (http://catalog.tarleton.edu/academicaffairs/)]	Writing and Editing for Agricultural Publications	
ACOM 3321 [WI (http://catalog.tarleton.edu/academicaffairs/)]	Communicating Agriculture to the Public	
AGSD 3302 [WI (http://catalog.tarleton.edu/academicaffairs/)]	Agricultural Sales and Services	
AGSD 3307 [WI (http://catalog.tarleton.edu/academicaffairs/)]	Premier Leadership in Agriculture	
ENGL 3309 [WI (http://catalog.tarleton.edu/academicaffairs/)]	Professional Writing	
Agricultural Focus Area Electives (9 hours must be advanced 3xxx or 4xxx Level)		21
General Electives		5
Advanced General Electives (3xxx or 4xxx Level)		16
Total Hours		**56**

* Excluding ANSC 1202, ANSC 1320, and WSES 4407.

Bachelor of Science in Agricultural Education

Agricultural Science with Teacher Certification. Commonly referred to as Agricultural Education. Provides the skills and knowledge to become a teacher of Agricultural Science in public schools or pursue employment with government and agricultural business and industry.

Agricultural Education

Required Courses		
General Education Requirements (http://catalog.tarleton.edu/academicaffairs/)		42
ENGL 1301 [shared] [WI (http://catalog.tarleton.edu/academicaffairs/)]	Composition I	
ENGL 1302 [shared] [WI (http://catalog.tarleton.edu/academicaffairs/)]	Composition II	
Sophomore English [shared]		
Choose two of the following:		
BIOL 1406 [shared]	Biology for Science Majors	
BIOL 1407 [shared]	Biology for Science Majors II	
CHEM 1407 [shared]	Fundamentals of Chemistry	
CHEM 1311 & CHEM 1111 [shared]	College Chemistry I (Lecture) and College Chemistry I (Laboratory)	
AGEC 2317 [shared]	Introductory Agricultural Economics	
AGRI 2304	Introductory Metals and Welding	3
or AGRI 2303	Agricultural Construction I	
or AGSD 3301	Advanced Agricultural Power Units	
AGSD 2306	Introduction to Mechanical Agriculture	3
HORT 1301	Horticulture	3
AGRI 1419	General Animal Science	4
AGSD 1110	Introduction to Agricultural Services & Development	1
AGSD 2307	SAE Development in Agricultural Education	3
AGSD 3101	Analysis of Agricultural Occupations	1
AGSD 3306	Lab Techniques in Agricultural Mechanics	3
AGSD 3307 [WI (http://catalog.tarleton.edu/academicaffairs/)]	Premier Leadership in Agriculture	3
AGSD 4307	Program Methods	3
AGSD 4306	Agricultural Mechanical Services and Instruction	3
AGSD 4310	Leadership Development	3
AGSD 4320	Agriscience Course Building	3
AGSD 4350	Animal Related Systems	3
AGSD 4601	Clinical Teaching	6
EDUC 3321 [WI (http://catalog.tarleton.edu/academicaffairs/)]	Foundations of Teaching: Middle and Secondary Classrooms	3
EDUC 4331	Instructional Strategies for Middle and Secondary Classrooms	3
EDSP 4361	Teaching Strategies for Adolescent Students with Learning Disabilities	3
READ 3351 [WI (http://catalog.tarleton.edu/academicaffairs/)]	Content Area Literacy	3
PSYC 3303	Educational Psychology	3
ANSC 3301	Livestock Management	3

HORT 3370	Floriculture Operations and Management	3
or HORT 3300	Plant Propagation	
Select 12 credit hours from ACOM, AGEC, AGRI, AGSD, ANSC, ENTO, ENVS, FDSC, HORT, NUTR, RNRM, SOIL, VETE, WSES Electives. Except WSES 4407 or ANSC 1202 or ANSC 1320		12
Total Hours		**120**

Bachelor of Science in Agricultural Communication

Agricultural Communication. Provides the student with both agricultural and communication knowledge and skills for exciting careers in agricultural publications, radio, livestock organizations, commodity groups, and governmental agencies that provide communication and information.

Bachelor of Science Degree in Agricultural Communication

Field of Study Courses		
ACOM 1110	Introduction to Agricultural Communication	1
ACOM 2301	Digital Photography Techniques for Agriculture	3
ACOM 2307	Graphic Design and Layout for Agricultural Publications	3
ACOM 3314 [WI (http://catalog.tarleton.edu/academicaffairs/)]	Writing and Editing for Agricultural Publications	3
ACOM 3321 [WI (http://catalog.tarleton.edu/academicaffairs/)]	Communicating Agriculture to the Public	3
ACOM 4305	Publication Development in Agricultural Communication	3
ACOM 4320	Advanced Technology in Agricultural Communication	3
ACOM 4350	Electronic Field Production for Agricultural Communications	3
ACOM 4684	Internship	6
AGSD 3301	Advanced Agricultural Power Units	3
or AGRI 2303	Agricultural Construction I	
or AGRI 2304	Introductory Metals and Welding	
or AGSD 2306	Introduction to Mechanical Agriculture	
AGSD 2311	Applied Agricultural Analysis	3
AGSD 4185	Seminar	1
AGSD 4310	Leadership Development	3
AGSD 4330	Agricultural Extension and Industry Methods	3
Advanced ACOM Elective		9
COMM 2311	News Gathering & Writing I	3
or ACOM 2309	Scientific Communications in Agriculture and Natural Resources	
General Elective from ACOM, ARTS, COMM, BUSI, ENGL, MKTG, AGEC, AGRI, AGSD, ANSC, ENVS, FDSC, HORT, NUTR, RNRM, SOIL, VETE, or WSES		6
Advanced Elective from ACOM, ARTS, COMM, BUSI, ENGL, MKTG, AGEC, AGRI, AGSD, ANSC, ENVS, FDSC, HORT, NUTR, RNRM, SOIL, VTSC, or WSES		9
Elective Hours from ACOM, AGEC, AGRI, AGSD, ANSC, ENVS, FDSC, HORT, NUTR, RNRM, SOIL, VTSC, or WSES		3
Other Required Courses		
General Education Requirements (http://catalog.tarleton.edu/academicaffairs/)		42
AGRI 1307	Agronomy	3
or HORT 1301	Horticulture	
AGRI 1419	General Animal Science	4
AGEC 2317 [shared]	Introductory Agricultural Economics	
ENGL 1301 [shared] [WI (http://catalog.tarleton.edu/academicaffairs/)]	Composition I	
ENGL 1302 [shared] [WI (http://catalog.tarleton.edu/academicaffairs/)]	Composition II	
Total Hours		**120**

Bachelor of Science in Agribusiness

• Agribusiness Management. Prepares students for entry-level positions such as the retail/wholesale sectors of agribusiness or the businesses and agencies supporting the agricultural industry.

• Agricultural Economics. Designed to prepare students for a career in the analytical or research sectors of production, marketing, or finance. Recommended for students preparing for graduate study.

• Personal and Small Business Financial Planning. To meet the needs and interests of students wishing a career as a financial planner.

• Dairy Business Management. Industry-designed for students who plan a career in the sector of dairy operations and supporting infrastructure including input suppliers and the processing and distribution of dairy products.

The Bachelor of Science Degree in Agribusiness

Required Courses		
General Education Requirements (http://catalog.tarleton.edu/academicaffairs/)		42
ECON 2301	Principles of Macroeconomics	3
ACCT 2301	Principles of Accounting I-Financial	3
ACCT 2302	Principles of Accounting II-Managerial	3
AGEC 1309	Microcomputer Applications in Agriculture	3
AGEC 2317 [shared]	Introductory Agricultural Economics	
or AGRI 2317	Introductory Agricultural Economics	

AGEC 3330	Agricultural Credit	3
AGEC 3312	Production Economics	3
AGEC 3314	The Agricultural Marketing System	3
AGEC 3317	Agricultural Statistics	3
AGEC 3333 [WI (http://catalog.tarleton.edu/academicaffairs/)]	Agriculture Prices	3
AGEC 4301	Public Agricultural Food Programs	3
AGEC 4384	Internship [2]	3
Electives		6
Total Hours		**81**

Additional Required Courses for Concentrations

Agricultural Economics

MATHEMATICS OPTION: Choose one of the following options		3
MATH 1314 & MATH 1324 [shared]	College Algebra and Math for Business & Social Sciences I (Finite Mathematics)	
MATH 1324 & MATH 1325 [shared]	Math for Business & Social Sciences I (Finite Mathematics) and Math for Business & Social Sciences II (Business Calculus)	
Select one of the following:		3
AGRI 1419	General Animal Science	
HORT 1301	Horticulture	
AGRI 1307	Agronomy	
AGEC 4302	International Trade and Agriculture	3
AGEC 4306	Commodity Futures Markets	3
AGEC 4321 [WI (http://catalog.tarleton.edu/academicaffairs/)]	Regional Economics	3
AGEC 4330	Agricultural Finance	3
ECON 3301	Intermediate Macroeconomics	3
ECON 3302	Intermediate Microeconomics	3
AGEC 4325	Recreation and Tourism Economics	3
AGEC 4333	Economics of Agribusiness Management	3
Advanced Electives		9
Total Hours		**39**

Agribusiness Management

MATHEMATICS OPTION: Choose one of the following options		3
MATH 1314 & MATH 1324 [shared]	College Algebra and Math for Business & Social Sciences I (Finite Mathematics)	
MATH 1324 & MATH 1325 [shared]	Math for Business & Social Sciences I (Finite Mathematics) and Math for Business & Social Sciences II (Business Calculus)	
Select one of the following:		3
AGRI 1419	General Animal Science	
HORT 1301	Horticulture	
AGRI 1307	Agronomy	
AGEC 4302	International Trade and Agriculture	3
AGEC 4306	Commodity Futures Markets	3
AGEC 4330	Agricultural Finance	3
AGSD 3302 [WI (http://catalog.tarleton.edu/academicaffairs/)]	Agricultural Sales and Services	3
AGEC 4321 [WI (http://catalog.tarleton.edu/academicaffairs/)]	Regional Economics	3
or AGEC 4325	Recreation and Tourism Economics	
AGEC 4333	Economics of Agribusiness Management	3
Advanced COBA/AGEC Electives [1]		15
Total Hours		**39**

Dairy Business Management

CHEM 1311 [shared]	College Chemistry I (Lecture)	
CHEM 1111 [shared]	College Chemistry I (Laboratory)	
CHEM 1312 [shared]	College Chemistry II (Lecture)	
CHEM 1112 [shared]	College Chemistry II (Laboratory)	
MATH 1314 [shared]	College Algebra	
MATH 1324	Math for Business & Social Sciences I (Finite Mathematics)	3
AGRI 1419	General Animal Science	4
AGEC 4306	Commodity Futures Markets	3
AGEC 4330	Agricultural Finance	3
AGEC 4333	Economics of Agribusiness Management	3
ECON 3304	Environmental Economics	3
ANSC 3408	Physiology of Reproduction	4

ANSC 3409	Feeds and Feeding	4
ANSC 3315	Animal Diseases and Parasites	3
AGEC 4321 [WI (http://catalog.tarleton.edu/academicaffairs/)]	Regional Economics	3
Total Hours		**33**

Personal and Small Business Financial Planning

MATHEMATICS OPTION: Choose one of the following options		3
MATH 1314 & MATH 1324 [shared]	College Algebra and Math for Business & Social Sciences I (Finite Mathematics)	
MATH 1324 & MATH 1325 [shared]	Math for Business & Social Sciences I (Finite Mathematics) and Math for Business & Social Sciences II (Business Calculus)	
Select one of the following:		3
AGRI 1419	General Animal Science	
HORT 1301	Horticulture	
AGRI 1307	Agronomy	
AGEC 4306	Commodity Futures Markets	3
AGEC 4333	Economics of Agribusiness Management	3
AGSD 3302 [WI (http://catalog.tarleton.edu/academicaffairs/)]	Agricultural Sales and Services	3
AGEC 3359	Personal & Family Financial Management I	3
AGEC 3360	Personal & Family Financial Management II	3
ACCT 4305	Federal Tax Accounting	3
BLAW 4333	Business Law II	3
FINC 3301	Principles of Financial Management	3
FINC 4308	Principles of Insurance and Risk Management	3
Select One of the Following:		3
AGEC 4090	Special Topics (Financial Planning Capstone Course)	
ECON 4090	Special Topics in Economics (Financial Planning Capstone Course)	
Select One of the Following:		3
AGEC 4090	Special Topics (Estate Planning)	
BLAW 4090	Special Topics in Business Law (Estate Planning)	
Total Hours		**39**

[1] Advanced Business Electives can be any 3 or 4 thousand level courses in AGEC, ACCT, ADMS, BCIS, ECON, FINC, BUSI, MGMT, REST, BLAW, and MKTG

[2] For the Personal/Business Financial Planning Concentration, students must complete AGEC 4384 as a Financial Planning Internship with an approved host company.

Academic Advising Guides

Academic Advising Guides area available at the following website:

https://web.tarleton.edu/majorinfo/

Professors

- Ford, Ted Dr.
- Lovell, Ashley Dr.
- Osei, Edward Dr.
- Tarpley, Rudy Dr.
- Yu, Mark Dr.

Associate professors

- Frazier, David Dr.
- Haynes, J. Chris Dr.

Assistant professors

- Andrew, Chandra Dr.
- Guney, Selin Dr.
- Lonie, Jean Dr.
- Poe, Brant Dr.
- Pulley, Justin Dr.

Instructor

- Cline, Bryce Mr.
- Damerau, Michelle Ms.
- Kennedy, Taylor Ms.

Agri Services and Development Courses

AGSD 1100. Transitioning to University Studies in Agriculture Services and Development. 1 Credit Hour (Lecture: 1 Hour, Lab: 1 Hour).
Practical study designed to prepare the student for university life, aid in the development of skills for academic success, promote personal growth and responsibility, and encourage active involvement in the learning process from an individual college perspective.

AGSD 1110. Introduction to Agricultural Services & Development. 1 Credit Hour (Lecture: 1 Hour, Lab: 0 Hours).
An introduction to the careers, opportunities, and skills needed within the agricultural services professions. Topics will include agricultural education, agricultural extension, agricultural industries, and general agriculture.

AGSD 2306. Introduction to Mechanical Agriculture. 3 Credit Hours (Lecture: 2 Hours, Lab: 2 Hours).
Introduction to current and emerging topics and industry related to agricultural mechanization and the use of mechanical principals in agricultural settings. Includes safe facility practices, construction practices, electrical energy, precision agriculture, nanotechnology, theory of the fusion of metals, efficiency of internal combustion engines, and other mechanical technology-related subjects.

AGSD 2307. SAE Development in Agricultural Education. 3 Credit Hours (Lecture: 3 Hours, Lab: 0 Hours).
This course will foster information assimilation, critical thinking and problem solving skills necessary to successfully manage a supervised agricultural experience (SAE) or any business that uses generally accepted accounting principles and business management knowledge and skills. Information, concepts and skills applied in this course will provide a foundational knowledge to be used in the implementation of recordkeeping practices in a supervised agricultural experience (SAE).

AGSD 2311. Applied Agricultural Analysis. 3 Credit Hours (Lecture: 3 Hours, Lab: 0 Hours).
Collection and computer analysis of data and records related to production agricultural enterprises. Problem-solving techniques related to the areas of animal science, agronomy, agricultural business, and agricultural mechanization are stressed.

AGSD 2330. History and Philosophy of the Cooperative Extension Service. 3 Credit Hours (Lecture: 3 Hours, Lab: 0 Hours).
A survey of the Cooperative Extension Service, the philosophy of Cooperative Extension, and Extension's role within the Land-Grant system. History, organization, program areas, and guiding principles of Cooperative Extension are discussed in detail.

AGSD 3101. Analysis of Agricultural Occupations. 1 Credit Hour (Lecture: 1 Hour, Lab: 0 Hours).
A course to advance student understanding of professional occupations in agriculture and the professional and technical competencies required.

AGSD 3301. Advanced Agricultural Power Units. 3 Credit Hours (Lecture: 2 Hours, Lab: 2 Hours).
Investigation of modern power systems on agricultural equipment, agricultural safety, internal combustion operation, preventative maintenance and general servicing of tractor systems, hydraulics, and powertrain operations. Prerequisite: Sophomore classification.

AGSD 3302. Agricultural Sales and Services. 3 Credit Hours (Lecture: 3 Hours, Lab: 0 Hours). [WI (http://catalog.tarleton.edu/academicaffairs/)]
Application of successful selling. Principles and practices in providing farm and ranch operations with agricultural materials, supplies, equipment, and services. Seller aspects involved in the marketing of farm and ranch products by farm-related agribusinesses. Career opportunities and preparation in agricultural sales and services will be explored.

AGSD 3306. Lab Techniques in Agricultural Mechanics. 3 Credit Hours (Lecture: 1 Hour, Lab: 4 Hours).
The development of mechanical laboratory skills used in the teaching of agriculture with emphasis on electrical, construction, and environmental topics. Laboratory management and maintenance for effective teaching will also be emphasized. Lab fee: $2.

AGSD 3307. Premier Leadership in Agriculture. 3 Credit Hours (Lecture: 3 Hours, Lab: 0 Hours). [WI (http://catalog.tarleton.edu/academicaffairs/)]
Study and application of leadership skills related to agricultural education in middle/secondary agricultural education programs.

AGSD 3318. Land Surveying and Soil/Water Conservation Practices. 3 Credit Hours (Lecture: 2 Hours, Lab: 3 Hours).
Surveying principles including leveling, total station, laser levels, and mapping as applied to agriculture. The utilization of GPS in the agricultural industry. Planning and development of structures for surface water and waste water management. Lab fee $10.

AGSD 3325. Agricultural Electrical Systems. 3 Credit Hours (Lecture: 2 Hours, Lab: 2 Hours).
Elements of: electric current generation and transmission, agricultural applications of electric heating, lighting and power, wiring, motors, and power rates. Also includes National Electrical Code and maintenance of air conditioning and cooling systems. Lab fee $16.

AGSD 3326. Precision Agricultural Equipment Management and Operation. 3 Credit Hours (Lecture: 2 Hours, Lab: 2 Hours).
This course provides an overview of current precision agriculture technologies, mapping methods, equipment operation, equipment setup, and equipment troubleshooting. Students can expect to be engaged in equipment operation in a broad range of agricultural experiences that deal with current precision equipment and techniques.

AGSD 3329. Farm Utilities. 3 Credit Hours (Lecture: 2 Hours, Lab: 3 Hours).
Farm water supply, sewage disposal, heating and ventilating system, farm refrigeration and farmstead layouts. Lab fee $6.

AGSD 3330. 4-H and Youth Development. 3 Credit Hours (Lecture: 3 Hours, Lab: 0 Hours).
An examination of 4-H and Youth Development programs within the Cooperative Extension Service. Volunteer management and guiding principles of the 4-H and Youth Development program will be discussed. Information, concepts and skills applied in this course will provide a foundational knowledge to be used in the implementation of developing and/or managing a 4-H and Youth Development program within the Cooperative Extension System.

AGSD 3340. Agricultural Field Machinery. 3 Credit Hours (Lecture: 2 Hours, Lab: 4 Hours).
Principles of construction, operation, adjustment, calibration, and repair of agricultural tillage, planting, cultivating, spraying, fertilizing, and harvesting machinery. Laboratory activities include set-up of new equipment, wear analysis and repair of used equipment, calibration of equipment, and field operations. Lab fee $12.

AGSD 3380. Formulation of Agriculture & Food Policy. 3 Credit Hours (Lecture: 3 Hours, Lab: 0 Hours).
The study of the past and present development of agriculture and food policy at the state and national levels. Topics include a history of the legislative process, current agricultural issues, and the place of agriculture in the American political system.

AGSD 4086. Problems in Agricultural Services. 1-6 Credit Hours (Lecture: 0 Hours, Lab: 1-6 Hours).
Independent study in an area of specialization. May be repeated for a maximum of 6 hours credit when topics differ. Prerequisite: Approval of department head.

AGSD 4185. Seminar. 1 Credit Hour (Lecture: 1 Hour, Lab: 0 Hours).
A review of current problems and developments in agricultural services; professional opportunities and responsibilities; individual investigations and reports. Prerequisite: Senior classification.

AGSD 4302. Processing and Storage of Agricultural Products. 3 Credit Hours (Lecture: 2 Hours, Lab: 2 Hours).
The mechanical processes used in the processing and storage of grains, forages, nuts, and other agricultural products along with factors important to maintaining product quality during storage and processing. Lab fee $6.

AGSD 4305. Agricultural Mechanical Services. 3 Credit Hours (Lecture: 2 Hours, Lab: 2 Hours).
Applications of advanced phases in agricultural mechanics. The course will emphasize the organization, management, service, and use of equipment in all areas of agricultural mechanics. Prerequisite: Senior classification Lab fee: $2.

AGSD 4306. Agricultural Mechanical Services and Instruction. 3 Credit Hours (Lecture: 2 Hours, Lab: 2 Hours).
Field-based applications of agricultural mechanics instruction. This course will emphasize the organization, management, service, and use of equipment in all areas of agricultural mechanics instruction. Prerequisite: AGRI 2301 OR AGRI 2304 Lab fee: $2.

AGSD 4307. Program Methods. 3 Credit Hours (Lecture: 3 Hours, Lab: 0 Hours).
A study of curriculum and programmatic management for all aspects of the secondary/middle school agricultural science and technology program. Topics include pre-employment laboratories, work-based learning, advisory committees, supervised agricultural experience programs, new program development/ implementation, foundations of agricultural education, program activism, and incorporating Agricultural Science and Technology into the total school curriculum.

AGSD 4310. Leadership Development. 3 Credit Hours (Lecture: 2 Hours, Lab: 2 Hours).
Field-based experiences designed to develop leadership ability for teaching, entrepreneurship, and conducting adult and youth organizations. Includes systems of record keeping. Lab fee: $2.

AGSD 4320. Agriscience Course Building. 3 Credit Hours (Lecture: 2 Hours, Lab: 2 Hours).
Field-based experiences are provided in a school setting where students will prepare and deliver units of instruction for middle school and secondary programs; develop unit and daily lesson plans, reports; manage curriculum issues; examine various models of instruction; implement brain-based teaching and learning techniques, analyze classroom management strategies, and demonstrate competencies in effective teaching practices. Prerequisite: EDUC 3321, EDUC 4331, EDSP 4361 and READ 3351 Lab fee $2.

AGSD 4325. Agriculture Safety and Health. 3 Credit Hours (Lecture: 3 Hours, Lab: 0 Hours).
Protecting agricultural workers and the general public in our age of technological and scientific advancement has become one of the most challenging and rewarding career fields. This online agricultural safety and health class will prepare you to respond to these needs, to analyze hazardous agricultural and rural public health situations, to develop and implement safety programs, and apply governmental regulations associated with production agriculture.

AGSD 4326. National Agricultural Education Outreach Development. 3 Credit Hours (Lecture: 3 Hours, Lab: 0 Hours).
An in-depth course designed to give students hands-on experience with developing a national agricultural education outreach program. Student will be required to travel to the National FFA Convention in the fall semester to deliver the program at the National FFA Convention. Students will need to submit an application for course enrollment. Prerequisite: Instructor approval.

AGSD 4330. Agricultural Extension and Industry Methods. 3 Credit Hours (Lecture: 3 Hours, Lab: 0 Hours).
Agricultural extension in agriculture and the agriculture industry. Objectives include organization, methods, and program building. Prerequisite: Approval of department head.

AGSD 4350. Animal Related Systems. 3 Credit Hours (Lecture: 2 Hours, Lab: 2 Hours).
Specialized feeding, training, and fitting livestock for sales and advertising. Specialized topics in identifying, selecting, and evaluating poultry and poultry products, horses, and dairy and dairy products. Prerequisites: Senior classification and AGRI 1419 Lab fee: $2.

AGSD 4355. Mexican Agricultural Relations. 3 Credit Hours (Lecture: 1 Hour, Lab: 6 Hours).
A study of international agricultural technology, educational methodology, and diverse cultural activities related to Mexico. A required one-week trip at student's expense to Mexico will be one of the requirements necessary to meet the course objectives. Prerequisites: Junior or senior classification and approval of the instructor.

AGSD 4383. Internship in Classroom Teaching in Agricultural Services and Development. 3 Credit Hours (Lecture: 1 Hour, Lab: 9 Hours).
This internship includes supervised, field-based activities in public school classrooms. Major emphasis is placed on the development of instructional strategies and professional practices designed to improve teaching performance. Students are required to conduct a reflective analysis of their teaching performance. May be repeated for credit. Prerequisite: admission to the Teacher Education Program and approval of department head. Field experience fee $50.

AGSD 4390. Special Topics. 3 Credit Hours (Lecture: 3 Hours, Lab: 0 Hours).
Deals with selected topics in Agricultural Services and Development. May be repeated for credit when topics vary. Prerequisite: approval of department head.

AGSD 4601. Clinical Teaching. 6 Credit Hours (Lecture: 1 Hour, Lab: 16 Hours).
Twelve weeks or equivalent of off-campus supervised clinical teaching in an Agricultural Science and Technology Program in selected public schools in Texas. Prerequisite: Senior classification.

AGSD 4684. Internship. 6 Credit Hours (Lecture: 0 Hours, Lab: 12-16 Hours).
The student will complete an approved supervised work experience with an agricultural service organization or related industry. Prerequisites: Senior classification and advisor approval. Lab fee: $2.

Agricultural Communication Courses

ACOM 1110. Introduction to Agricultural Communication. 1 Credit Hour (Lecture: 1 Hour, Lab: 0 Hours).
Focuses on the fundamentals of agricultural news writing and other communication methods. Students will learn about the history and practice of agricultural communication, the role of the media in agriculture and related fields, and careers.

ACOM 2301. Digital Photography Techniques for Agriculture. 3 Credit Hours (Lecture: 2 Hours, Lab: 2 Hours).
This course focuses on the fundamentals of Digital Photography and image editing in an agricultural setting. Topics will include livestock, wildlife, event, and portrait photography as they relate to the field of agriculture.

ACOM 2307. Graphic Design and Layout for Agricultural Publications. 3 Credit Hours (Lecture: 2 Hours, Lab: 2 Hours).
Fundamentals of layout and design as applied to agricultural publications, such as brochures, newsletters, magazine and advertising layouts, and social media. Practical application of design principles, typography, desktop-publishing software and printing practices.

ACOM 2309. Scientific Communications in Agriculture and Natural Resources. 3 Credit Hours (Lecture: 3 Hours, Lab: 0 Hours).
Concepts of writing scientific information for various audiences about agriculture and natural resources. Course will introduce the fundamentals of issue identification, research skills, and storytelling of topics in agriculture and natural resources using print and digital formats. Development of expert and research sources, press releases, feature stories, and other written documents needed to share information about agriculture and natural resources. Prerequisites: ENGL 1301 and ENGL 1302 or instructor approval.

ACOM 3310. Podcasting for Audiences in Agriculture and Natural Resources. 3 Credit Hours (Lecture: 2 Hours, Lab: 2 Hours).
Development and production of a podcast for audiences interested in agriculture and natural resources. Includes storytelling, topic identification, sound gathering using sound gear in a studio or in the field, interviewing, script writing, audio editing, and developing their “voice” as students create an informative podcast episode regarding a topic in agriculture and natural resources.

ACOM 3314. Writing and Editing for Agricultural Publications. 3 Credit Hours (Lecture: 3 Hours, Lab: 1 Hour). [WI (http://catalog.tarleton.edu/academicaffairs/)]
Writing and editing in agricultural industries and publications. Writing agricultural articles, tightening copy, editing, copy reading, writing headlines, writing photo captions.

ACOM 3321. Communicating Agriculture to the Public. 3 Credit Hours (Lecture: 3 Hours, Lab: 3 Hours). [WI (http://catalog.tarleton.edu/academicaffairs/)]
This course is an application of public relations writing and skills in an agricultural context. Agricultural organizations can be government-related, for-profit business, or not-for-profit commodity groups. Whatever the organization classification, they must communicate internally, among each other, and to a larger audience. This course will equip you with an understanding of public relations and help develop necessary skills to be successful communicators for the industry.

ACOM 3325. New Media in Agriculture and Natural Resources. 3 Credit Hours (Lecture: 3 Hours, Lab: 0 Hours).
This course focuses on the fundamentals of using digital online media for agriculture and natural resources–including but not limited to: social media, customer relationship management software, digital asset management software and email marketing. Practical application of theory and skills related to design, management and evaluation of digital and online media.

ACOM 3330. Website Design in Agricultural Communication. 3 Credit Hours (Lecture: 3 Hours, Lab: 0 Hours).
This course promotes a basic understanding of Web design principles and experiential learning through a project requiring students to develop a website for a client in the agriculture and natural resources industries.

ACOM 4086. Problems in Agricultural Communications. 1-4 Credit Hours (Lecture: 1-4 Hours, Lab: 0 Hours).
Individualized study of current topics in student's major concentration of study or supporting discipline. Specific content and credit dependent upon students' interest, needs, and depth of study. Maximum undergraduate credit, four semester hours. Prerequisite: Senior classification and advanced approval by academic advisor.

ACOM 4300. Career Readiness for Agricultural Leadership. 3 Credit Hours (Lecture: 3 Hours, Lab: 0 Hours).
This course provides the focused development and hands-on application of soft skills needed to become a leader in agricultural and natural resources industries, which include government-related, for-profit business, or not-for-profit commodity groups. Discussion of leadership theory as well as targeting the improvement of interpersonal skills, professionalism, emotional intelligence and its importance in agricultural industries, and understanding biases and the role they play within agriculture, its niche groups, and audiences outside of agriculture and natural resources. Prerequisite: AGRI 1419.

ACOM 4305. Publication Development in Agricultural Communication. 3 Credit Hours (Lecture: 3 Hours, Lab: 0 Hours).
This course provides directed experience in the development of a commercial agricultural publication. Students will master public relations writing style, interviewing and photography skills, and sponsorship sales techniques in an agricultural context.

ACOM 4315. Campaigns and Events in Agriculture and Natural Resources. 3 Credit Hours (Lecture: 3 Hours, Lab: 2 Hours).
Provides directed experience in the development of communication campaigns, promotional activities, and hosting of agricultural and environmental events, including risk assessment and management. Includes the development of planning, materials, budget, insurance, and venue contracts after completion of agricultural facility analyses to troubleshoot and resolve obstacles. Prerequisite: AGRI 1419.

ACOM 4320. Advanced Technology in Agricultural Communication. 3 Credit Hours (Lecture: 3 Hours, Lab: 0 Hours).
A survey of various topics, trends, technologies, and best practices in the field of Agricultural Communication. Students will work both independently and in teams to apply critical thinking and creative problem solving skills to address real-world challenges.

ACOM 4325. Agricultural Media Convergence. 3 Credit Hours (Lecture: 2 Hours, Lab: 2 Hours).
Practical application of theory and skills related to the design, planning, management, and delivery of agricultural events through digital and online media.

ACOM 4341. Agricultural Communication Study Away. 3 Credit Hours (Lecture: 3 Hours, Lab: 0 Hours).
Agriculture and natural resources study away with exposure to a wide array of agricultural production operations and crops, professional networking opportunities, and real-world exposure to changes occurring in the industry by attending a professional conference dedicated to agricultural and natural resources communication. Prerequisite: Instructor approval.

ACOM 4342. Study Abroad in Agricultural Communications. 3 Credit Hours (Lecture: 3 Hours, Lab: 0 Hours).
Agricultural and natural resources travel course emphasizing photography, advanced composition techniques, global issues and production practices, and exposure to cultural and agricultural sites from a photographic perspective. Locations will include livestock, wildlife, event, and portrait photography as they relate to the field of agriculture and natural resources. Prerequisite: Junior or Senior classification or instructor approval.

ACOM 4350. Electronic Field Production for Agricultural Communications. 3 Credit Hours (Lecture: 2 Hours, Lab: 2 Hours).
This course provides directed experience in agricultural television field production and electronic news gathering. Students will master video production skills such as script writing, storyboarding, camera operation, and video editing in an agricultural setting.

ACOM 4390. Special Topics. 3 Credit Hours (Lecture: 3 Hours, Lab: 0 Hours).
Selected topics in Agricultural Communication. May be repeated for credit when topics vary.

ACOM 4684. Internship. 6 Credit Hours (Lecture: 0 Hours, Lab: 16 Hours).
Pre-approved and supervised work experience in an administrative systems-related position with a public or private business organization. Prerequisites: Junior classification and approval of department head. Field experience fee $50.

Agricultural Economics Courses

AGEC 1309. Microcomputer Applications in Agriculture. 3 Credit Hours (Lecture: 3 Hours, Lab: 2 Hours).
Microcomputer technology applied to management, record keeping, and agribusiness. Emphasis on the application of database, spreadsheet, and other business software in various agricultural environments. Lab fee: $2.

AGEC 2305. Consumer Issues & Decision Making. 3 Credit Hours (Lecture: 3 Hours, Lab: 0 Hours).
Designed to make the student an intelligent consumer of goods and services and to understand consumer decision#making in the marketplace. Major influences on consumer problems, fraud, protection, and consumer behavior.

AGEC 2317. Introductory Agricultural Economics. 3 Credit Hours (Lecture: 3 Hours, Lab: 0 Hours).
An introduction to economics principles and concepts in agriculture today as they relate to the American economic system. Emphasis will be on management problem-solving techniques under various situations, especially those agricultural in nature,including producing, processing, distributing, and consuming farm and ranch products.

AGEC 3312. Production Economics. 3 Credit Hours (Lecture: 3 Hours, Lab: 0 Hours).
Application of economic production principles in solving resource allocation problems in agriculture and agribusiness. Prerequisites: MATH 1324 or MATH 1325, and either AGRI/AGEC 2317 OR ECON 2302, or permission of instructor.

AGEC 3314. The Agricultural Marketing System. 3 Credit Hours (Lecture: 3 Hours, Lab: 0 Hours).
An introductory course covering the principles, practices, institutions, functions, and problems involved in the marketing of agricultural commodities. Prerequisite: AGRI 2317/AGEC 2317 or ECON 2302.

AGEC 3317. Agricultural Statistics. 3 Credit Hours (Lecture: 2 Hours, Lab: 2 Hours).
Statistical principles and methods in analyzing agricultural and economic data to solve problems relating to production, consumption, and cost/profit optimization. Provides a basic background in statistical analysis and related computer applications. Prerequisite: MATH 1314 or higher, or approval of instructor. Lab fee: $2.

AGEC 3330. Agricultural Credit. 3 Credit Hours (Lecture: 3 Hours, Lab: 0 Hours).
Emphasis will be on building Balance Sheets, Income/Expenses Statements, Collateral Analysis, Credit Action Forms and Financial Analysis. Prerequisites: AGRI 2317/AGEC 2317 and MATH 1314 or higher, or approval of instructor.

AGEC 3333. Agriculture Prices. 3 Credit Hours (Lecture: 3 Hours, Lab: 0 Hours). [WI (http://catalog.tarleton.edu/academicaffairs/)]
Factors affecting commodity prices, price trends and seasonal variations, parity prices, methods of forecasting demand and prices, and economic tools and techniques for making decisions. Prerequisites: AGRI 2317/AGEC 2317, AGRI 1309/AGEC 1309, and AGEC 3314. Lab fee $15.

AGEC 3359. Personal & Family Financial Management I. 3 Credit Hours (Lecture: 3 Hours, Lab: 0 Hours).
Planning, managing, and purchasing decisions to achieve individual and family financial goals.

AGEC 3360. Personal & Family Financial Management II. 3 Credit Hours (Lecture: 3 Hours, Lab: 0 Hours).
Individual and family planning for insurance, risk management, investments, retirement, and estates.

AGEC 4086. Agricultural Economics Problems. 1-4 Credit Hours (Lecture: 0 Hours, Lab: 1-4 Hours).
Individualized study of current topics in student's major concentration of study or supporting discipline. Specific content and credit dependent upon student's interest, needs, and depth of study. Maximum undergraduate credit, four semester hours. Prerequisite: Senior classification and advance approval by instructor of record.

AGEC 4088. Undergraduate Research. 1-3 Credit Hours (Lecture: 1-3 Hours, Lab: 1-3 Hours).
Fundamental research methods will be addressed through a faculty-directed project. Participation in an abbreviated lecture series may be required. Project components may include a literature review, data collection and analysis, testing, planning, project design, and/or computer modeling. The student is required to prepare a final report and produce a presentation. No credit is awarded until the the report and presentation are submitted. Only one undergraduate research experience will be counted toward degree requirements. Prerequisite: Junior Standing, completion of 12 hours in AGEC, and approval of department head.

AGEC 4090. Special Topics. 1-3 Credit Hours (Lecture: 1-3 Hours, Lab: 0 Hours).
Selected topics in agriculture or agribusiness. May be repeated for credit when content varies, to a maximum of six hours.

AGEC 4301. Public Agricultural Food Programs. 3 Credit Hours (Lecture: 3 Hours, Lab: 0 Hours).
Identification and analysis of alternative governmental programs and policies affecting prices and quantities of agricultural commodities, farmer-rancher incomes, food supplies and consumer prices, and domestic and foreign food distribution and trade. Consideration of relevant political and economic factors, administrative aspects, and the policy participants. Prerequisites: AGRI 2317/AGEC 2317 or two semesters of economics and junior classification.

AGEC 4302. International Trade and Agriculture. 3 Credit Hours (Lecture: 3 Hours, Lab: 0 Hours).
Role of U.S. agriculture in a dynamic world economy; national and international policies, institutions, exchange rates, tariffs, and non-tariff barriers that impact US agribusiness trade. Prerequisites: AGEC 2317 or 3 hours of economics and junior or senior classification. Prerequisite: AGEC 2317 or 3 hours of economics and junior or senior classification.

AGEC 4306. Commodity Futures Markets. 3 Credit Hours (Lecture: 3 Hours, Lab: 0 Hours).
Introduction to the organization and functioning of futures markets. Analysis of the economic function performed by markets, and study of fundamental and technical approaches to market forecasting. Examination of various trading strategies applied primarily to agricultural commodities. Prerequisites: AGRI 2317/AGEC 2317 or ECON 2302; AGRI 1309/AGEC 1309 and AGEC 3314.

AGEC 4317. Applied Quantitative Methods. 3 Credit Hours (Lecture: 2 Hours, Lab: 2 Hours).
Application of quantitative techniques used to support managerial decision-making and resource allocation. Exposure to mathematical and statistical tools (regression analysis, mathematical programming, simulation) used in economic analysis in Agribusiness. Credit for AGEC 4317 or AGEC 5317 not both. Prerequisite: AGEC 3317 or BUSI 3317 or instructor approval.

AGEC 4321. Regional Economics. 3 Credit Hours (Lecture: 3 Hours, Lab: 0 Hours). [WI (http://catalog.tarleton.edu/academicaffairs/)]
Analysis of regional/community economic problems in the United States. Application of economic principles and theory to regional/community development. Evaluation of current methods and public programs for economic development. Application of analytical methods to development problems. Credit for both AGEC 4321 and ECON 4321 will not be awarded. Prerequisite: AGEC 2317/AGRI 2317 or ECON 2302.

AGEC 4325. Recreation and Tourism Economics. 3 Credit Hours (Lecture: 3 Hours, Lab: 0 Hours).
Benefit-cost frameworks in public planning for outdoor recreation development, pricing problems, market demand assessment, and impacts of recreational development on regional economies. Prerequisites: ECON 2301, and either AGEC/AGRI 2317 or ECON 2302.

AGEC 4330. Agricultural Finance. 3 Credit Hours (Lecture: 3 Hours, Lab: 0 Hours).
Analysis of the capital requirements for farming and ranching; principles involved in the use of each type of farm credit. Prerequisites: AGEC 3330 and ACCT 2302.

AGEC 4333. Economics of Agribusiness Management. 3 Credit Hours (Lecture: 3 Hours, Lab: 0 Hours).
Economic aspects of the agribusiness system. Management techniques related to problem recognition and decision making in organizations involved in the agricultural sector. Prerequisites: AGEC 2317/AGRI 2317 or ECON 2302 and AGEC 3314.

AGEC 4335. Farm Appraisal. 3 Credit Hours (Lecture: 2 Hours, Lab: 2 Hours).
Techniques for evaluating the market value of agricultural real estate using three common approaches: sales comparison, cost, and income. Analyzing effects of different farm characteristics on farm value. Prerequisite: AGEC 3330 or AGEC 4330.

AGEC 4336. Estate Planning. 3 Credit Hours (Lecture: 3 Hours, Lab: 0 Hours).
Tools and techniques to plan for the accumulation, conservation, and distribution of wealth. Synthesis of financial, legal, and personal considerations to achieve estate planning and wealth transfer goals. Students are encouraged to have completed ACCT 4305, AGEC 3359, AGEC 3360, BLAW 4333.

AGEC 4341. Financial Planning/Development Capstone. 3 Credit Hours (Lecture: 3 Hours, Lab: 0 Hours).
Retirement planning, qualified and non-qualified retirement plans, Social Security provisions, government and private sector healthcare plans, and basics of employee benefits. Focus on quantitative (i.e., calculating retirement needs and plan limits) and qualitative (i.e., retirement age decisions, retirement income management) aspects of retirement. Prerequisite: Students must have completed one of the following courses: ACCT 4305, AGEC 3359, AGEC 3360, FINC 3301, FINC 4308.

AGEC 4350. Natural Resource Economics. 3 Credit Hours (Lecture: 3 Hours, Lab: 0 Hours).
Natural resource availability, use, conservation, and government policy relevant to crop and livestock production. Current and emerging natural resource issues affecting production agriculture and agribusiness firms. Evaluation of the farm economic impacts of natural resource policies at the state and federal levels. Prerequisites: AGEC 2317 or ECON 2302 and Junior or Senior classification.

AGEC 4370. Family and Economic Issues. 3 Credit Hours (Lecture: 3 Hours, Lab: 0 Hours).
Focus is the intricate relationship between family management, the economic environment, non-economic and social changes and related planning and decisions in the family life cycle. Prerequisite: AGEC 3359 or AGEC 3360.

AGEC 4384. Internship. 3 Credit Hours (Lecture: 3 Hours, Lab: 0 Hours).
An approved, supervised, comprehensive work experience consisting of a minimum of 240 hours(6 weeks) for career preparation in an agribusiness enterprise. Prerequisite: Completion of 24 hours in AGEC and instructor approval.