BACHELOR OF SCIENCE, MAJOR IN AGRICULTURAL ENGINEERING TECHNOLOGY

The purpose of the Agricultural Engineering Technology curriculum is to provide an educational experience based on the fundamentals of engineering principles and practices. Theory-based lectures will be accompanied by experiential learning activities for persons who intend to pursue a career related to the technical operation and management of an agriculture enterprise. It is expected that graduates will choose a position of leadership and responsibility in a career area associated with service and sales, production, processing, product testing, alternative energies, or a government agency.

Agricultural Engineering Technology majors are required to complete the concentration in Power Machinery Management or a minor area of study. Common minors are Agricultural Business, Plant and Soil Science, and Construction.

An internship in an agricultural engineering technology-related business or industry is strongly encouraged for each student. This will provide students 'real-life' learning experiences outside their regular classroom and laboratory opportunities. Students generally seek an internship experience at the end of their sophomore or junior year. Internships may be arranged through a student's contact with providers or through departmental announcements or postings. All internships must be approved by the student's departmental academic adviser prior to the initiation of the internship. Maximum credit for the internships is six (6) credit hours.

Code	Title	Hours
Bachelor of Science, Major in Agricultural Engineering Technology		
Core Curriculum **(**http://catalog.shsu.edu/undergraduate/academic-policies-procedures/degree-requirements-academic-guidelines/core-curriculum/**)**		
Component Area I (Communication)		6
Component Area II (Mathematics)		3
Component Area III (Life and Physical Science)		8
Component Area IV (Language, Philosophy, and Culture)		3
Component Area V (Creative Arts)		3
Component Area VI (U.S. History)		6
Component Area VII (Political Science/Government)		6
Component Area VIII (Social and Behavioral Sciences)		3
Component Area IX (Component Area Option)		4
Degree Specific Requirements		
ACCT 2301	Principles of Financial Acc	3
ACOM 3360	Communication Skills for Agriculturists	3
or ENGL 3330	Intro to Technical Writing	
AGRI 1309	Computers in Agriculture (or approved substitute)	3
or CSTE 1330	Introduction to Computers	
ETDD 1361	Engineering Graphics	3
or ETDD 1390	Intro -Computer Aided Drafting	
or AGET 3350	Plasma Arc Cutting Technology	
MATH 1342	Elementary Statistics	3
MGMT 3310	Principles Of Management (or approved BUAD, AGBU (advanced))	3
PHYS 1305 & PHYS 1105	Classical Physics & Thermdynmc and Class Phy & Thermodynamics Lab	4
Major Core		
AGET 2303	Intro to Ag Engineering Tech	3
AGRI 1131	Intro to Pro Leadership Skills	1
PLSC or ANSC Electives - Select one from the following:		4
ANSC 1319 & ANSC 1119	Animal Science and Animal Science Laboratory	
PLSC 1307 & PLSC 1107	Plant Science and Plant Science Laboratory	
Major Core		
AGBU 2317	Principles of Agri Economics	3
or AGBU 2389	Agribusiness Financl Analysis	

AGRI 4120	Professional Career Skills	1
Approved, Agricultural Engineering Technology advanced electives, including internship hours. [1]		20-26
Minor or Concentration [2]		**18-24**
Minor (18 SCH)		
Minor		
Minor (Advanced)		
Concentration: Power Machinery Management 24 SCH)		
AGBU 3361	Agribusiness Org & Mgt	
AGBU 3367	Agricultural Finance	
AGET 4385	Applied Electronics/Hydraulics	
AGET 4387	Agricultural Engines & Tractor	
BUAD 3336	Successful Workplace Relations	
BUAD 4325	Negotiation in Business	
AGET 4000 Approved Elective		
ETEC 3374	Time And Motion Study	
Total Hours		**120**

1 Students pursing a **minor** take **26 semester credit hours** of approved, Agricultural Engineering Technology advanced electives, including internship hours. Students pursing a **Concentration in Power Machinery Management** take **20 semester credit hours** approved, Agricultural Engineering Technology advanced electives, including internship hours.

2 Students have the option of either 1) pursing a **minor** with 18 **semester credit hours** of coursework or 2) pursing a **Concentration in Power Machinery Management with 24 semester** credit hours of coursework.

Note: Students should use elective and/or minor hours to satisfy the 42 advanced hour requirement.

First Year

Fall	Hours	Spring	Hours
Component Area I (http://catalog.shsu.edu/undergraduate/academic-policies-procedures/degree-requirements-academic-guidelines/core-curriculum/#componentareai)	3	Component Area I (http://catalog.shsu.edu/undergraduate/academic-policies-procedures/degree-requirements-academic-guidelines/core-curriculum/#componentareai)	3
Component Area II (http://catalog.shsu.edu/undergraduate/academic-policies-procedures/degree-requirements-academic-guidelines/core-curriculum/#componentareaii)	3	Component Area III (http://catalog.shsu.edu/undergraduate/academic-policies-procedures/degree-requirements-academic-guidelines/core-curriculum/#componentareaiii)	4
AGET 2303	3	Component Area VI (http://catalog.shsu.edu/undergraduate/academic-policies-procedures/degree-requirements-academic-guidelines/core-curriculum/#componentareavi)	3
AGRI 1131	1	Component Area VII (http://catalog.shsu.edu/undergraduate/academic-policies-procedures/degree-requirements-academic-guidelines/core-curriculum/#componentareavii)	3
AGRI 1309 or CSTE 1330	3	PLSC 1307 & PLSC 1107[1]	4
	13		**17**

Second Year

Fall	Hours	Spring	Hours
Component Area VI (http://catalog.shsu.edu/undergraduate/academic-policies-procedures/degree-requirements-academic-guidelines/core-curriculum/#componentareavi)	3	Component Area III (http://catalog.shsu.edu/undergraduate/academic-policies-procedures/degree-requirements-academic-guidelines/core-curriculum/#componentareaiii)	4
Component Area VIII (http://catalog.shsu.edu/undergraduate/academic-policies-procedures/degree-requirements-academic-guidelines/core-curriculum/#componentareaviii)	3	Component Area IV (http://catalog.shsu.edu/undergraduate/academic-policies-procedures/degree-requirements-academic-guidelines/core-curriculum/#componentareaiv)	3

AGBU 2317 or 2389	3	Component Area V (http://catalog.shsu.edu/undergraduate/academic-policies-procedures/degree-requirements-academic-guidelines/core-curriculum/#componentareav)	3
MATH 1342	3	ACCT 2301	3
Minor	3	ETDD 1361, 1390, or AGET 3350	3
	15		**16**

Third Year

Fall	Hours	Spring	Hours
Component Area VII (http://catalog.shsu.edu/undergraduate/academic-policies-procedures/degree-requirements-academic-guidelines/core-curriculum/#componentareavii)	3	AGET Advanced Electives[2]	3-6
Component Area IX (http://catalog.shsu.edu/undergraduate/academic-policies-procedures/degree-requirements-academic-guidelines/core-curriculum/#componentareaix)	4	MGMT 3310 (or Advanced AGBU Elective)	3
AGET Advanced Elective[2]	3	Minor Advanced OR Concentration Courses[3, 4]	6-9
PHYS 1305 & PHYS 1105	4		
	14		**15**

Fourth Year

Fall	Hours	Spring	Hours
ACOM 3360 or ENGL 3330	3	AGET Advanced Electives[2]	8
AGET Advanced Electives[2]	6-9	AGRI 4120	1
Minor Advanced OR Concentration Course[3, 4]	3-6	Minor or Concentration [3, 4]	6
	15		**15**

Total Hours: 120

Note: Students should use elective and/or minor hours to satisfy the 42 advanced hour **requirement.**

1 Or ANSC 1319 & ANSC 1119

2 Students pursing a **minor** take **26 semester credit hours** of approved, Agricultural Engineering Technology advanced electives, including internship hours. Students pursing a **Concentration in Power Machinery Management** take **20 semester credit hours** approved, Agricultural Engineering Technology advanced electives, including internship hour.

3 Students have the option of either 1) pursing a **minor** with 18 **semester credit hours** of coursework or 2) pursing a **Concentration in Power Machinery Management with 24 semester** credit hours of coursework.

4 See, below Power Machinery Management Concentration course list.

Code	Title	Hours
Power Machinery Management Concentration Courses [4]		
AGBU 3361	Agribusiness Org & Mgt	3
AGBU 3367	Agricultural Finance	3
AGET 4385	Applied Electronics/Hydraulics	3
AGET 4387	Agricultural Engines & Tractor	3
BUAD 3336	Successful Workplace Relations	3
BUAD 4325	Negotiation in Business	3
AGET 4000 Approved Elective Course		3
ETEC 3374	Time And Motion Study	3

The Texas Higher Education Coordinating Board (THECB) marketable skills initiative is part of the state's **60x30TX plan** and was designed to help students articulate their skills to employers. Marketable skills are those skills valued by employers and/or graduate programs that can be applied in a variety of work or education settings and may include interpersonal, cognitive, and applied skill areas.

The BS in Agricultural Engineering Technology is designed to provide graduates with the following marketable skills:

- Understand the importance and use of technology found in agriculture and related industries for real-world problem solving.
- Evaluate how technology has changed in our society and how those technologies are utilized in modern agriculture and related industries.
- Analyze engineering issues found within agriculture and/or other related industries, and the technological solutions to those problems.
- Apply independent and team-working skills to accomplish objectives and meet organizational goals.
- Demonstrate a work ethic and soft skills that are desirable of an employee.
- Use professional oral and written communication skills for the transfer of technologically-rich knowledge.