

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, a minor area of study or complete the Teacher Certification focus in Agricultural Education. Common minors are Agricultural Business, Plant and Soil Science, and Construction Management.

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.

Additional information: Reference the Program Landing Page (<https://www.shsu.edu/programs/bachelor-of-science-in-agricultural-engineering-technology/>) for additional information, such as cost, delivery format, contact information, or to schedule a visit.

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) ¹		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	
ETDD 1361	Engineering Graphics	3
or ETDD 1390	Intro -Computer Aided Drafting	
or AGET 3350	Plasma Arc Cutting Technology	
MATH 1314	Pre Calculus Algebra ¹	3
MATH 1342	Elementary Statistics	3
MGMT 3310	Principles Of Management (or approved BUAD, AGBU (advanced))	3
PHYS 1305 & PHYS 1105	Classical Physics & Thermodynmc and Class Phy & Thermodynamics Lab	4
Major: Foundation		
AGBU 2317	Principles of Agri Economics ²	3
or AGBU 2389	Agribusiness FinancI Analysis	
AGET 2303	Intro to Ag Engineering Tech	3
AGRI 1131	Intro to Pro Leadership Skills	1
AGRI 1309	Computers in Agriculture ²	3
or CSTE 1330	Introduction to Computers	
or AGBU 2389	Agribusiness FinancI Analysis	

Major: Prescribed Electives

ANSC or PLSC Electives	4
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
Advanced Electives: including internship hours ²	20-26
Minor Or Concentration: Required ^{4,5}	18-24
Minor (18 SCH) ^{4,5}	
Concentration: Power Machinery Management (24 SCH) ⁴	
AGBU 3361	Agribusiness Org & Mgt
AGBU 3367	Agricultural Finance
AGET 4385	Applied Electronics/Hydraulics
AGET 4387	Agricultural Engines & Tractor
AGET 4000 Approved Elective	
EETC 3374	Time And Motion Study
Concentration Electives ⁶	
Total Hours	120

¹ MATH 1314 satisfies the Core Curriculum requirement for Component Area II [Mathematics] and the Degree Specific Requirement.

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

³ Students seeking a **Concentration in Power Machinery Management** must select AGBU 2389

⁴ Students have the option of either 1) pursuing a **minor** with **18 semester credit hours** of coursework or 2) pursuing a **Concentration in Power Machinery Management with 24 semester** credit hours of coursework.

⁵ The following minors **cannot be paired** with this degree program: Minor in Agriculture Engineering Technology, Minor in Conservation Biology, Minor in Early Childhood Education, and Minor in Wildlife Ecology.

⁶ Choose six hours from the list of Concentration Electives below.

Code	Title	Hours
Concentration Electives ⁶		
Select 6 hours from the following:		6
AGBU 4319	Agribusiness Ventures	
AGBU 4363	Agricultural Sales & Consulting	
AGBU 4365	Legal Issues in Agribusiness	
BUAD 3336	Successful Workplace Relations	
BUAD 4325	Negotiation in Business	
MGMT 3320	Organizational Behavior	
MGMT 3327	Mgt of Innovation & Technology	
MGMT 3335	Diversity, Equity, & Inclusion in Organizational Management	

Notes

Students must earn a 2.0 minimum overall GPA in all coursework.

Students must meet a 2.0 minimum overall major GPA in all major coursework.

Students must earn a 2.0 minimum SHSU GPA in all coursework.

Students must meet a 2.0 minimum SHSU major GPA in all major coursework.

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

Additional information: Reference the Program Landing Page (<https://www.shsu.edu/programs/bachelor-of-science-in-agricultural-engineering-technology/>) for additional information, such as cost, delivery format, contact information, or to schedule a visit.

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
AGET 2303		3 Component Area III (http://catalog.shsu.edu/undergraduate/academic-policies-procedures/degree-requirements-academic-guidelines/core-curriculum/#componentareaiii)	4
AGRI 1131		1 Component Area VI (http://catalog.shsu.edu/undergraduate/academic-policies-procedures/degree-requirements-academic-guidelines/core-curriculum/#componentareavi)	3
AGRI 1309, CSTE 1330, or AGBU 2389 ¹		3 Component Area VII (http://catalog.shsu.edu/undergraduate/academic-policies-procedures/degree-requirements-academic-guidelines/core-curriculum/#componentareavii)	3
MATH 1314 ²		3 ANSC or PLSC Elective ³	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/#componentareaiiv)	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 or Concentration ^{4,5,6}		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 MGMT 3310	3
Component Area IX (http://catalog.shsu.edu/undergraduate/academic-policies-procedures/degree-requirements-academic-guidelines/core-curriculum/#componentareaix)		4 Advanced Electives ⁷	3-6
PHYS 1305 & PHYS 1105		4 Minor Advanced OR Concentration ^{4,5,6}	6-9
Advanced Electives ⁷		4	
	15		15

Fourth Year

Fall	Hours	Spring	Hours
ACOM 3360 or ENGL 3330		3 Advanced Electives ⁷	8
Advanced Electives ⁷		6-9 Minor Advanced OR Concentration ^{4,5,6}	6

Minor Advanced OR Concentration ^{4,5,6}	3-6	
	15	14

Total Hours: 120

- ¹ Students seeking a **Concentration in Power Machinery Management** must take AGBU 2389.
- ² MATH 1314 satisfies the Core Curriculum requirement for Component Area II [Mathematics] and the Degree Specific Requirement.
- ³ Select one from the following: ANSC 1319 and ANSC 1119 OR PLSC 1307 and PLSC 1107.
- ⁴ Students have the option of either 1) pursuing a **minor** with 18 **semester credit hours** of coursework or 2) pursuing a **Concentration in Power Machinery Management with 24 semester credit hours** of coursework.
- ⁵ See, the course list for **Concentration in Power Machinery Management** below.
- ⁶ The following minors **cannot be paired** with this degree program: Minor in Agriculture Engineering Technology, Minor in Conservation Biology, Minor in Early Childhood Education, and Minor in Wildlife Ecology.
- ⁷ Students pursuing a minor take 26 semester credit hours of approved, Agricultural Engineering Technology advanced electives, including internship hours. Students pursuing a Concentration in Power Machinery Management take 20 semester credit hours approved, Agricultural Engineering Technology advanced electives, including internship hour.

Code	Title	Hours
Power Machinery Management Concentration Courses⁵		
AGBU 3361	Agribusiness Org & Mgt	3
AGBU 3367	Agricultural Finance	3
AGET 4385	Applied Electronics/Hydraulics	3
AGET 4387	Agricultural Engines & Tractor	3
AGET 4000 Approved Elective		3
ETEC 3374	Time And Motion Study	3
Concentration Electives		6
AGBU 4319	Agribusiness Ventures	
AGBU 4363	Agricultural Sales & Consulting	
AGBU 4365	Legal Issues in Agribusiness	
BUAD 3336	Successful Workplace Relations	
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Students should use elective and/or minor hours to satisfy the 42 advanced hour requirement.

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.