

The University of Tennessee at Martin
Bachelor of Science in Agriculture (with a major in General Agriculture)
Agricultural Engineering Technology Concentration
Precision Agriculture Technology Option (program 1124-PAT)

Overview

The Agricultural Engineering Technology (AGET) program was developed for students seeking careers associated with the application of technologies in the field of food and fiber production. The program prepares students to be successful in careers associated with industry or government. The curriculum is also structured to prepare students for admission to graduate school in Agriculture Engineering Technology, Agricultural Operations Management, Agricultural Systems Management, or Agricultural Mechanics.

As agriculture is becoming more technical and sophisticated, it is essential that students receive a thorough educational background in relevant technologies and business practices. Students in the Precision Agriculture Technology option students obtain a Geographic Information Systems certification while taking courses in AGET and plant science from the Department of Agriculture, Geosciences and Natural Resources.

Career Opportunities

The production of food and fiber, processing them, and transporting the final products to the world's people is the largest enterprise on earth. Everyone everywhere depends on agriculture. Colleges of agriculture and employers throughout the country recognize the necessity for trained individuals in the field of precision agriculture technology. It is estimated that nearly 50,000 jobs related to agriculture become available each year and many of them are related to technologies in precision agriculture.

Careers in Precision Agriculture Technology include: agricultural equipment manufacturers, agricultural/industrial equipment sales and service, geospatial technologies, and technological fields in government-related careers.

Facilities

The university's 600-acre farm is a showcase for precision agriculture technologies, such as center pivot irrigation, and GPS enabled tractors and harvesting equipment. Modern agricultural laboratories, classrooms, and computer laboratories are located in Brehm Hall and the Ned R. McWherter Agricultural Complex. Students utilize the latest computer technologies, GPS/GIS hardware and software, surveying instruments, and other technology-related equipment. Field trips, guest speakers, and hands-on laboratory activities enhance classroom instruction.

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B.S. in Agriculture – Agricultural Technology Concentration - Precision Agricultural Technology Option (1124-PAT)

Course Requirements for 2018-2019 catalog

Fine Arts (3 hours) *Select One*

ART 110	Understanding Visual Arts	___/3
ARTH 210	The History of Art	___/3
ARTH 211	The History of Art	___/3
DANC 110	Understanding Dance	___/3
MUS 111	Masterpieces of Music	___/3
MUS 112	Music in Our Time	___/3
MUS 113	Western Masterpieces	___/3
MUS 114	Historical Survey of Jazz	___/3
MUS 115	Music for the Masses	___/3
THEA 110	Understanding Theatre	___/3
THEA 111	Understanding Theatre	___/3

Biological & Physical Systems (12 hours)

CHEM 111	Intro: General & Inorganic	___/4
or CHEM 121	General Chemistry	___/4

Select One Sequence:

PHYS 211	College Physics	___/4
& PHYS 212	College Physics	___/4
or		
PHYS 220	University Physics	___/4
& PHYS 221	University Physics	___/4

Communication (9 hours)

ENGL 110	English Comp: Critical Thinking & Writing	___/4
or ENGL 111	English Composition (Must earn a C or better)	___/3
ENGL 112	English Composition (Must earn a C or better)	___/3
COMM 230	Public Speaking	___/3

Humanities (9 hours) *Select three:*

ENGL 250	British Literature	___/3
ENGL 251	British Literature	___/3
ENGL 260	American Literature	___/3
ENGL 261	American Literature	___/3
ENGL 270	World Literature	___/3
ENGL 271	World Literature	___/3
FREN 250	France Today: People & Culture	___/3
GERM 250	Germany Today: People & Culture	___/3
HIST 121	World Civilization I	___/3
HIST 122	World Civilization II	___/3
HIST 201	History of the U.S. I	___/3
HIST 202	History of the U.S. II	___/3
JAPN 250	Japan Today: People & Culture	___/3
PHIL 110	Adventure of Ideas: Historical	___/3
PHIL 120	Adventure of Ideas: Contemporary	___/3
PHIL 130	Ethics and Race	___/3
PHIL 160	Exploring Ethics	___/3
RLST 201	Intro to Religious Studies	___/3
SPAN 250	Latin America Today: People & Culture	___/3

Mathematics (3 hours) *Select one:*

MATH 110	Essentials of Algebra	___/4
MATH 140	College Algebra & Elementary Function	___/3
MATH 160	Calculus for Business & Life Sciences	___/3
MATH 185	Precalculus	___/5
MATH 210	Elementary Statistics & Probability	___/3
MATH 251	Calculus I	___/4

Social & Behavioral Science (6 hours) *Select two:*

AGRI 295	International Food & Fiber Systems	___/3
ANSC 270	Animal Welfare & Ethics	___/3
ECON 201	Principles of Macroeconomics	___/3
ECON 202	Principles of Microeconomics	___/3
ENGR 100	Society & Technology	___/3
GEOG 151	Intro: Regional Geography	___/3
GEOG 152	Intro: Regional Geography	___/3
GEOG 202	Intro: Cultural Geography	___/3

HLTH 111	Principles & Concepts in Personal Health	___/3
IDST 201	Intro: Women's Studies	___/3
NRM 101	Wildlife, Conservation, & Environmental Issues	___/3
NRM 250	Global Perspectives in Natural Resource	___/3
NUTR 100	Introductory Nutrition	___/3
POSC 210	American Government & Politics	___/3
POSC 220	American Political Institutions & Policy	___/3
POSC 230	Intro: World Politics	___/3
PSYC 101	Intro: Psychology	___/3
SWRK 220	Understanding Human Diversity	___/3
SOC 201	General Sociology	___/3
SOC 202	Social Problems	___/3

Concentration Requirements (79 hours)

AGEC 110	Introduction to Agricultural Business	___/3
PLSC 110	Introductory Plant & Soil Science	___/3
AGET 110	Introduction to Agricultural Engineering	___/3
SOIL 210	Soil Science	___/4
AGRI 270	Intro to Geospatial Technology	___/3
or GEOG 270	Intro to Geospatial Technology	___/3
ACCT 201	Accounting Information for Decision Making	___/3
AGEC 271	Farm Management	___/3
AGEC 311	Spreadsheet Analysis in Agribusiness	___/3
AGET 220	Surveying & Soil & Water Conservation	___/3
AGET 350	Agriculture Power & Machinery Management	___/3
AGET 382	Precision Agriculture Technologies	___/3
AGET 420	Irrigation	___/3
AGET 470	Applied Pneumatics & Hydraulics	___/3
AGET 370	Agricultural Mechanics Shop	___/3
AGET 480	Supervised Field Experience	___/3
or AGET 482	Principles of GIS & GPS	___/3
GEOG 310	Principles of Geographic Information Systems	___/3
GEOG 364	Introduction to Remote Sensing	___/3
GEOG 410	Geographic Info Systems: Modeling & App	___/3
GEOG 471	Cartography	___/3
PLSC 333	Weed Science	___/3
PLSC 433	Field Crop Production	___/3
AGRI 240	History of American Agriculture	___/3
or AGRI 295	International Food & Fiber Systems	___/3
ENGR 101	Engineering Graphics	___/3
ENGL 325	Technical Communications	___/3
or INFS 351	Business Communications	___/3
MATH 170	Trigonometry	___/3
PLSC or AGET Elective - choose from any 300 or 400 level course:		___/3

Major: Agriculture
Concentration: Agricultural Engineering Technology
Option: Precision Agriculture Technology

2018-2019

Sample Program of Study

This list includes all courses required; however, the sequence may be flexible.

FALL

Freshman Year	Hours
GENS 101	2
ENGL 111	3
Any Gen Ed MATH	3
PLSC 110	3
Humanities Elective*	3
AGEC 110	3
Total	17

Sophomore Year	Hours
AGRI 240 or 295	3
AGEC 271	3
PHYS 211	4
Humanities Elective*	3
AGEC 220	3
Total	16

Junior Year	Hours
Fine Arts Elective*	3
PLSC 333	3
AGRI/GEOG 270	3
AGEC 311	3
AGEC 350	3
Total	15

Senior Year	Hours
GEOG 410	3
GEOG 471	3
PLSC 433	3
GEOG 364	3
AGEC 470	3
Total	15

SPRING

Freshman Year	Hours
CHEM 111	4
ENGL 112	3
MATH 170	3
AGEC 110	3
Humanities Elective*	3
Total	16

Sophomore Year	Hours
PHYS 212	4
SOIL 210	4
ENGR 101	3
AGEC 370	3
Social/Behavioral Sci Elective*	3
Total	17

Junior Year	Hours
COMM 230	3
ACCT 201	3
Social/Behavioral Sci Elective*	3
GEOG 310	3
AGEC 382	3
Total	15

Senior Year	Hours
PLSC or AGECElective**	3
AGEC 420	3
AGEC 480 or 482	3
ENGL 325 or INFS 351	3
Total	12

*Humanities, Fine Arts and Social and Behavioral Science Electives must meet the university requirement.

**Plant Science or Agricultural Engineering Electives may be any course at a 300-400 level.