Agricultural Technology Management (Biomanufacturing Technology Option)

120 credit hours total

YEAR 1

FALL

CHM 210 (4)
Chemistry I

●ATM 160 (3)
Engineered Systems and Technology in Agriculture

DEN 160 (1)
College of Engineering Orientation

✻COMM 106 (3)
Public Speaking
KSC-2

✻Elective (3)
Social and Behavioral Sciences
KSC-5

(14 credit hours)

SPRING

BIOL 198 (4)
Principles of Biology

ECON 110 (3)
Principles of Macroeconomics

✻ENGL 100 (3)
Expository Writing I
KSC-1

✻Elective (3)
Arts and Humanities
KSC-6

✻Elective (3)
Institutional
KSC-7

(16 credit hours)

YEAR 2

FALL

✻MATH 205 (3)
General Calculus and Linear Algebra
KSC-3

MANGT 220 (3)
Principles of Management

✻ENGL 200 (3)
Expository Writing II
KSC-1
PR: ENGL 100

▲Elective (3)
Graphic Communications

✻Elective (3)
Arts and Humanities
KSC-6

(15 credit hours)

SPRING

STAT 225 (3)
Introduction to Statistics

✻PHYS 113 (4)
General Physics I
KSC-4

ACCTG 231 (3)
Introduction to Managerial Accounting

▲Elective (3)
Technical

✻Elective (3)
Social and Behavioral Sciences
KSC-5

(15 credit hours)

YEAR 3

FALL

CC 110 (2)
Introduction to Computing

CC 111 (1)
Elements of Computer Programming
PR/CO: CC 110

BIOCH 265 (5)
Introductory Organic Biochemistry
PR: CHM 110

●ATM 245 (3)
Introduction to Biomanufacturing Technology
PR: BIOL 198 or CHM 210 or BIOCH 265

▲Elective (3)
Technical

(14 credit hours)

SPRING

●ATM 331 (1)
Professional Practice for Agricultural Technology Managers
PR: JR standing

●ATM 450 (3)
Sensors and Controls for Agricultural and Biological Systems
PR: PHYS 113 or 115
PR: ATM 160 or MATH 100

●BAE 345/346 (3)
Properties of Biological Materials and Laboratory
PR: CHM 210 or 220

●ATM 345 (3)
Cell Culture Technology in Biomanufacturing
PR: MATH 150 or 205 or 220, BIOL 198 or CHM 210 or BIOCH 265

▲Elective (3)
Business Management

✻Elective (3)
Institutional
KSC-7

(16 credit hours)

YEAR 4

FALL

●ATM 536 (3)
ATM Capstone Project
PR: ATM 331 and SR standing

●ATM 511 (3)
Agricultural Building Systems
PR: ATM 160 or PHYS 113 or 115

BIOL 255 (4)
General Microbiology
PR: BIOL 198, one CHM course

▲Elective (3)
ATM/BAE

▲Elective (2)
Technical

(15 credit hours)

SPRING

●ATM 545 (3)
Processing and Storage of Grains
PR: ATM 160 or PHYS 113 or 115

▲Elective (3)
ATM/BAE

▲Elective (3)
ATM/BAE

▲Elective (3)
Technical

▲Elective (3)
Business Management

(15 credit hours)

KANSAS STATE UNIVERSITY | Carl R. Ice College of Engineering

KEY

◪ = Prerequisite for another course PR = Prerequisite requirement PR/CO = Prerequisite or concurrent requirement
✻ = K-State Core (KSC) course ▲ = See department approved electives ● = Only offered in the semester shown

Degree map is for advising purposes only. Students are responsible for complying with University Catalog requirements.

Agricultural Technology Management Curriculum Notes

Students who satisfy all or part of K-State Core Institutional Electives (KSC-7) with courses that satisfy other degree requirements may use additional unrestricted electives to meet the degree requirement of 120 credit hours.

Substitutions

AGEC 318 or MANGT 421 can substitute for MANGT 220.

CE 202 or GRSC 210 can substitute for BAE 250.

ECON 120 can substitute for ECON 110.

Technical Electives

ATM/BAE electives and technical electives must be selected from an approved departmental list and be used to complete one of the option areas listed below.

Agribusiness Management (43 credit hours total in option)

- 21 credit hours of required courses within option
- 15 credit hours of ATM/BAE electives
- 7 credit hours of technical electives

Biomanufacturing (43 credit hours total in option)

- 24 credit hours of required courses within option
- 9 credit hours of ATM/BAE electives
- 10 credit hours of technical electives

Precision Agriculture (43 credit hours total in option)

- 26 credit hours of required courses within option
- 12 credit hours of ATM/BAE electives
- 15 credit hours of technical electives

Production Agriculture (43 credit hours total in option)

- 19 credit hours of required courses within option
- 9 credit hours of ATM/BAE electives
- 15 credit hours of technical electives

Water Management (43 credit hours total in option)

- 17 credit hours of required courses within option
- 15 credit hours of ATM/BAE electives
- 11 credit hours of technical electives

Additional information is available at **bae.k-state.edu/academics/undergraduate/atm/atm-elective-lists.pdf** .

K-State Core

The K-State Core (KSC) is the university's version of the systemwide general education framework established by the Kansas Board of Regents.

KSC requirement 1 – English (6 hours)
KSC requirement 2 – Communications (3 hours)
KSC requirement 3 – Math and Statistics (3 hours)
KSC requirement 4 – Natural and Physical Sciences (4-5 hours)
KSC requirement 5* – Social and Behavioral Sciences (6 hours)
KSC requirement 6* – Arts and Humanities (6 hours)
KSC requirement 7 – Institutional Electives (6 hours)

To view course lists for each requirement, visit **k-state.edu/general-education** .

**Requires two courses from two different subject areas.*