### Agricultural Technology Management
(Biomanufacturing Technology Option)
120 credit hours total

<table>
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<tr>
<th>FALL</th>
<th>YEAR 1</th>
<th>SPRING</th>
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<th>FALL</th>
<th>YEAR 3</th>
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<th>YEAR 4</th>
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<tr>
<td>CHM 210 (4)</td>
<td>BIOL 198 (4)</td>
<td>ECON 110 (3)</td>
<td>ATM 160 (3)</td>
<td>ENGL 100 (3)</td>
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<td>ENGL 200 (3)</td>
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<td>Chemistry I</td>
<td>Principles of Biology</td>
<td>Principles of Macroeconomics</td>
<td>Engineered Systems and Technology in Agriculture</td>
<td>Expository Writing I</td>
<td>Arts and Humanities</td>
<td>Expository Writing II</td>
<td>Accounting for Business Operation</td>
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<td>Social and Behavioral Sciences</td>
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<td>ATM 245 (3)</td>
<td>ATM 450 (3)</td>
<td>ATM 331 (1)</td>
<td>ATM 536 (3)</td>
<td>ATM 545 (3)</td>
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<td>Introduction to Biomanufacturing Technology</td>
<td>Sensors and Controls for Agricultural and Biological Systems</td>
<td>Professional Practice for Agricultural Technology Managers</td>
<td>ATM Capstone Project</td>
<td>Processing and Storage of Grains</td>
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<td>Cell Culture Technology in Biomanufacturing</td>
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<td>ATM 331 (1)</td>
<td>Professional Practice for Agricultural Technology Managers</td>
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**Degree Map:**
- **FALL** (14 credit hours)
- **SPRING** (16 credit hours)
- **FALL** (15 credit hours)
- **SPRING** (15 credit hours)
- **FALL** (14 credit hours)
- **SPRING** (16 credit hours)
- **FALL** (15 credit hours)
- **SPRING** (15 credit hours)

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

Degree map is for advising purposes only. Students are responsible for complying with University Catalog requirements.
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/provost/kstate-core.

*Requires two courses from two different subject areas.