

SUSTAINABLE FARM AND RANCH MANAGEMENT (TECHNICAL CERTIFICATE)

Overview

Award: Technical Certificate

Program of Study: Sustainable Farm and Ranch Management

Program Code: 1212

CMU Tech's Agriculture Science Program provides students with a solid foundation of agricultural knowledge based on principles of agribusiness, stewardship and stockmanship. Exploring an expanded outlook on the agricultural industry and practical skills required for a sustainable agriculture business. With this skill set, students are well prepared to successfully pursue their chosen agricultural career.

For more information on what you can do with this major, visit Career Services' [What to Do with a Major?](#) resource.

For more information on what you can do with this major, visit [CMU Tech's Programs of Study page](#).

All CMU/CMU Tech technical certificate graduates are expected to demonstrate proficiency in specialized knowledge/applied learning, communication fluency, and critical thinking. In addition to these campus-wide student learning outcomes, graduates of this major will be able to:

1. Apply Core Agricultural Knowledge by demonstrating an understanding of agricultural science principles, including agribusiness, stewardship and stockmanship, and explain how these principles contribute to sustainable farm and ranch operations.
2. Demonstrate Business and Financial Competency by develop and analyzing farm and ranch business plans; applying concepts of agricultural finance, marketing, and facility design to ensure profitability and long-term sustainability.
3. Utilize Critical Thinking and Problem-Solving Skills to evaluate real-world agricultural challenges, such as environmental variability, market shifts, and resource limitations, with the ability to propose practical, innovative solutions.
4. Integrate Sustainable Practices on a Production Agriculture scale, with identifying and implementing sustainable farming and ranching methods that balance productivity with environmental stewardship and animal welfare.
5. Employ Hands-On Technical Skills, such as operating, maintaining, and assessing agricultural systems, equipment, and facilities through applied learning experiences in classrooms, labs, and fieldwork.
6. Communicate Professionally and Effectively, to present ideas, business plans, and agricultural concepts clearly and persuasively in both oral and written formats to peers, industry professionals, and community stakeholders.
7. Engage in Professionalism and Career Readiness through the demonstration of leadership, collaboration, and ethical decision-making through internships, cooperative learning experiences, and industry partnerships, preparing for employment or continued education in agricultural sciences.

Requirements

Each section below contains details about the requirements for this program. Select a header to expand the information/requirements for that particular section of the program's requirements.

To print or save an overview of this program's information, including the program description, learning outcomes, requirements, suggested course sequencing (if applicable), and advising and graduation information, scroll to the bottom of the left-hand navigation menu and select "Print Options." This will give you the options to either "Send Page to Printer" or "Download PDF of This Page." The "Download PDF of This Page" option prepares a much more concise presentation of all program information. The PDF is also printable and may be preferable due to its brevity.

Institutional Certificate Requirements

The following institutional requirements apply to all CMU or CMU Tech Technical Certificates. Specific programs may have different requirements that must be met in addition to institutional requirements.

- Consists of 5-59 semester hours.
- Consists of 100-200 level courses.
- At least fifty percent of the credit hours must be taken at CMU/CMU Tech.
- 2.00 cumulative GPA or higher in all courses taken to satisfy certificate requirements.
- A grade lower than "C" will not be counted toward meeting the requirements.
- A course may only be used to fulfill one requirement for each degree/certificate.
- Non-traditional credit, such as advanced placement, credit by examination, credit for prior learning, cooperative education and internships, cannot exceed twenty-five percent of the semester credit hours required for a technical certificate.
- Pre-collegiate courses (usually numbered below 100) cannot be used for graduation.
- Capstone exit assessment/projects (e.g., Major Field Achievement Test) requirements are identified under Program-Specific Certificate Requirements.
- The Catalog Year determines which program sheet and certificate requirements a student must fulfill in order to graduate. Visit with your advisor or academic department to determine which catalog year and program requirements you should follow.
- See "Requirements for Undergraduate Degrees and Certificates" in the catalog for a complete list of graduation requirements.

Program Specific Certificate Requirements

(33 semester hours)

Code	Title	Semester Credit Hours
Required Courses		
AGRS 102	Agriculture Economics	3
AGRS 115	Fundamentals of Agriculture	3
AGRS 125	Agricultural Machinery and Technology	3
AGRS 118	Agriculture Facilities Management and Design	3

AGRS 208	Agricultural Finance	3
AGRS 205	Farm and Ranch Management	3
AGRS 210	Agricultural Marketing	3
AGRS 293	Cooperative Experience/Internship	5
ENGL 111	English Composition I-GTCO1	3
MATH 108	Technical Mathematics	4
Total Semester Credit Hours		33

- Submit the “Intent to Graduate” form to the Registrar’s Office to officially declare the intended graduation date and commencement ceremony plans.
- Register for all needed courses and complete all requirements for each degree sought.

Submission deadlines and commencement details can be found on the [Graduation](#) web page.

If a student’s petition for graduation is denied, it will be their responsibility to apply for graduation in a subsequent semester. A student’s “Intent to Graduate” does not automatically move to a later graduation date.

Suggested Course Plan

First Year

Fall Semester

Semester
Credit
Hours

AGRS 102	Agriculture Economics	3
AGRS 115	Fundamentals of Agriculture	3
AGRS 118	Agriculture Facilities Management and Design	3
AGRS 125	Agricultural Machinery and Technology (or higher)	3
MATH 108	Technical Mathematics	4
Semester Credit Hours		16

Spring Semester

AGRS 205	Farm and Ranch Management	3
AGRS 208	Agricultural Finance	3
AGRS 210	Agricultural Marketing	3
AGRS 293	Cooperative Experience/Internship	5
ENGL 111	English Composition I-GTCO1	3
Semester Credit Hours		17
Total Semester Credit Hours		33

Advising and Graduation Advising Process and DegreeWorks

Documentation on the pages related to this program is intended for informational purposes to help determine what courses and associated requirements are needed to earn a certificate. Some courses are critical to complete in specific semesters while others may be moved around. Meeting with an academic advisor is essential in planning courses and discussing the suggested course sequencing. It is ultimately the student’s responsibility to understand and fulfill the requirements for their intended certificate.

DegreeWorks is an online degree audit tool available in MAVzone. It is the official record used by the Registrar’s Office to evaluate progress towards a certificate and determine eligibility for graduation. Students are responsible for reviewing their DegreeWorks audit on a regular basis and should discuss questions or concerns with their advisor or academic department head. Discrepancies in requirements should be reported to the Registrar’s Office.

Graduation Process

Students must complete the following in the first two months of the semester prior to completing their certificate requirements (for one-semester certificates, complete in the first week of class):

- Review their DegreeWorks audit and create a plan that outlines how unmet requirements will be met in the final semester.
- Meet with their advisor and modify their plan as needed. The advisor must approve the final plan.