



AGRICULTURAL POWER AND TECHNOLOGY

Course Description

Agricultural Power and Technology (APT) introduces students to mechanical and engineering career opportunities in the world of agriculture.

Students experience hands-on activities related to shop safety, project planning, design, fabrication, energy, machines, and structures. While enrolled in APT, students acquire the basic skills to operate, repair, engineer, and design agricultural structures and equipment. Throughout the course, students will apply physical science and engineering principles to agricultural mechanics.



Equipping teachers

- Specialization course
- Full year course
- Inquiry and project based instructional practices
- CASE Institute professional development

Engaging students

- ✓ Practice the engineering design process
- ✓ Develop a technical manual for tools and equipment
- ✓ Explore mechanical and engineering careers and technical skills.
- ✓ Demonstrate shop safety and tool operation
- ✓ Use science, technology, engineering, and math, to solve problems.

Instructional Units

- Introduction to Ag Power and Technology
- Safety and Measurement
- Material Properties
- Fabrication
- Energy
- Machines and Structures
- Mechanical Applications

Flexibility & Adaptability

CASE provides a comprehensive professional development experience, in addition to a work-life balance so teachers can best educate their students. Course work is adaptable and customizable based on teacher preference to fit all geographies and communities.

“As an agriculture teacher, I'm always looking for new labs, units, and activities for my students. CASE does a great job of combining agriculture and science to explore why the world works the way that it does. The labs scaffold students from being introduced to a concept to solving problems independently.”

- Mattie Mink, Kentucky

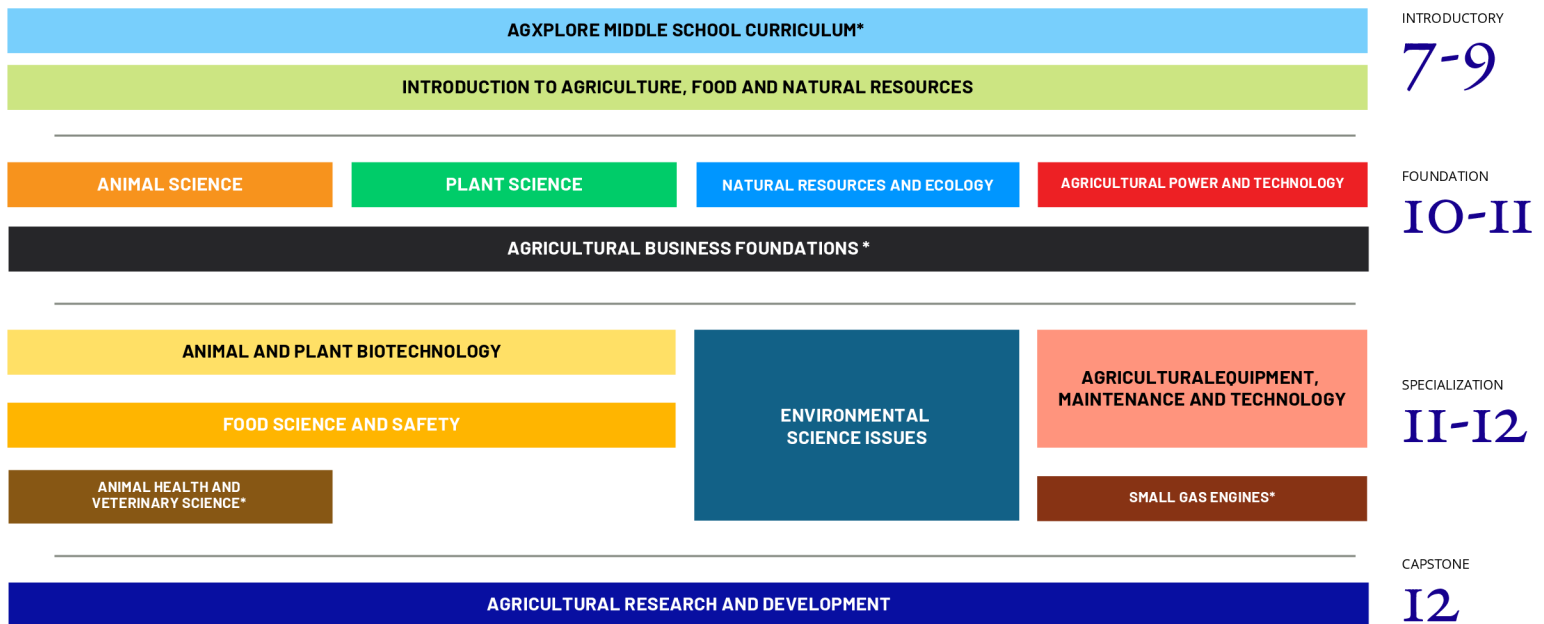


scan or visit case4learning.org

Purposeful Curriculum

CASE has sequenced courses at four levels that enhance the delivery of agricultural education through inquiry-based learning and technical skills.

Courses and Instruction Levels



Mission

To design industry-leading, inquiry-based curriculum and teacher education to create lifelong learners and prepare students for the future of agriculture.

Standards Aligned

CASE develops curriculum with industry feedback and aligns courses to National Agriculture, Food, & Natural Resources and Career & Technical Education standards.

Professional Development and Lifetime Certification

CASE 4 Learning enhances agricultural education with inquiry and project-based learning to prepare the next generation of the agricultural workforce through teacher certification and professional development.

CASE Institutes

Professional development events preparing teachers to implement full-year CASE courses. Institutes provide teachers the content and skills needed to use CASE curricula in their classroom. CASE Institutes range from five to eight days in a hybrid, in-person, or virtual format.

BriefCASEs *

Professional development for shortened CASE courses or modules. BriefCASEs range from one to three days.

Grants & Scholarships

Corporate sponsors and donors throughout the agriculture industry support CASE teachers through funding material implementation grants and professional development scholarships. Teachers are eligible to apply in the fall to fund their programs in the following year.

Certification

Once the teacher is certified by attending a CASE Institute or BriefCASE, they have lifetime access. There are no subscriptions or renewal fees!



In-Person

Teachers attend the entire training at the host site.



Virtual

Teachers attend the entire training online. Teachers will receive materials via mail, and are responsible for their lab space.



Hybrid

Teachers receive training both virtually and in-person based on the course.