

Want to start using CASE in your agricultural education program?

Attend a CASE Institute!



- CASE Institutes are intense professional development led by practicing CASE teachers.
- The CASE curriculum is free to those who successfully complete a CASE Institute.
- Institutes are hosted by affiliated universities and colleges across the United States each summer.
- CASE teachers receive complimentary updates to the curriculum and many other services throughout their careers.
- For a complete listing of upcoming CASE Institutes and certification information, please visit www.case4learning.org and click on "Professional Development."

CASE



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**AGRICULTURAL POWER
AND TECHNOLOGY**



CASE

*Curriculum for Agricultural
Science Education*

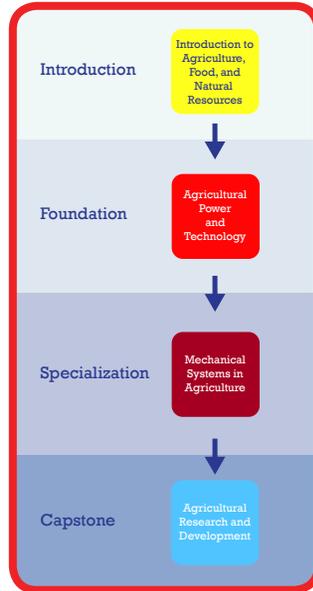
CASE PROGRAM OF STUDY

“Career and Technical Education students should follow a program of study made up of a **purposeful sequence** of **rigorous courses** to build student knowledge and skills.”

– recommendation in Perkins reauthorization



We have carefully designed a program of study pathway for agricultural engineering that scaffolds student learning within courses and throughout the pathway.



Agricultural Power and Technology



All CASE pathways begin with the *Introduction to Agriculture, Food, and Natural Resources* course, then branch into four areas which focus on animals, plants, agricultural engineering, and natural resources.

Students develop a foundation of mechanical and engineering skills in *Agricultural Power and Technology*. Science of materials and energy used in agriculture are integrated throughout the course to develop a strong knowledge base. Once students establish a strong scientific knowledge and skill base, they begin to design machines and structures. Then students progress to the specialization course *Mechanical Systems in Agriculture*. All CASE pathways culminate with the capstone course *Agricultural Research and Development*.

Agricultural Power and Technology

Agricultural Power and Technology is a foundation level course designed to prepare students for the wide array of career opportunities in agricultural engineering. Students are immersed in inquiry-based exercises that tie in the math and science of agricultural mechanics and engineering. Throughout the course, students apply technical skill while becoming competent in the process used to operate, repair, engineer, and design agricultural tools and equipment.

Agricultural Power and Technology

Areas of study include:

- Engineering Design
- Shop Safety
- Tool Operation
- Material Properties and Selection
- Project Planning
- Fabrication
- Energy and Power
- Machines
- Structures

CASE provides teachers hands-on professional development to facilitate instruction.

We are grateful to **TransCanada**, **John Deere**, and **Firestone** for sponsoring the CASE *Agricultural Power and Technology* course as a special project through the **National FFA Foundation**.

