DEPARTMENT OF AGRICULTURAL AND BIOLOGICAL ENGINEERING

AGRICULTURAL MECHANIZATION & BUSINESS

COLLEGE OF AGRICULTURE, FORESTRY AND LIFE SCIENCES

THE STUDY OF AG MECH

Agricultural mechanization and business (ag mech) combines the science of agricultural systems and technologies with a sound background in business management in order to produce a graduate that is uniquely qualified to enter into a wide range of careers. The program is well-rooted in the physical and biological sciences, with an emphasis on unit operations in today's agricultural industries.

THE CLEMSON PROGRAM

Clemson University offers the Bachelor of Science degree in agricultural mechanization and business. The curriculum is administered by the College of Agriculture, Forestry, and Life Sciences through the Department of Agricultural and Biological Engineering. Ag mech academic advisers, instructors, classrooms, and laboratories are located in McAdams Hall.

WHAT YOU WILL LEARN

Students who are mechanically or technologically inclined and interested in any aspect of the food and fiber production and processing industries will enjoy working in this field of agriculture. This program prepares students for entry into many different careers in agriculture and industry. Ag mech graduates are instrumental in delivering new technologies and applying innovative and sound management practices.

While agricultural technologies form the basis of much of the curriculum, the qualifications of ag mech graduates do not limit them to entering only those fields related to agriculture. Ag mechs are capable of pursuing a broad array of career opportunities extending far beyond the agribusiness arena to many related and similar business/industrial endeavors. For example, expertise and knowledge of hydraulic systems qualifies the graduate not only for agricultural, earthmoving, and industrial machinery, but also for the pneumatic automation and control systems common in industrial production facilities.

THE AG MECH CURRICULUM

At the heart of the ag mech curriculum lie foundations in mechanical and power systems, which produces graduates that demonstrate competencies in such an extensive list of disciplines. An aspect of the program that is particularly valuable to businesses is that the students are not only trained to understand and be able to deliver product technology, but they are also prepared with a firm appreciation of the management and marketing necessary to support a profitable company.

Business skills are developed collaterally with technical skills because every company must operate as an efficient business in order to be successful. Whether a graduate is interested primarily in the technical aspects of the industry or in the business management aspects of the company, the most successful will have a keen appreciation of both.

The ag mech undergraduate curriculum consists of agricultural engineering technology, agricultural and basic sciences, and business management, in addition to the University's general education requirements. The program includes courses in the following areas:

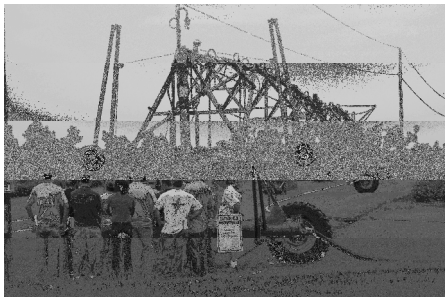
- Basic sciences – math, physics, and chemistry
- Applied sciences – Biology, computer technology, soil science
- Business – Accounting, economics, management, marketing
- Ag mech core courses – Fabrication, machinery management, surveying
- Ag engineering technology – Soil & water conservation, mechanical and hydraulic systems, electrical systems, drainage irrigation and waste management, agricultural structures and environmental control, precision ag technology, mobile power systems

Students are encouraged to minor in agricultural business management, but have the option to choose any other minor offered through the university. In this manner, students can tailor their program of study to meet individual career goals.

CAREER OPPORTUNITIES

The program prepares graduates for technical sales and service, systems testing and development, business and operations management, and product marketing in fields that stretch across the full spectrum of the agricultural industry. Some of these fields include construction, agricultural, and forestry equipment and machinery; agricultural chemicals, seeds, and fertilizers; precision and variable rate production technologies; hydraulic, pneumatic, and electrical control and automation systems; animal production; government regulation; and corporate or family farm management. A unifying factor in all of the delivered material is an emphasis on energy conservation, sensible use of natural resources, and environmental sustainability.

Because they are able to contribute to companies from both a technical and managerial standpoint, ag mech graduates are well prepared to learn the company from the bottom to the top. The technical background equips graduates to understand and to contribute to the production function of the company. The business background enables them to understand and appreciate the bottom line of profitability. Previous graduates have been successful in moving toward top management in their companies. Those graduates desiring to start their own company will find their technical and business backgrounds to be invaluable assets.



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