AGRICULTURAL SYSTEMS MGT (ASM)

ASM 105 Survey of Agricultural Mechanics
1-3 credits, max 3
This course is designed to introduce the student to the principles of technology in agriculture. It includes the development of knowledge and skills pertaining to agricultural mechanics, welding, power technology, electricity, and structures. It will provide introductory learning experiences for students in the areas of agricultural systems management.

ASM 107 Beginning Welding
2 credits
Principles of operation, use, and care of arc and acetylene welding equipment. One lecture, one 2-hour lab, and two hours of individual practice a week. Enrollment limited to 12 per section. Cooperative: open to WSU degree-seeking students.

ASM 112 Introduction to Agricultural Systems Management
3 credits
Application of basic engineering principles to solving problems dealing with farm machinery, buildings, processing, irrigation, and energy use. Recommended Preparation: high school algebra.

ASM 200 (s) Seminar
Credit arranged.

ASM 202 Agricultural Shop Practices
2 credits
Primarily for agricultural mechanization and agricultural education students. Operation, use, and care of shop tools and equipment. One lecture and one 3-hour lab a week.

ASM 204 (s) Special Topics
Credit arranged.

ASM 210 Small Engines
2 credits
Principles of engine operation, tune-up, and maintenance; repair and overhaul of small engines. One lecture, one 2-hour lab, and two hours of individual practice a week. Enrollment limited to 12 per section.

ASM 299 (s) Directed Study
Credit arranged.

ASM 305 GPS and Precision Agriculture
3 credits
This course will cover the fundamentals of global positioning, yield monitors, and variable rate applications. Instrumentation used in agriculture, environmental science, and industry will be discussed. Two lectures and one 3-hour lab a week. Cooperative: open to WSU degree-seeking students.

ASM 315 Irrigation Systems and Water Management
3 credits
Irrigation methods, irrigation management, water rights, conveyance and measurement, pumps, soil-water-plant relationships, and drainage. Two lectures and one 3-hour lab a week. Cooperative: open to WSU degree-seeking students.
Prereq: SOIL 205, MATH 108, MATH 143, MATH 160 or MATH 170 or Permission.

ASM 331 Electric Power Systems for Agriculture
3 credits
Basic circuits; wiring and the code; motors and controls; heating, lighting, and power. Two lectures and one 3-hour lab a week. Cooperative: open to WSU degree-seeking students.

ASM 398 (s) Internship
1-6 credits, max 6
Graded P/F.
Prereq: Permission.

ASM 400 (s) Seminar
Credit arranged.

ASM 403 (s) Workshop
Credit arranged.

ASM 404 (s) Special Topics
Credit arranged.

ASM 407 Advanced Welding
1 credit
This course provides the student an opportunity to learn various advanced welding theories, practices and applications for ferrous and non-ferrous metals, which include Gas Metal Arc Welding (GMAW), Flux Cored Arc Welding (FCAW), Gas Tungsten Arc Welding (GTAW) and Plasma Arc Cutting (PAC). These are only introduced in ASM 107, Beginning Welding, and will be covered in depth in this course. This course will also provide the student with a technical understanding of calculating material and use of proper procedures for the completion of project manufactured in the lab. Student presentations and demonstrations are required. This course will introduce emerging technologies in welding and fabrication industries.
Prereq: ASM 107 and Permission.

ASM 409 Agricultural Tractors, Power Units and Machinery Management
4 credits
This course focuses on the selection, operation, adjustment, and servicing of farm tractors and power units. Fuels, lubrication, cooling, and electrical systems will also be covered. Machinery operation, power transmission systems, hitching, traction, and safety are also discussed. The course will conclude with discussions on depreciation and machinery replacement. Three 1-hour lectures and one 3-hour lab a week.

ASM 412 Agricultural Safety and Health
2 credits
Covers a broad variety of items related to agricultural safety and health: identification of safety and health hazards, maximizing capabilities of farmers and ranchers with disabilities, grain and livestock handling, chemical and gases handling, and fire safety; corrective measures to eliminate hazards and application of information learned to student's own situation. (Alt/yr)

ASM 433 Agricultural Processing Systems
3 credits
Grain cleaning, mixing, and drying; materials handling, heat transfer, pumps, fans, refrigeration, and instrumentation. Two lectures and one 3-hour lab a week; one 1-day field trip. Recommended Preparation: MATH 160.

ASM 498 (s) Internship
1-6 credits, max 6
Graded P/F.
Prereq: Permission.

ASM 499 (s) Directed Study
Credit arranged.