UTAH SYSTEM OF HIGHER EDUCATION

Utah System of Higher Education
Farm Operations Technology
FY2027 / 6 Credits (180 Clock-Hours)

Foundational Courses

TEFO 1020 Farm Financial and Production Records — 3 Credits / 90 Clock-Hours

Electronic financial and production record keeping is taught using actual farm financial and production records. Records are organized for whole farm as well as enterprise reporting. Balance sheets and an income statement is prepared for financial lending and reporting and for tax preparation.

Objectives:
• Accurate financial records.
• Input all financial transactions into accounting software.
• Keep accurate inventory for creating a complete and accurate beginning and ending balance sheets.
• Organize non-financial records (production and yields in pounds, tons, bushels, etc.) and enter into a production record keeping system (spreadsheet).
• Perform the appropriate calculations to determine all production costs as well as per unit cost of production.

TEFO 2030 Farm Analysis — 3 Credits / 90 Clock-Hours

Using financial transactions including inventory along with all assets and all liabilities to prepare beginning and end of year balance sheets a fiscal year-end whole farm and enterprise analysis report is completed. Analysis of the year-end reports include benchmarking key financial ratios and cost of production matrixes to identify strengths and weaknesses in the business.

Objectives:
• Perform a whole farm business analysis and appropriate enterprise analysis of different farm operation through FINPACK software.
• Make accrual adjustments to cash Income Statement to arrive at an accrual adjusted Income Statement.
• Perform a complete business analysis which includes benchmarking key matrix variances.
• Do cash flow planning.
• Demonstrate the process of making sound farm management decisions.
• Implement a marketing plan for farm production.
• Utilize applicable government programs and adhere to government regulations.

Supplemental Courses Varies by Institution

Snow

TEFO 1050 Farm Equipment Operations and Management **3 Credits / 90 Clock-Hours**

Students are prepared to analyze factors that comprise safe machinery management and operation and the function of various machine mechanisms. Students learn machinery operation, maintenance, farm machine safety, procedures for diagnosing machinery problems, basic machine repair and processes for making machinery management decisions.

Objectives:
• Explain proper uses and selection of machines and pairing of machines for work tasks.
• Identify farm machines and machinery operations.
• Perform all maintenance and basic repair tasks.
• Perform economic analysis for machinery and pairing of machines to accomplish the work on a case study farm including fuel use and efficiency.

TEFO 2450 Agriculture Facilities Operations and Management **3 Credits / 90 Clock-Hours**

This course trains students in the proper handling and design of livestock and veterinary facilities. This includes waste management and composting. Students will also define and create CAFO and AFO plans required by the State of Utah in large animal feeding operations.

Objectives:
• Define facility, environmental and waste management terms.
• Select and explain appropriate stockmanship, facility location, waste management, and environmental stewardship.
• Design solutions for new facilities and develop solutions for existing facilities that maintain or increase profitability.
• Evaluate the effectiveness of different facility locations and waste management practices.
• Create a CAFO and AFO waste management plan for a livestock operation.

TEFO 2500 Irrigation Operations and Management **3 Credits / 90 Clock-Hours**

This course trains students in various technologies used in sprinkler irrigation systems. Emphasis is on pivot maintenance and operation of Variable Rate (VR) (precision) irrigation to meet production goals. Various crop's water requirements, water resources, application methods, types and selection of irrigation equipment, application time and rates, irrigation wells principles and operations, maintenance and repair, costs and returns are covered.

Objectives:
• Explain the effects of irrigation on crop production.
• Use soil moisture probes to probe soil moisture as part of developing an irrigation plan.
• Identify components utilized to make and implement Variable Rate Irrigation plans.

TEFO 2700 Farm Safety **3 Credits / 90 Clock-Hours**

Farm Safety course provides training in working with and around machinery, chemicals, electricity, hydraulics, ATV, and farm animals. Students will acquire knowledge and demonstrate skills to safely work on a farm ranch.

Objectives:
• Demonstrate safe operation of major farm equipment including: understanding of equipment instrumentation and controls, towing, backing, equipment attachment safety, and common machine hazards and highway safety.
• Complete requirements for Utah Pesticide Applicators License which includes testing on, Pesticide and chemical safety, formulations, labeling and preventing pesticide poisoning.
• Compete assessments on working safely around and with electricity, overhead line clearance, main switches, breaker boxes, and fuses.
• Demonstrate safe handling and working around livestock, horses, cattle, zoonosis (diseases which can be transmitted from animals to humans) and animal waste-manure pits.
• Complete Utah OHV Education Course in safe operation of ATV's, and OHV's, including protective equipment, operation on paved or gravel roads and on slopes, and legal ATV operation on public roads and property.
• Demonstrate taking care of yourself, personal protection equipment, ergonomics, stress, rest, heatstroke, drugs and medications, and first aid.

TEFO 2830 Grazing and Forage Management **3 Credits / 90 Clock-Hours**

Students learn to analyze the factors that comprise forage growth, forage nutrients, soil health, total forage production, grazing, monitoring of forage growth and grazing management. Students will know the various growing and grazing practices and their role in the economics of a livestock operation, resource sustainability, approaches and procedures for making management decisions, and develop a grazing plan.

Objectives:
• Identify forages, life cycles, development stages and harvesting principles.
• Use aerial imagery for forage growth and health, and livestock utilization.
• Identify monitoring techniques including trend line analysis and aerial imagery for forage resource viability.
• Develop and implement grazing and harvesting techniques to best utilize soil, forage, and livestock resources.
• Explain the economics associated with resource improvements and forage use and management.
• Explain plant physiology and function, and soil, plant, and animal health principles.