Werklund School of Agriculture Technology Outcome Competencies



Solving Technology Problems (0-3-0 hrs) - ATG 1008

1. General Areas of Competency

- A. Engage in the cyclical, inter-related process of effective problem-solving, including Defining, Stating, Selecting and Collecting, Analyzing, Testing and Communicating. Outcomes:
 - i. Identify what is known and required to clarify a problem.
 - ii. Explore problem-solving strategies using relevant information, resources or criteria.
 - iii. Explain the importance of options in a problem-solving process.
 - iv. Evaluate the impact of possible solutions to carry out a viable option.
 - v. Describe the iterative process of problem-solving to find a successful solution.
- B. Apply the problem-solving strategy to a technical agricultural issue. Outcomes:
 - i. Configure a spreadsheet for collecting and cleaning data to solve a problem.
 - ii. Use computer software as a technical problem-solving tool.
 - iii. Perform advanced data analysis and data visualization to support the problem-solving process.
 - iv. Identify the needs and associated information to solve a technical agricultural issue.
 - v. Develop criteria to evaluate possible solutions to solve a technical agricultural issue.
 - vi. Utilize computer programming methods to solve a technical agricultural issue.
 - vii. Apply algorithmic problem solving to a technical agricultural issue.
 - viii. Apply mathematical and statistical methods to solve a technical agricultural issue.
- C. Communicate solutions based on quantitative and qualitative data on a technical agricultural issue. Outcomes:
 - i. Apply audience analysis to documentation.
 - ii. Compose practical communications such as technical memoranda and emails to support a solution on a technical agricultural issue.
 - iii. Conduct contextual inquiry for user and task analysis.
 - iv. Present a new technology solution to an audience.

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