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| **Jordan College of Agricultural Sciences & Technology****Master of Science in Agricultural Science****Amanda McKeith – Grad Program Coordinator, Assessment Coordinator**  |
| **Student Outcomes Assessment Plan (SOAP)** |
| Mission Statement |
| The mission of the Master of Science in Agricultural Science is to facilitate the development of future leaders in the food and fiber industry that possess appropriate knowledge and effective communication and problem-solving skills that will allow them to make a positive contribution to the industry. |

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| Goals and Student Learning Outcomes |
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| ***Goal 1: Develop Industry Leaders***Students should become empowered to advance their own careers, to contribute to their profession, and to educate themselves beyond the completion of their degree program.Upon completion of the program, students will be able to:Objective 1.1: Read, understand, and evaluate scientific papers on subjects related to their chosen area of the food and fiber industry.Objective 1.2: Network and interact with professionals at scientific and industry meetings.Objective 1.3: Become contributing members of professional associations and the food and fiber industry.***Goal 2: Develop Effective Communicators***Students should be able to write clear, concise and thoughtful research papers, and communicate appropriately with colleagues, students, and the public.Upon the completion of the program, students will be able to:Objective 2.1: Communicate verbally and in writing, in a clear and understandable way, using scientific knowledge and terminology relevant in the food and fiber industry to express their ideas and goals.Objective 2.2: Present information to colleagues and classmates on topics related to the food and fiber industry.Objective 2.3: Write with clarity and good organization of thought, demonstrating proper grammar, spelling, and punctuation.***Goal 3: Develop Effective Problem Solvers***Students should possess the ability to critically review literature, select appropriate research methodologies, design experimental procedures, analyze samples, interpret data, and formulate appropriate conclusions.Upon the completion of the program, students will be able to:Objective 3.1: Gather and integrate information from several scientific sources to write a coherent paper as well as a project or thesis with scientific substantiation for the hypothesis, methods, and conclusions.Objective 3.2: Select and utilize appropriate statistical tests and procedures to analyze and interpret data to answer scientific questions.Objective 3.3: Perform appropriate research procedures, selection/collection of samples for analysis, data analysis and interpretation, and application of data to answer research questions. |

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| Curriculum Map (Matrix of Courses X Learning Outcomes) |

| **I = Introduced** | **R = Reinforced** | **E=Emphasized** | **M=Mastered** |
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| **Objective** | **Core** |  |  | **Specialization Courses** | **Project or Thesis** |
|  | AGRI 200 | AGRI 220 or ERA 220 |  ASCI 229 | Varies by student | AGRI 298 or ASCI 299 |
| 1.1 |  |  | R | R | E |
| 1.2 |  |  | R |  | E |
| 1.3 |  |  | R |  | E |
| 2.1 |  | E | E | R | E |
| 2.2 |  | R | R | R | E |
| 2.3 |  | R | R | R | E |
| 3.1 |  | E |  |  | E |
| 3.2 | E | R |  |  | E |
| 3.3 | R | E |  |  | E |

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| Assessment Methods |
| * 1. **Direct Measures: (A minimum of three are required.)**
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| * + 1. AGRI 200 - Assessment of students term project. Students will find a data set, analyze it, and interpret the output.
		2. AGRI 220/ERA 220 – Assessment of literature review for proposed project or thesis. Students draft a Literature Review and Materials and Methods section on their proposals in consultation with their master’s advisor and committee members. Students work will be evaluated based on sections 1 and 2 of the thesis rubric. (See attached Thesis Assessment rubric).
		3. Assessment of written projects or theses. Projects/theses will be evaluated for the appropriateness and organization of the introduction and literature review, materials and methods, hypothesis, results, and discussion (see attached Thesis Assessment rubric).
		4. Assessment of oral defense of project or thesis. Presentations will be evaluated for organization, content (relevancy and currency), quality of slides/media, quality of conclusions, voice quality and pace, and professionalism (see attached Oral Presentation rubric).
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| * 1. **Indirect Measure(s): (Departments are required to have one indirect measure. Examples of indirect measures are senior exit surveys, a focus group, written reflections by students, and of course alumni surveys which departments may choose to conduct.)**
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| Survey of graduates of the program to assess graduate’s perception of their experiences with the program to prepare them for success after graduation. Survey of employers of graduates of program to assess employer’s perception of work-related skills of employees/graduates and how these skills are associated with the Master’s degree program. |

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| Student Learning Outcomes X Assessment Methods Matrix |
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| **Objective** | **Direct Assessments** |  |  |  | **Indirect Assessments** |  |
|  | AGRI 200 Term Project Assessment | Literature Review Assessment | Thesis Assessment | Oral Defense Assessment | Graduate Survey | Employer Survey |
| 1.1 |  | X | X | X | X |  |
| 1.2 |  |  |  |  | X | X |
| 1.3 |  |  |  |  | X | X |
| 2.1 |  | X | X | X | X | X |
| 2.2 |  |  |  | X | X | X |
| 2.3 | X | X | X |  |  | X |
| 3.1 |  | X | X | X | X |  |
| 3.2 | X |  | X | X | X |  |
| 3.3 | X |  | X | X | X |  |

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| 1. **Timeline for Implementation of Assessment Methods and Summary Evaluations**
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| Year 2018 to 2019 |
| 1. Assessment of student theses completed during the fall or spring semester will be conducted at the end of the academic year.
2. Conduct survey of program graduates and summarize data.
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| Year 2019 to 2020 |
| 1. Assessment of students’ oral defense presentation of their theses will be conducted at the end of the academic year.
2. Conduct survey of program graduates’ employers and summarize data.
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| Year 2020 to 2021 |
| 1. Assessment of students’ AGRI 200 term project will be conducted.
2. Assessment of students’ Literature Review from AGRI 220 or ERA 220 Research Methods courses will be conducted.
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| Process for Closing the Loop |
| The graduate faculty from the Animal Science and Agricultural Education Department will meet at the beginning of the fall semester. Faculty will examine the data gathered from the assessment activities the previous academic year. The discussion will consist of two parts. The faculty will evaluate whether the data indicates that graduate students are meeting our student learning outcome standards. If the answer is positive then no further action is required. If the answer is negative, then discussion will address the changes necessary to improve student performance. Potential changes could include at least one of the following: adjustments of student learning outcome standards; modifications of syllabi or assignments in one or more courses; substantial revisions of existing courses and/or proposal of new courses; modifications of major requirements; or modifications in project/thesis requirements. Depending on the tasks involved and the necessary actions, specific faculty members will be tasked with completing the agreed changes. |