**Assessment Plan**

**for Workforce and FOS Programs**

**Program/Track Name: \_\_AAS Urban Sustainable Agriculture\_\_\_\_\_\_\_\_\_\_**

**Description of Program-Level Learning Outcomes**

Please indicate the Program Learning Outcomes for the degree, degree track, or certificate below:

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| Program-Level Learning Outcomes | |
| Program Learning Outcome 1: | Students will be able to differentiate production methods based on geography and crop selection. |
| Program Learning Outcome 2: | Students will analyze the impact of climate variation on crops, assess the interactions of soils, water, and fertility, and demonstrate an understanding of fundamental animal husbandry practices. |
| Program Learning Outcome 3: | Students will be able to apply scientific reasoning to solve problems and make informed decisions. |
| Program Learning Outcome 4: | Students will be able to identify and apply the needs and uses of technology in agriculture. |
| Program Learning Outcome 5: | Students will investigate methods of environmental manipulation (controlled environments) and apply the best practices to meet market needs. |
| Program Learning Outcome 6: | Students will be able to examine the structure of agricultural markets and determine market value of commodities. |
| Program Learning Outcome 7: |  |
| Program Learning Outcome 8: |  |

**Section I: Technical Courses**

For **all technical courses** in the program, indicate in the table on the following page whether and/or how the course will support the program learning outcomes. You should include courses outside your discipline area and work collaboratively with those disciplines to determine whether and/or how those course(s) will support the program learning outcomes. **Please note** that it is understandable if courses from outside the discipline do not assess the program-level learning outcomes and serve only to introduce, practice and/or emphasize the program outcomes. It is also possible that technical courses outside of your discipline may not directly support the specific program-level learning outcomes you have identified.

***How to complete the program map:***

For each technical course in your program, please indicate whether any program-level learning outcome is introduced to students (I), practiced by students (P), emphasized for students (E), or formally assessed (A).

For example, if course WXYZ 1234 introduces students to one of the program outcomes, then enter “I” for that specific program outcome in the appropriate column. Please note that a course can be “I”, “P”, “E” and/or “A” in any program outcome. The labels in the following table apply SOLELY to the program level learning outcomes defined above. (It is NOT necessary for every course to address a program level learning outcome, and it is NOT necessary that Assessment or program level learning outcomes occur in every course.)

**Program Map ▼**

I=Introduced P=Practiced E=Emphasized A=Assessed

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| Program Courses | Program Learning Outcome 1 | Program Learning Outcome 2 | Program Learning Outcome 3 | Program Learning Outcome 4 | Program Learning Outcome 5 | Program Learning Outcome 6 | Program Learning Outcome 7 | Program Learning Outcome 8 |
| AGCR 2305-Ento |  |  | IE |  | IE |  |  |  |
| AGCR 2371-Intro Sus Ag | IE | IE |  |  |  | IE |  |  |
| HALT 2421-Sm Farming + Lab | IPEA |  | IE |  |  |  |  |  |
| AGCR 2313-Soil and water |  | IEA |  |  |  |  |  |  |
| AGRI 2303-Ag Construct |  |  |  | IE |  |  |  |  |
| AGRI 1415-Hort |  |  | PA |  | IPE |  |  |  |
| HALT 2308-Grnhs Mgmt |  |  |  | PEA |  |  |  |  |
| HALT 2402-Grnhs Crop Prod |  |  |  |  | EA |  |  |  |
| AGCR 2586-Intern |  | PE | P |  | PE | P |  |  |
| AGRI 1325-Ag Mktg |  |  |  |  |  | EA |  |  |
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**Assessment Plan for Program Learning Outcomes**

Review existing assessment methods and current practices for collecting/gathering student data to identify direct (and possibly indirect methods of assessment). Remember that the data will need to be gathered, analyzed, and used to support the program’s continuous improvement processes.

**Note:** Because courses from other disciplines already have assessment plans in place, they do not have to be included in this assessment plan. Nonetheless, proposers must work collaboratively with these other disciplines to stay current and up-to-date with the assessment plans in these courses.

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| Program-Level Learning Outcome (e.g. Students will describe the impact of various cultures on American cuisine.) | Assessment Measure(s) and Where Implemented in Curriculum – Description of Instrument(s)/ process(es) used to measure results and indication of where the assessment will be collected in curriculum. (e.g. Essay on Cultural influences on American cuisine in CUIS 1300.) | Targets- Level of Success Expected  (e.g. 80% of students score 2.5 or better on rubric for essay on cultures and cuisine.) |
| PLO #1 Students will be able to differentiate production methods based on geography and crop selection. | Performance-based final lab practical in HALT 2421- Small Farming in which students will be required to demonstrate the ability to evaluate production methods best suited to plant needs and soil/climate factors. | Success level expected to be 80% of students scoring 75% or higher on the practical. |
| PLO #2 Students will analyze the impact of climate variation on crops, assess the interactions of soils, water, and fertility, and demonstrate an understanding of fundamental animal husbandry practices. | Performance-based project in AGCR 2313 – Soil and Water Conservation Management on Soil and Water Conservation demonstrating student’s ability to:   1. analyze soil type and fertility, and 2. create a plan for improving soil health using data-driven decision making based on industry best practices that includes the use of composting, green manure cover crops, and water conservation methods. | Success level expected to be 80% of students scoring 75% or higher on the project. |
| PLO #3 Students will be able to apply scientific reasoning to solve problems and make informed decisions. | Lab practical for Final Exam in AGRI 1415-Horticulture. Students will apply scientific principles to solve problems in horticulture crops that will require students to demonstrate proper plant propagation techniques, seed germination techniques, and manual pollination of several species of food crops. | Success level expected to be 80% of students scoring 75% or higher on the final practical exam. |
| PLO #4 Students will be able to identify and apply the needs and uses of technology in agriculture. | Group based project in HALT 2308-Greenhouse Management in which students will be required to create a greenhouse management plan to include industry standard technology and monitoring equipment. Students will demonstrate proper use of pH strips or meters, program timers to deliver water to drip irrigation, calibrate temperatures to control optimum growth of plants, and data-driven decisions to utilize shade cloth and ventilation systems to manage pests, humidity, and disease in the greenhouse. | Success level expected to be 80% of students scoring 75% or higher on the project. |
| PLO #5 Students will investigate methods of environmental manipulation (controlled environments) and apply the best practices to meet market needs. | Performance based laboratory practical (final exam) in HALT 2402-Greenhouse Crop Production in which students will demonstrate:   1. correct procedures for testing environmental factors in a controlled environment crop, making decisions based on industry best practices to create an ideal environment, and 2. Monitor pH values of water and soil, temperature and humidity of the greenhouse, and monitor for pests, fungi, and disease on plants and in growing media. | Success level expected to be 80% of students scoring 75% or higher on the practical. |
| PLO #6 Students will be able to examine the structure of agricultural markets and determine market value of commodities. | Assignment in AGRI 1325-Marketing of Agricultural Products in which students will be required to create a marketing plan to promote and distribute agricultural commodities to retail and wholesale customers. Students will be expected to analyze market data from local famer’s markets and USDA ERS data to make decisions on crop choices based upon market demand, and to demonstrate data-driven decision making in the marketing plan. | Success level expected to be 80% of students scoring 75% or higher on the project. |