

**Department of Horticulture
Undergraduate Capstone Program Assessment Rubric**

This form should be completed by the instructor or advisor of the capstone course / project, however the instructor / advisor is encouraged to discuss the details of the rubric with the student's supervisor if the student's internship is off campus or supervised by another individual.

The goal of this rubric is to assess the degree to which the student has met Learning Goal 5, "Demonstrate professionalism and proficiency in skills that relate to horticulture." Please base your rating on the student's work products, output, and the entirety of their educational experience while enrolled in, or conducting, the capstone course / project.

This rubric should be used for Horticulture 376, 399, 699 for students using those courses to meet the capstone requirement. A score of 4 would be the highest or best score, while a score of 1 would be the lowest.

Student Name: _____ **Date and semester completed** _____

Capstone instructor or advisor _____

Capstone experience met by _____

| <i>Score</i> | 4 | 3 | 2 | 1 | NA | SCORE |
|---|---|--|---|---|-----------|--------------|
| Technical mastery of subject matter from an intellectual standpoint * | Student displays strong intellectual mastery of the scientific and technical aspects of the project or subject(s) | Student shows good intellectual understanding of the technical and scientific aspects of the project or subject(s) but shows room for growth in that understanding | Student shows some intellectual understanding of the technical and scientific aspects of the project or subject(s) but displays significant gaps in knowledge | Student shows limited intellectual understanding of the technical and scientific aspects of the project or subject(s) | | |
| Technical mastery of subject matter from a hands-on or practical standpoint ** | Student displays strong practical skills and mastery of the project or subject(s). | Student displays good practical skills of the project or subject(s) but shows room for growth in their skill set | Student displays an some practical skills of the project or subject(s) but shows requires refinement of their skill set | Student displays limited practical skills of the project or subject(s) | | |
| Competency and clarity of verbal and/or written work products *** | Student displays strong communication skills in their work and presentation of the project or subject(s) | Student displays good communication skills in their work and presentation of the project or subject(s), but has some gaps in their skill set | Student displays some good communication skills in their work and presentation of the project or subject(s) but shows significant room for improvement | Student displays poor communication skills in their work and presentation of the project or subject(s) | | |

| | | | | | |
|--|---|--|--|---|--|
| Understanding of the context in which the project fits into the larger body of horticultural work **** | Student displays a strong understanding of the scope of horticultural work and where their project fits in the broader scheme | Student displays a good understanding of the scope of horticultural work and where their project fits in the broader scheme but shows room for growth in this area | Student displays some understanding of the scope of horticultural work and where their project fits in the broader scheme but shows significant room for improvement | Student displays limited understanding of the scope of horticultural work and where their project fits in the broader scheme | |
| Professionalism in conduct, work products, and presentation ***** | Student displays a strong level of professionalism in their conduct, work products, and presentation of their project or subject(s) | Student displays a good level of professionalism in their conduct, work products, and presentation of their project or subject(s) but shows room for growth in this area | Student displays some level of professionalism in their conduct, work products, and presentation of their project or subject(s) but shows significant room for improvement | Student displays a poor level of professionalism in their conduct, work products, and presentation of their project or subject(s) | |
| Leadership skills and ability to work in teams ***** | Student displays a strong level of leadership and successfully leads or participates in team work. | Student displays a good level of leadership, may lead teams, and is able to effectively and enthusiastically participate in team work. | Student displays some level of leadership and is able to participate in team work. | Student displays a poor level of leadership. | |
| Overall depth of knowledge of horticultural practices | Student displays a high level of overall knowledge of horticultural practices relative to their project or subject(s) | Student displays a good level of overall knowledge of horticultural practices relative to their project or subject(s) but shows room for growth in this area | Student displays a decent level of overall knowledge of horticultural practices relative to their project or subject(s) but shows significant room for improvement | Student displays poor overall knowledge of horticultural practices relative to their project or subject(s) | |

* Examples of skills to assess technical mastery from an intellectual standpoint

- Recognize institutional, state, government and/or international regulations
- Environmental awareness
- Research skills
- Problem solving skills
- Decision-making skills
- Creativity
- Demonstrate ethical judgment (moral responsibility, responsibility in sustainable management of resources)
- Demonstrate a global perspective
- Understanding cultural and biological diversity

**** Examples of skills to assess technical mastery from a hands-on/practical standpoint:**

- Plant identification
- Field, laboratory and greenhouse management
- New technologies within the horticulture discipline (software, equipment, germplasm access, automation, laboratory analytical skills...)
- Biological science (cropping systems, IPM, biotic and abiotic stress, genetics and plant breeding,..)
- Research skills
- Problem solving skills
- Decision-making skills

***** Examples of skills to assess writing/verbal competency**

- Speak effectively on subject matter
- Write concisely on subject matter
- Apply critical thinking
- Able to present points of view, ideas, data intelligently and logically to a diverse set of audiences

****** Examples of skills to assess understanding of the context in which the project fits**

- Fundamental knowledge of biological science
- Fundamental knowledge of physiology
- Fundamental knowledge of plant breeding and genetics
- Fundamental knowledge of principles of soils
- Environmental awareness

******* Examples of skills to assess professionalism**

- Ability to develop institutional connections with horticulture stake-holders
- Recognize need for continuing education/training/learning
- Appreciation and respect of cultural diversity
- Demonstrate global perspective
- Engages in social responsibility
- Ability to take principled positions on diverse issues
- Email, work, professional meetings etiquette
- Apply respectful customer relation skills (maintain courteous and responsive attitude, effectively manages workload, demonstrate an enthusiastic attitude, follow schedules)
- Demonstrate employability skills
- Responds appropriately to compliments, complaints, conflicts, criticism

******* Examples of skills to assess leadership**

- Demonstrates self-discipline
- Inspire and organize a team to solving a problem
- Work effectively in a team as a leader or participant
- Demonstrate high standards of achievement
- Capability of recognizing alternative view points
- Implement a solution to a problem
- Summarize concisely a group's decision
- Lead a group through the decision-making process
- Practices active learning

Additional comments from instructor / advisor:

Ways to obtain evidence to evaluate the different skills listed in this document:

- 1. Technical mastery of subject matter from an intellectual standpoint**
evaluation of these skills can be done in tests, exams, projects
- 2. Technical mastery of subject matter from a hands-on or practical standpoint**
evaluation can be based on competencies that students are expected to have in laboratory work, field work, service-learning
- 3. Competency and clarity of verbal and/or written work products**
evaluation can be based on written essays, papers, individual or group presentations, role playing in debates or trials
- 4. Understanding of the context in which the project fits into the larger body of horticultural work**
evaluation can be done in directed discussions, debates, problem-based learning, case-studies
- 5. Professionalism in conduct, work products, and presentation**
evaluation can be based on performance, attitudes and actions
- 6. Leadership skills and ability to work in teams**
evaluation of these skills can be done by group peer evaluation and self-evaluation
- 7. Overall depth of knowledge of horticultural practices**
summative and integrative assessment of the overall knowledge of horticultural practices

*Irwin Goldman, July 10, 2019, Draft
Claudia Calderon, July 21, 2019 additions*