**UNIT REPORT** 

Plant Sciences-Academic - APR Self-Study Report by Academic Unit/Department

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# **Program Mission**

# **New Program Mission Item**

#### **Program Mission Statement:**

Plant Sciences department works to advance research and address many local, regional and global challenges such as breeding plants to tolerate drought-stress, developing sustainable cropping practices and conserving plant species for future generations. Our department prepares students for careers in the rapidly changing fields of applied and basic plant sciences and in modern production agriculture.

# Program Goal (add a minimum of 3 program goal "plan items")

# Program Goal 2: Addressing retiring faculty teaching Horticulture and Urban Agriculture

#### **Goal Statement:**

Hire a faculty member to replace Bob Tripepi, retiring in July and currently the only faculty member in the department addressing Horticulture and Urban Agriculture.

Alignment to UI Strategic Plan Goals: Transform (Goal 3): Increase our educational impact.

### **Indicators/Metrics to Evaluate Progress:**

Approval through CALS, HR and the Provost's office to hire personnel to address the dire shortage of teaching faculty.

# List of Actions the Program Will Take to Achieve Goals:

Develop job announcement and process with the hiring processes.

Goal Achievement Level: Not Met

# **Program Goal 1: Increase Student Enrollment**

# **Goal Statement:**

To address future needs in agriculture, expansion of the Horticulture and Urban Agricultural Major will be addressed with hiring of one tenure-track research and teaching faculty member in a critical needs area.

# Alignment to UI Strategic Plan Goals:

Innovate (Goal 1): Scholarly and creative products of the highest quality and scope, resulting in significant positive impact for the region and the world.

Engage (Goal 2): Suggest and influence change that addresses societal needs and global issues, and advances economic development and culture.

Transform (Goal 3): Increase our educational impact.

Cultivate (Goal 4): Foster an inclusive, diverse community of students, faculty, and staff and improve cohesion and morale.

# **Indicators/Metrics to Evaluate Progress:**

With the introduction of appropriate coursework, the new tenure track faculty member will address the coursework associated with Controlled Environment Agriculture (CEA).

# **List of Actions the Program Will Take to Achieve Goals:**

Hire appropriate an CEA faculty member to develop coursework in complement with new Soil and Water Systems faculty.

**Goal Achievement Level:** In Progress

# **Program Goal 3: Sustainability**

# **Goal Statement:**

Study the science behind healthy farming in programs that provides the broad-based knowledge to sustainably grow successful crops.

# Alignment to UI Strategic Plan Goals:

Innovate (Goal 1): Scholarly and creative products of the highest quality and scope, resulting in significant positive impact for the region and the world.

Engage (Goal 2): Suggest and influence change that addresses societal needs and global issues, and advances economic development and culture.

Transform (Goal 3): Increase our educational impact.

Cultivate (Goal 4): Foster an inclusive, diverse community of students, faculty, and staff and improve cohesion and morale.

#### **Indicators/Metrics to Evaluate Progress:**

Achieving the appropriate number of teaching faculty is critically important to address the teaching needs of the three majors offered within the Department.

# List of Actions the Program Will Take to Achieve Goals:

With appropriate Gen Ed funding, teaching faculty, both tenure track and clinical teaching faculty, need to be hired to address major gaps in the curriculum of two of the three majors.

Goal Achievement Level: Not Met

# Student Learning Assessment Report (add one "plan item" for each major, degree, and/or certificate offered by dept)

# Horticulture and Urban Agriculture

Assessment Report Contact: Robert Tripepi

**Program Changes in Past Year:** 

None to report

Learning Outcomes are Communicated to All Students in Program (check box if true): true

Learning Outcomes are Communicated to All Faculty (check box if true): true

**Optional: Framework Alignment:** 

# **Import Outcomes Data (from Anthology Outcomes):**

Students will be able to recognize and apply scientific principles and concepts to production or management of horticultural crops and different horticultural systems.

Students will be able to present and explain important concepts for plant propagation and will be able to recognize and analyze various procedures for propagating various horticultural crops.

Students will gain experiential practice in applying their horticultural knowledge through internships or laboratory research experiences and participation in students clubs/organizations.

Students will be able to communicate effectively, verbally and in writing, problems, analyses and solutions to horticultural problems to a variety of audiences.

1.

# **Scientific Principles and Concepts**

Students will be able to recognize and apply scientific principles and concepts to production or management of horticultural crops and different horticultural systems.

Academic Year 2020-2021: Horticulture & Urban Agriculture (B.S.Pl.Sc.)

Term: Overview

No Results

2.

# **Concepts for Plant Propagation**

Students will be able to present and explain important concepts for plant propagation and will be able to recognize and analyze various procedures for propagating various horticultural crops.

Academic Year 2020-2021: Horticulture & Urban Agriculture (B.S.Pl.Sc.)

Term: Overview

No Results

3.

# **Applied Horticulture Knowledge**

Students will gain experiential practice in applying their horticulture knowledge through internships or laboratory research experiences and participation in student clubs/organizations.

Academic Year 2020-2021: Horticulture & Urban Agriculture (B.S.Pl.Sc.)

Term: Overview

No Results

4.

# **Communicate Solutions to Horticultural Problems**

Students will be able to communicate effectively, verbally and in writing, problems, analyses, and solutions to horticultural problems to a variety of audiences

Academic Year 2020-2021: Horticulture & Urban Agriculture (B.S.Pl.Sc.)

Term: Overview

No Results

#### **Summary of Student Learning:**

Discussion with graduates report feeling appropriately prepared for the job market.

#### **Summary of Faculty Discussion:**

None to report

#### **Summary of Changes/Improvements Being Considered:**

None to report

#### **Inter-rater Reliability:**

Regularly occurring faculty meetings result in the discussion of student viewpoints and successes.

#### **Closing the Loop:**

None to report

# **Crop Science**

**Assessment Report Contact:** Tim Prather

#### **Program Changes in Past Year:**

Placing two classes on hiatus status (no one to teach them).

Learning Outcomes are Communicated to All Students in Program (check box if true): true

Learning Outcomes are Communicated to All Faculty (check box if true): true

Optional: Framework Alignment: Idaho Pesticide License

# **Import Outcomes Data (from Anthology Outcomes):**

Students will be able to recognize and apply scientific principles and concepts to production or management of agronomic crops and different field crop production systems.

Students will be able to present and explain important concepts for field crop production and will be able to recognize and analyze various procedures for producing various agronomic crops.

Students will gain experiential practice in applying their knowledge of agronomy and field crop production through internships or laboratory research experiences and participation in student clubs/organizations.

Students will be able to communicate effectively, verbally and in writing, problems, analyses and solutions to agronomic problems to a variety of audiences.

1.

# **Scientific Principles and Concepts**

Students will be able to recognize and apply scientific principles and concepts to production or management of agronomic crops and different field crop production systems.

Academic Year 2020-2021: Crop Science (B.S.Pl.Sc.)

Term: Overview

No Results

2.

# Field Crop Production

Students will be able to present and explain important concepts for field crop production and will be able to recognize and analyze various procedures for producing various agronomic crops.

Academic Year 2020-2021: Crop Science (B.S.Pl.Sc.)

Term: Overview

No Results
3.

# Knowledge of Agronomy

Students will gain experiential practice in applying their knowledge of agronomy and field crop production through internships or laboratory research experiences and participation in student clubs/organizations.

Academic Year 2020-2021: Crop Science (B.S.Pl.Sc.)

Term: Overview

No Results

4.

# Communicate Solutions to Agronomic Problems

Students will be able to communicate effectively, verbally and in writing, problems, analyses and solutions to agronomic problems to a variety of audiences.

Academic Year 2020-2021: Crop Science (B.S.Pl.Sc.)

Term: Overview

No Results

#### **Summary of Student Learning:**

Discussion with graduates reported feeling adequately prepared for the job market.

#### **Summary of Faculty Discussion:**

None to report

#### **Summary of Changes/Improvements Being Considered:**

There is a significant potential to retire the Crop Science major due to serious lack of instructors.

#### **Inter-rater Reliability:**

Regularly occurring faculty meetings result in the discussion of student viewpoints and successes.

#### **Closing the Loop:**

Nothing to report

# **Biotechnology and Plant Genomics**

Assessment Report Contact: Joseph Kuhl

**Program Changes in Past Year:** 

none to report.

Learning Outcomes are Communicated to All Students in Program (check box if true): true

Learning Outcomes are Communicated to All Faculty (check box if true): true

**Optional: Framework Alignment:** 

# **Import Outcomes Data (from Anthology Outcomes):**

Students will be able to recognize and apply scientific principles to various laboratory techniques used for production or management of various agronomic and horticultural crops and their systems.

Students will be able to present and explain important concepts for plant molecular techniques and will be able to recognize and analyze various laboratory procedures used for analyses of different agronomic and horticultural crops.

Students will gain experiential practice in applying their knowledge of biotechnology and plant genomics through internships or laboratory research experiences and participation in student clubs/organizations.

Students will be able to communicate effectively, verbally and in writing, problems, analyses and solutions to biotechnology problems as effected by research techniques and public opinion to a variety of audiences.

1.

# **Scientific Principles**

Students will be able to recognize and apply scientific principles to various laboratory techniques used for production, management or modification of a wide variety of plant species and their associated systems.

Academic Year 2020-2021: Biotechnology & Plant Genomics (B.S.Pl.Sc.)

Term: Overview

No Results

2.

# Plant Molecular Techniques

Students will be able to present and explain important concepts for plant molecular techniques and will be able to recognize and analyze various laboratory procedures used for analyses of different agronomic and horticultural crops.

Academic Year 2020-2021: Biotechnology & Plant Genomics (B.S.Pl.Sc.)

Term: Overview

No Results

3.

# **Knowledge of Biotechnology and Plant Genomics**

Students will gain experiential practice in applying their knowledge of biotechnology and plant genomics through internships or laboratory research experiences and participation in student clubs/organizations.

Academic Year 2020-2021: Biotechnology & Plant Genomics (B.S.Pl.Sc.)

Term: Overview

No Results

4.

# Communicate Solutions to Biotechnology Problems

Students will be able to communicate effectively, verbally and in writing, problems, analyses, and solutions to biotechnology problems as effected by research techniques and public opinion to a variety of audiences.

Academic Year 2020-2021: Biotechnology & Plant Genomics (B.S.Pl.Sc.)

Term: Overview

No Results

#### **Summary of Student Learning:**

Discussion with graduates reported feeling adequately prepared for the job market.

#### **Summary of Faculty Discussion:**

Regularly occurring faculty meetings result in the discussion of student viewpoints and successes.

### **Summary of Changes/Improvements Being Considered:**

None to report.

#### **Inter-rater Reliability:**

Regularly occurring faculty meetings result in the discussion of student viewpoints and successes

#### **Closing the Loop:**

None to report

# **Student Achievement**

# **New Student Achievement Item**

#### **Student Retention:**

Student retention is closely monitored by the main advisors within each major in collaboration with the Academic Programs Office.

#### **Student Persistence:**

# **Student Completion:**

In collaboration with Academic Programs office, CALS assists departments with monitoring student data in regards to student completion.

#### **Student Postgraduate Success:**

Discussion with graduates reported feeling adequately prepared for the job market.

#### **Identify Equity Gaps:**

None to report.

#### **Effective Learning Environment and Closing Equity Gaps:**

We report no concerns with equity gaps in effective learning environments within the department.

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