



**SOUTH DAKOTA BOARD OF REGENTS  
ACADEMIC AFFAIRS FORMS**

**Substantive Program Modification Form**

|                                |  |
|--------------------------------|--|
| <b>UNIVERSITY:</b>             | SDSU                                       |
| <b>CURRENT PROGRAM TITLE:</b>  | Pest Management Minor                      |
| <b>CIP CODE:</b>               | 26.0702                                    |
| <b>UNIVERSITY DEPARTMENT:</b>  | Agronomy, Horticulture & Plant Science     |
| <b>BANNER DEPARTMENT CODE:</b> | SAHP                                       |
| <b>UNIVERSITY DIVISION:</b>    | Agriculture, Food & Environmental Sciences |
| <b>BANNER DIVISION CODE:</b>   | 3F   |

**University Approval**

*To the Board of Regents and the Executive Director: I certify that I have read this proposal, that I believe it to be accurate, and that it has been evaluated and approved as provided by university policy.*

Dennis D. Hedge

5/3/2021

\_\_\_\_\_  
Vice President of Academic Affairs or  
President of the University

\_\_\_\_\_  
Date

**1. This modification addresses a change in:**

- |   |  |
|---|--|
| <input type="checkbox"/> Total credits required within the discipline | <input type="checkbox"/> Total credits of supportive course work                     |
| <input type="checkbox"/> Total credits of elective course work        | <input type="checkbox"/> Total credits required for program                          |
| <input checked="" type="checkbox"/> Program name                      | <input type="checkbox"/> Existing specialization                                     |
| <input checked="" type="checkbox"/> CIP Code                          | <input checked="" type="checkbox"/> Other: Revised Coursework, Academic Requirements |

**2. Effective date of change:** 2021-2022 Academic Year

**3. Program Degree Level:** Associate  Bachelor's  Master's  Doctoral

**4. Category:** Certificate  Specialization  Minor  Major

**5. If a name change is proposed, the change will occur:**

- On the effective date for all students
- On the effective date for students new to the program (enrolled students will graduate from existing program)

Proposed new name: **Crop Protection Minor**

**6. Primary Aspects of the Modification:**

Existing Curriculum

Proposed Curriculum (Highlight Changes)

| Pref  | Num                  | Title  | Cr Hrs   | Pref  | Num                  | Title  | Cr Hrs   |
|---|----------------------|--|----------|---|----------------------|--|----------|
| PS  | 223-223L             | Principles of Plant Pathology and Lab                                      | 3        | PS  | 223-223L             | Principles of Plant Pathology and Lab                                      | 3        |
| PS<br>OR<br>PS  | 405-405L<br>407-407L | Entomology & Lab <sup>1</sup><br>Insect Pest Management & Lab <sup>1</sup> | 3        | PS<br>OR<br>PS  | 405-405L<br>407-407L | Entomology & Lab <sup>1</sup><br>Insect Pest Management & Lab <sup>1</sup> | 3        |
| PS  | 445-445L             | Weed Science and Lab   | 3        | PS  | 445-445L             | Weed Science and Lab   | 3        |
| <b>Electives</b> – Select at least 9 credits from the following list of courses |                      |  | <b>9</b> | <b>Electives</b> – Select at least 9 credits from the following list of courses |                      |  | <b>9</b> |
|   |                      |  |          | PS/HO   | 329                  | Horticultural Pests  | 3        |
|   |                      |  |          | PS/HO   | 345                  | Non-chemical Weed Management   | 3        |

| Existing Curriculum                      |                      |  |        | Proposed Curriculum (Highlight Changes)  |                      |  |            |
|--|----------------------|--|--------|--|----------------------|--|------------|
| Pref                                     | Num                  | Title  | Cr Hrs | Pref                                     | Num                  | Title  | Cr Hrs     |
| PS<br>OR<br>PS                           | 405-405L<br>407-407L | Entomology & Lab <sup>1</sup><br>Insect Pest Management & Lab <sup>1</sup> | 3      | PS<br>OR<br>PS                           | 405-405L<br>407-407L | Entomology & Lab <sup>1</sup><br>Insect Pest Management & Lab <sup>1</sup> | 3          |
| PS                                       | 415-415L             | Mycology and Lab   | 3      | <b>PS</b>                                | <b>415-415L</b>      | <b>Mycology and Lab</b>  | <b>3</b>   |
| PS                                       | 431                  | Insect Ecology and Biological Control                                      | 3      | PS                                       | 431                  | Insect Ecology and Biological Control                                      | 3          |
| PS                                       | 433                  | Field Crop Diseases and Management   | 3      | PS                                       | 433                  | Field Crop Diseases and Management   | 3          |
| PS                                       | 450-450L             | Field Study of Plant Disease Diagnosis and Lab                             | 2      | PS                                       | 450-450L             | Field Study of Plant Disease Diagnosis and Lab                             | 2          |
| PS                                       | 491                  | Independent Study <sup>2</sup>   | 1-5    | <b>PS</b>                                | <b>491</b>           | <b>Independent Study<sup>2</sup></b>                                       | <b>1-5</b> |
| PS                                       | 492                  | Topics <sup>2</sup>  | 1-3    | <b>PS</b>                                | <b>492</b>           | <b>Topics<sup>2</sup></b>  | <b>1-3</b> |
| Total number of hours required for minor |                      |  | 18     | Total number of hours required for minor |                      |  | 18         |

### Academic Requirements:

#### Current:

The program requires a 2.5 GPA or higher and a grade of C or higher in all coursework for the minor. Additionally, some noted <sup>1</sup>courses may only be used to meet requirements in one section below, and other <sup>2</sup>courses require collaboration with pest management faculty.

#### Proposed:

The program requires a 2.5 GPA or higher and a grade of C or higher in all coursework for the minor.

<sup>1</sup> Can only be used to meet requirements in one section (i.e. PS 407 cannot be a required and an elective credit)

### CIP Code:

#### Current:

CIP Code: 26.0702; Title: Entomology.

Definition: A program that focuses on the scientific study of insect species and populations in respect of their life cycles, morphology, genetics, physiology, ecology, taxonomy, population dynamics, and environmental and economic impacts. Includes instruction in applicable biological and physical sciences as well as insect toxicology and the biochemical control of insect populations.

#### Proposed:

CIP Code: 01.1105; Title: Plant Protection and Integrated Pest Management.

Definition: A program that focuses on the application of scientific principles to the control of animal, insect and weed infestation of domesticated plant populations and other settings, including agricultural crops; the prevention/reduction of attendant economic loss; and the control of environmental pollution and degradation related to pest infestation and pest control measures. Includes instruction in entomology, applicable animal sciences, plant pathology and physiology, weed science, crop science, and environmental toxicology.

## 7. Explanation of the Change:

The Department proposes to add PS/HO 329 Horticultural Pests and PS/HO 345 Non-chemical Weed Management as electives to the minor. These courses are already offered to the undergraduate students and count towards the Plant Protection electives in the Agronomy major. Additionally, the courses meet the program goal of the minor, which is to “provide students with knowledge of the general principles of managing insect, disease and weed pests in a variety of situations, and a firm understanding of the environmental consequences of pest control

decisions”. Also, the proposed changes will help students apply the knowledge they acquire in pest management as well as provide them the flexibility and choice to select courses towards their professional growth and goals.

PS 415-415L Mycology and Lab, PS 491 Independent Study and PS 492 Topics have been deleted as they are being replaced by more defined courses that better achieve the goals of the program.

The name change to “Crop Protection” better reflects the goals of this minor. Crops can be horticultural, turf, or agricultural in nature.