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| For Academic Affairs and Research Use Only | |
| Proposal Number | AGRI14 |
| CIP Code: |  |
| Degree Code: |  |

**New or Modified Course Proposal Form**

**[x] Undergraduate Curriculum Council**

**[ ] Graduate Council**

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| **[x]New Course, [ ]Experimental Course (1-time offering), or [ ]Modified Course (Check one box)** |

Signed paper copies of proposals submitted for consideration are no longer required. Please type approver name and enter date of approval.

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| \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ Enter date… **Department Curriculum Committee Chair** | \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ Enter date…  **COPE Chair (if applicable)** |
| Donald Kennedy 3/25/2021 **Department Chair** | \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ Enter date…  **Head of Unit (if applicable)** |
| J Kim Pittcock 3/25/2021  **College Curriculum Committee Chair** | \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ Enter date…  **Undergraduate Curriculum Council Chair** |
| \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ Enter date… **Director of Assessment (new courses only)** | \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ Enter date…  **Graduate Curriculum Committee Chair** |
| Mickey A Latour 3/25/2021 **College Dean** | Alan Utter 4/12/2021  **Vice Chancellor for Academic Affairs** |
| \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ Enter date…  **General Education Committee Chair (if applicable)** |  |

1. **Contact Person (Name, Email Address, Phone Number)**

Steven Green, sgreen@astate.edu, 972-3463

1. **Proposed starting term and Bulletin year for new course or modification to take effect**

Fall 2021 start; 2021-2022 bulletin

**Instructions:**

*Please complete all sections unless otherwise noted. For course modifications, sections with a “Modification requested?” prompt need not be completed if the answer is “No.”*

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|  | **Current (Course Modifications Only)** | **Proposed (New or Modified)**  *(Indicate “N/A” if no modification)* |
| **Prefix** |  | **PSSC** |
| **Number\*** |  | **4413** |
| **Title** |  | **Rice Production** |
| **Description\*\*** |  | **A study of rice growth characteristics and rice production management systems** |

***\**** (Confirm with the Registrar’s Office that number chosen has not been used before and is available for use. For variable credit courses, indicate variable range. *Proposed number for experimental course is 9*. )

\*\*Forty words or fewer as it should appear in the Bulletin.

1. **Proposed prerequisites and major restrictions** **[Modification requested? Yes/No]**

(Indicate all prerequisites. If this course is restricted to a specific major, which major. If a student does not have the prerequisites or does not have the appropriate major, the student will not be allowed to register).

1. **YES** Are there any prerequisites?
   1. If yes, which ones?

PSSC 1303 (Intro Plant Science) and PSSC 2813 (Soils)

* 1. Why or why not?

These courses provide general background needed for rice crop production practices.

1. **NO** Is this course restricted to a specific major?
   1. If yes, which major? Enter text...
2. **Proposed course frequency [Modification requested? Yes/No]**

(e.g. Fall, Spring, Summer; if irregularly offered, please indicate, “irregular.”) *Not applicable to Graduate courses.*

Fall

1. **Proposed course type [Modification requested? Yes/No]**

Will this course be lecture only, lab only, lecture and lab, activity (e.g., physical education), dissertation/thesis, capstone, independent study, internship/practicum, seminar, special topics, or studio? Please choose one.

Lecture only

1. **Proposed grade type [Modification requested? Yes/No]**

What is the grade type (i.e. standard letter, credit/no credit, pass/fail, no grade, developmental, or other [please elaborate])

Standard letter

1. **YES** Is this course dual-listed (undergraduate/graduate)? PSSC 5413
2. **NO** Is this course cross-listed?

*(If it is, all course entries must be identical including course descriptions. Submit appropriate documentation for requested changes. It is important to check the course description of an existing course when adding a new cross-listed course.)*

**a.** – If yes, please list the prefix and course number of the cross-listed course.

Enter text...

**b.** – **Yes / No** Can the cross-listed course be used to satisfy the prerequisite or degree requirements this course satisfies?

Enter text...

1. **NO** Is this course in support of a new program?

a. If yes, what program?

Enter text...

1. **NO** Will this course be a one-to-one equivalent to a deleted course or previous version of this course (please check with the Registrar if unsure)?

a. If yes, which course?

Enter text...

**Course Details**

1. **Proposed outline** **[Modification requested? Yes/No]**

(The course outline should be topical by weeks and should be sufficient in detail to allow for judgment of the content of the course.)

Week 1: Background and history of global rice production

Week 2: History of rice production in Arkansas

Week 3: Rice cultivars for cooking and processed foods

Week 4: Rice stand establishment and environmental conditions needed for successful planting

Week 5: Weeds and weed control in rice production

Week 6: Diseases and disease control in rice production

Week 7: Insects and insect control in rice production

Week 8: Nutrient management and fertilizers for rice production

Week 9: Chemical input application strategies in rice production

Week 10: Water management in rice production: flooded rice practices

Week 11: Water management in rice production: alternatives to flooded rice practices

Week 12: Rice milling quality and milling yield factors

Week 13: Rice drying and on-farm storage

Week 14: University of Arkansas rice research program

Week 15: Monitoring rice growth stages with the DD50 Rice Management Program

1. **Proposed special features** **[Modification requested? Yes/No]**

(e.g. labs, exhibits, site visitations, etc.)

N/A

1. **Department staffing and classroom/lab resources**

Course will utilize existing classroom space

1. Will this require additional faculty, supplies, etc.?

Course will require an adjunct faculty member

1. **NO** Does this course require course fees?

*If yes: please attach the New Program Tuition and Fees form, which is available from the UCC website.*

**Justification**

**Modification Justification (Course Modifications Only)**

1. Justification for Modification(s)

Enter text...

**New Course Justification (New Courses Only)**

1. Justification for course. Must include:

a. Academic rationale and goals for the course (skills or level of knowledge students can be expected to attain)

Arkansas is the number 1 producer of rice in the United States. Each year approximately 1.5 million acres of rice is grown in 40 of the 75 counties in Arkansas and ranks as one of the top 3 crop commodities in cash receipts for Arkansas farmers. Students will learn the technical skills for rice production. The goal for this course is to educate students to a high skill level such that they are able to manage all aspects of rice production, from land preparation; planting; nutrient, disease, irrigation, and pest management; and harvest. Students will emerge from this course as well-educated rice production specialists.

b. How does the course fit with the mission of the department? If course is mandated by an accrediting or certifying agency, include the directive.

The mission of the College of Agriculture is to discover, develop, and disseminate knowledge in agricultural and environmental systems to serve and benefit our students, the agricultural community and society. As such, this course serves our students by preparing them with the technical knowledge and skills needed to engage in rice production or to assist others (as consultants, extension specialists, educators, agronomic service representatives, etc.) in rice production.

c. Student population served.

This course serves students in the College of Agriculture, specifically upper-level students majoring in Plant and Soil Science with an emphasis in Agronomy, as well as those minoring in Crop Consulting and Agronomic Services.

d. Rationale for the level of the course (lower, upper, or graduate).

This is an upper level course (4000 level). The course utilizes information learned in lower level courses and other upper level courses general to the topic of agronomy and applies it specifically to the production of rice crops.

**Assessment**

**Assessment Plan Modifications (Course Modifications Only)**

1. **Yes / No** Do the proposed modifications result in a change to the assessment plan?

*If yes, please complete the Assessment section of the proposal*

**Relationship with Current Program-Level Assessment Process (Course modifications skip this section unless the answer to #18 is “Yes”)**

1. What is/are the intended program-level learning outcome/s for students enrolled in this course? Where will this course fit into an already existing program assessment process?

PLO: Students will demonstrate depth in an emphasis area to support their professional goals.

PLO: Students will demonstrate mastery of fundamental concepts in plant and soil sciences.

This course provides depth in the Plant and Soil Science major for students pursuing a career in crop production; it also expands upon the fundamental concepts learned in lower level courses.

1. Considering the indicated program-level learning outcome/s (from question #19), please fill out the following table to show how and where this course fits into the program’s continuous improvement assessment process.

*For further assistance, please see the ‘Expanded Instructions’ document available on the UCC - Forms website for guidance, or contact the Office of Assessment at 870-972-2989.*

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| **Program-Level Outcome 1 (from question #19)** | Students will demonstrate depth in an emphasis area to support their professional goals. |
| Assessment Measure | Please include direct and indirect assessment measure for outcome. |
| Assessment  Timetable | Outcome assessed in Principles of Crop Production (PSSC 4804) annually in fall semesters |
| Who is responsible for assessing and reporting on the results? | Dr. Ed Brown is responsible for assessing this PLO and the CoA assessment chairperson assists in evaluating and analyzing results and action plans are developed by the Plant and Soil Science faculty. |

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| **Program-Level Outcome 2 (from question #19)** | Students will demonstrate mastery of fundamental concepts in plant and soil sciences. |
| Assessment Measure | Essays will be written on four main topics: Seeds and Reserves; Growth and Photosynthesis; Plant Growth Regulators; Reproduction and Abiotic Stresses and graded with a rubric. Final exam designed to demonstrate Cohort competence of the material and is an oral group final exam based of approximately 100 questions. 98-100 correct is a cohort grade of A. 96-97 correct is a cohort grade of B; 94-95 correct is a cohort grade of C. |
| Assessment  Timetable | Outcome assessed in Plant Growth and Development (PSSC 4313) annually in fall semesters |
| Who is responsible for assessing and reporting on the results? | Dr. Ed Brown is responsible for assessing this PLO and the CoA assessment chairperson assists in evaluating and analyzing results and action plans are developed by the Plant and Soil Science faculty. |

**Course-Level Outcomes**

1. What are the course-level outcomes for students enrolled in this course and the associated assessment measures?

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| **Outcome 1** | Students will be able to diagnose weeds, diseases, and insects common in a rice crop. |
| Which learning activities are responsible for this outcome? | Presentation of images and specimen of prominent weed, disease, and insect species. |
| Assessment Measure | Practical identification exam graded with rubric. |

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| **Outcome 2** | Students will be able to develop mitigation strategies for weed, disease, and insect infestations in a rice crop. |
| Which learning activities are responsible for this outcome? | Students will prepare a mitigation portfolio for weeds, diseases, and insects based on lecture and class discussion. |
| Assessment Measure | Assessment of knowledge based on response to case study examination graded with rubric. |

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| **Outcome 3** | Students will be able to identify factors that affect rice milling quality. |
| Which learning activities are responsible for this outcome? | Visual examination of exhibits of suboptimal rice milling quality and discussion of causes. |
| Assessment Measure | Written examination graded with rubric. |

*(Repeat if needed for additional outcomes)*

**Bulletin Changes**

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| **Instructions** |
| **Please visit** [**http://www.astate.edu/a/registrar/students/bulletins/index.dot**](http://www.astate.edu/a/registrar/students/bulletins/index.dot) **and select the most recent version of the bulletin. Copy and paste all bulletin pages this proposal affects below. Please include a before (with changed areas highlighted) and after of all affected sections.**  **\*Please note: Courses are often listed in multiple sections of the bulletin. To ensure that all affected sections have been located, please search the bulletin (ctrl+F) for the appropriate courses before submission of this form.** |

**PSSC 4313. Plant Growth and Development** Auxins, gibberellins, and various other regula­tors of plant growth, also phenomena such as flowering and dormancy. Prerequisites, CHEM 1052 and PSSC 1303. Fall.

**PSSC 4343. Seed Production, Processing and Analysis** Methods of producing quality seeds and seed stocks, processing methods, and techniques of seed analysis and grading. Prerequisite, PSSC 1303. Spring, odd. Dual-listed with PSSC 5343.

**PSSC 4413. Rice Production** A study of rice growth characteristics and rice production management systems. Prerequisites: PSSC 1303 and PSSC 2813. Dual-listed with PSSC 5413. Fall.

**PSSC 4513. Plant Biotechnology** Course materials will address the why and how of plant gene transfer plus the issues involved in making those plants part of the agricultural landscape. Dual listed as PSSC 5513. Prerequisite: AGRI 2213 or BIOL 3013 or instructor permission. Spring.

**PSSC 4713. Soil Quality Assessment and Interpretation** A study of the indicators of soil quality, documentation and measurement of soil quality, interpretations of soil quality, impacts and effects of management of soil quality, and the role of conservation planning in improving soil quality. Prerequisite, PSSC 2813. Fall, even.

**PSSC 4723. Agroecological Systems** Field-based course to develop a deeper conceptual and analytical framework for understanding agricultural ecosystems of the region. Students will work in teams and visit numerous working farms and agricultural enterprises in their quest to understand agricultural system sustainability. Prerequisites, AGEC 1003, AGST 2003, ANSC 1613, PSSC 1303, PSSC 2813. Summer.