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

**New or Modified Course Proposal Form**

**[ ] Undergraduate Curriculum Council**

**[X] 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 W. Kennedy 3/14/2022 **Department Chair** | \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ Enter date…  **Head of Unit (if applicable)** |
| \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ Enter date…  **College Curriculum Committee Chair** | \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ Enter date…  **Undergraduate Curriculum Council Chair** |
| Mary Elizabeth Spence 3/8/2022 **Office of Assessment (new courses only)** | Elizabeth E. Hood 3/12/2022  **Graduate Curriculum Committee Chair** |
| \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ Enter date… **College Dean** | Alan Utter 4/25/2022  **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**

Summer 2022 start; 2022-2023 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** |  | **AGRI** |
| **Number\*** |  | **6253** |
| **Title** |  | **Agroecosystems Analysis** |
| **Description\*\*** |  | Field-based course to develop a deeper analytical framework for evaluating the sustainability of agricultural ecosystems. Students will develop sustainability metrics to evaluate agricultural systems. Students will visit agricultural operations in the region to conduct the agroecosystems analysis. |

***\**** (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. **No** Are there any prerequisites?
   1. If yes, which ones?

Enter text...Why or why not?

Enter text...

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.*

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.

Other: Experiential Learning (Confirmed this option with registrar on 20 Oct 2021)

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. **NO** Is this course dual-listed (undergraduate/graduate)?
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.)

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| **Unit** | **Topic of Discussion** | **Major Assignments** |
| Unit 1 | Methods of ecosystem analysis | Preliminary readings |
| Unit 2 | Components of sustainable agriculture |  |
| Unit 3 | Metrics to evaluate agroecosystems | Reflection paper |
| Unit 4 | Animal agroecosystems |  |
| Unit 5 | Row crop agroecosystems |  |
| Unit 6 | Regenerative vs. resilient, vs organic, vs. sustainable farming systems | Oral presentation |
| Unit 7 | Farmer attitudes toward alternative farming systems |  |
| Unit 8 | Government policy impact on farmer practices |  |
| Unit 9 | Farm management practice impact on the environment |  |
| Unit 10 | Consumer involvement/impact on farm management |  |
| Unit 11 | Testing the agroecosystem analysis methodology at A-State farm | Written term paper |
| Unit 12 | Agroecosystem analysis of farm in the region, I |  |
| Unit 13 | Agroecosystem analysis of farm in the region, II |  |
| Unit 14 | Agroecosystem analysis of farm in the region, III |  |
| Unit 15 | Summary of findings from 3 farm analyses | Student presentations of agroecosystems analysis findings from farm evaluations |

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

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

This course will include visits to many farms and agricultural enterprises in the region. This course will rely heavily on team projects, including the major writing assignment and the major presentation.

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

Course will not require any special classroom space.

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

Transportation to site visits will be necessary

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)

With a global population approaching 8 billion people and rising, the need to produce more food on existing agricultural land is imperative. Producing more food in a sustainable manner that does not induce more harm to the global environment is essential. Students need first hand practical knowledge of agricultural practices that are being implemented by successful and environmentally sustainable farmers in order to be able to understand and defend these practices while the majority continue as usual. This knowledge must be gained in the field as opposed to out of a book.

Upon completion of this course, students will have:

1. Defined and described the properties of agroecosystems.
2. Experienced an investigative framework for analyzing the origin, impact and sustainability of agricultural practices used on farms within the region.
3. Gained experience in defining, assessing and interpreting factors that contribute to greater sustainability of agroecosystems.
4. Reviewed and reflected on the basic ecological principles that build and shape agricultural systems.
5. Considered how worldview affects people’s (their own and others) views of agroecosystems and of sustainability.
6. Interacted directly with farmers, agricultural scientists, business managers, faculty, and other students who share expertise and interest in agroecosystems and their sustainability.

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 analytical skills needed to evaluate agricultural management and land-use activities that are/can be used in various careers in agriculture and natural resource management.

c. Student population served.

This course serves students in the College of Agriculture and Environmental Sciences graduate programs. ­­

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

This is a graduate level course (6000 level). The course utilizes information learned in undergraduate courses general to the topics of agriculture and environmental science and applies it specifically to sustainable agriculture, agricultural ecosystems, and land-use evaluation.

**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?

PLO1: Students will demonstrate depth in a concentration area to support their professional goals.

PLO2: Students will demonstrate both verbal and written communication skills.

PLO3: Students will develop advanced skills in critical thinking and analysis applied to solve relevant problems.

This course supports PLOs 1, 2, and 3

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 a concentration area to support their professional goals. |
| Assessment Measure | Successful development (Pass in a Pass/Fail class) of a work plan related to the student’s professional goals and interests with input and review by major advisor and instructor in AGRI 6362 (Graduate Communication Skills I, Developing Work Plans |
| Assessment  Timetable | Fall semesters of even years |
| Who is responsible for assessing and reporting on the results? | Instructor of AGRI 6362; review by CoA Graduate Committee and CoA Assessment Committee. |

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| **Program-Level Outcome 2 (from question #19)** | Students will demonstrate both verbal and written communication skills. |
| Assessment Measure | Successful completion of written work plan with approval by major advisor and instructor in AGRI 6371.  Successful (Pass) slideshow presentation of work plan or thesis to faculty and students in a seminar setting. |
| Assessment  Timetable | Spring semesters of even years. |
| Who is responsible for assessing and reporting on the results? | Instructor of AGRI 6371; review by CoA Graduate Committee and CoA Assessment Committee. |
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| **Program-Level Outcome 3 (from question #19)** | Students will develop advanced skills in critical thinking and analysis applied to solve relevant problems. |
| Assessment Measure | Successful completion of the Comprehensive/Final Defense Exam in front of graduate advisory committee. |
| Assessment  Timetable | Spring semesters of odd years. |
| Who is responsible for assessing and reporting on the results? | Major advisors; review by CoA Graduate Committee and CoA Assessment Committee. |

**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 define and describe the properties of agroecosystems and various agroecosystem analysis metrics. |
| Which learning activities are responsible for this outcome? | Background readings. |
| Assessment Measure | Preliminary reading narrative paper graded with rubric. |

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| **Outcome 2** | Students will be able to identify basic ecological principles that build and shape agricultural systems. |
| Which learning activities are responsible for this outcome? | Evaluation of different agricultural systems: row crop, animal agriculture, organic and other alternative agriculture systems. |
| Assessment Measure | Oral presentation of different agricultural systems, graded with rubric. |

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| **Outcome 3** | Students will understand how worldview affects people’s (their own and others) views of agroecosystems and of sustainability. |
| Which learning activities are responsible for this outcome? | Debriefing sessions and group discussions of field experiences and interactions with farmers and other agricultural professionals |
| Assessment Measure | Written paper describing ancillary forces impacting agricultural practices; graded with rubric. |
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| **Outcome 4** | Students will understand how worldview affects farmer’s implementation of agricultural management practices. |
| Which learning activities are responsible for this outcome? | Group discussions and readings of consumer behavior, farmer attitudes, and policy impacts on agricultural practices. |
| Assessment Measure | Final oral presentation describing the agroecosystem analysis of farms in the region, 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.** |

**AGRI 6203. Intermediary Metabolism** Integration of biochemistry and physiology with nutrition of livestock and agronomic plants.

**AGRI 6213. Experimental Designs** A course that teaches the basic principles of statistics to be able to design experiments properly and to draw valid conclusions from the results. Includes material on the most common experimental designs in use, correlation, regression, and mean separation. Prerequisite, AGRI 4233.

**AGRI 6243. Environmental Sustainability** Study of environmental impacts of socio-economic development. Examines complex interactions between development and environment and discusses integrative systems approach for achieving sustainability in all human development activities. Agriculture, energy, air, development, cultural, economic and political issues related to sustainable natural resources addressed.

**AGRI 6253. Agroecosystems Analysis** Field-based course to develop a deeper analytical framework for evaluating the sustainability of agricultural ecosystems. Students will develop sustainability metrics to evaluate agricultural systems. Students will visit agricultural operations in the region to conduct the agroecosystems analysis.

**AGRI 6303. Global Water Issues** Overview of current and historical water quality and quantity issues shaping human civilization. Emphasizes water issues facing regions of dense population and intensive agriculture. Importance of ground and surface water, ecosystem, sustainability, economic and policy issue of water are investigated.

**AGRI 6351. Graduate Seminar, Research Orientation** Provide pedagogy related to assembling graduate committee, developing and submitting degree plans, developing thesis or non-thesis research proposal and formally present the degree plan, literature background and plan of thesis or non-thesis research project to the faculty and other students.

**AGRI 6362. Graduate Communication Skills I: Professional Writing** Developing effective written work plans appropriate for the agricultural professional. Thesis students develop written work plans for thesis project; non-thesis students develop written work plans on current topics in their concentration area. Successful completion qualifies non-thesis students for the written portion of the comprehensive exam.