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

**Course Revision Proposal Form**

**[ ] Undergraduate Curriculum Council**

**[X] Graduate Council**

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

Email completed proposals to [curriculum@astate.edu](mailto:curriculum@astate.edu) for inclusion in curriculum committee agenda.

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| David Newman 4/8/2020 **Department Curriculum Committee Chair** | \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ Enter date…  **COPE Chair (if applicable)** |
| Donald Kennedy 4/8/2020 **Department Chair:** | \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ Enter date…  **Head of Unit (If applicable)** |
| David Newman 4/8/2020 **College Curriculum Committee Chair** | \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ Enter date…  **Undergraduate Curriculum Council Chair** |
| Donald Kennedy 4/8/2020 **College Dean** | \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ Enter date…  **Graduate Curriculum Committee Chair** |
| |  |  | | --- | --- | | \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ | Enter date |   **General Education Committee Chair (If applicable)** | \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ Enter date…  **Vice Chancellor for Academic Affairs** |

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

**Aaron M. Shew,** [**ashew@astate.edu**](mailto:ashew@astate.edu)**, (615)971-9938**

2. Proposed Starting Term and Bulletin Year for Change to Take Effect

**Fall 2020**

3. Current Course Prefix and Number

**AGEC 6033**

3.1 – **[NO]** Request for Course Prefix and Number change

If yes, include new course Prefix and Number below. *(Confirm that number chosen has not been used before. For variable credit courses, indicate variable range. Proposed number for experimental course is 9. )*

Enter text...

3.2 – **Yes / No** If yes, has it been confirmed that this course number is available for use?

*If no: Contact Registrar’s Office for assistance.*

4. Current Course Title

**Strategic Agribusiness and Food Management**

4.1 – **[YES]** Request for Course Title Change

If yes, include new Course Title Below.

**Quantitative Decision-Making in Agribusiness and Food Management**

1. If title is more than 30 characters (including spaces), provide short title to be used on transcripts. *Title cannot have any symbols (e.g. slash, colon, semi-colon, apostrophe, dash, and parenthesis).*

**Quant Decision-Making Agribus**

1. Please indicate if this course will have variable titles (e.g. independent study, thesis, special topics).

Enter text...

5. – **[YES ]** Request for Course Description Change.

If yes, please include brief course description (40 words or fewer) as it should appear in the bulletin.

**Practical mathematical applications for agribusiness decision-making using relevant software, including interpretation and communication of quantitative techniques and the agribusiness decision-making process.** **Emphasis on applied optimization concepts, analysis, and problem solving skills to manage agribusiness and food marketing firms.**

6. – [**NO** ] Request for prerequisites and major restrictions change.

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

Enter text...

* 1. Why or why not?

Enter text...

1. **Yes / No** Is this course restricted to a specific major?
   1. If yes, which major? Enter text...

7. – [**NO** ] Request for Course Frequency Change(e.g. Fall, Spring, Summer). *Not applicable to Graduate courses.*

a. If yes, please indicate current and new frequency:

Enter text...

8. – [**NO** ] Request for Class Mode Change

*If yes, indicate if this course will be lecture only, lab only, lecture and lab, activity, dissertation, experiential learning, independent study, internship, performance, practicum, recitation, seminar, special problems, special topics, studio, student exchange, occupational learning credit, or course for fee purpose only (e.g. an exam)? Please* *indicate the current and choose one.*

Enter text...

9. – [**NO** ] Request for grade type change

*If yes, what is the current and the new grade type (i.e. standard letter, credit/no credit, pass/fail, no grade, developmental, or other [please elaborate])*

Enter text...

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

a. If yes, indicate course prefix, number and title of dual listed course.

Enter text...

11. **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.)*

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

Enter text...

**11.2** – **Yes / No** Are these courses offered for equivalent credit?

Please explain. Enter text...

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

a. If yes, what program?

Enter text...

13. **NO** Does this course replace a course being deleted?

a. If yes, what course?

Enter text...

14. **NO** Will this course be equivalent to a deleted course or the previous version of the course?

a. If yes, which course?

Enter text...

15. **NO** Does this course affect another program?

If yes, provide confirmation of acceptance/approval of changes from the Dean, Department Head, and/or Program Director whose area this affects.

Enter text...

16. Does this course require course fees?

**NO**

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

**Revision Details**

17. Please outline the proposed revisions to the course.

*Include information as to any changes to course outline, special features, required resources, or in academic rationale and goals for the course.*

**The following table outlines the semester requirements for the course. Emphasis will be given on quantitative decision-making and optimization.**

**Reading Notation:** KM – Kaiser and Messer (2011): **Mathematical Programming for Agricultural, Environmental, and Resource Economics**

**Deliverables:** Quizzes and/or Homework and/or Presentation = “Q/H/P”

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| **Week/Date** | **Topic** | **Reading\*** | **Deliverables** |
| **Week 1** | Introduction to Linear Programming (LP) | KM Ch. 1 | Discussion Board; Q/H/P; Phone Call |
| **Week 2** | Simplex Method for LP | KM Ch. 2 | Discussion Board; Q/H/P |
| **Week 3** | Sensitivity Analysis for Simplex and Duality | KM Ch. 3 | Discussion Board; Q/H/P |
| **Week 4** | Farm-level LP Models | KM Ch. 4 | Discussion Board; Q/H/P |
| **Week 5** | Transportation and Assignment Models | KM Ch. 5 | Discussion Board; Q/H/P |
| **Week 6** | Natural Resource Applications of LP | KM Ch. 6 | Discussion Board; Q/H/P |
| **Week 7** | **Mid-Term Exam** | **ONLINE** | **Mid-Term Exam** |
| **Week 8** | **Project 1 Presentation and Paper** | **Linear Programming Project** | **Presentation and written description** |
| **Week 9** | Integer and Binary Programming | KM Ch. 7 | Discussion Board; Q/H/P |
| **Week 10** | Optimizing Nonlinear Functions | KM Ch. 8 | Discussion Board; Q/H/P |
| **Week 11** | Global Approaches to Nonlinear Optimization | KM Ch. 9 | Discussion Board; Q/H/P |
| **Week 12** | Risk Programming Models | KM Ch. 10 | Discussion Board; Q/H/P |
| **Week 13** | Price Endogenous Models | KM Ch. 11 | Discussion Board;  Q/H/P |
| **Week 14** | Goal Programming and Dynamic Optimization | KM Ch. 12-13 | Discussion Board;  Q/H/P |
| **Week 15** | **Project 2 Presentation and Paper** | **Non-Linear Optimization Project** | **Presentation and written description** |
| **Week 16** | **Final Exam** | **ONLINE** | **Final Exam; Phone Call** |

18. Please provide justification to the proposed changes to the course.

**The proposed course revisions will modernize this course, providing more focus on quantitative optimization in agribusiness and food management. Careers in agribusiness require strong analytical and mathematical skills. This applied mathematical programming course will provide the foundation students need to set up and solve quantitative agribusiness problems. This will provide crucial and foundational knowledge for decision-making in agribusiness and farm management in the modern world.**

19. **NO** Do these revisions result in a change to the assessment plan?

*\*If yes: Please complete the Assessment section of the proposal on the next page.*

*\*If no: Skip to Bulletin Changes section of the proposal.*

***\*See question 19 before completing the Assessment portion of this proposal.***

**Assessment**

**Relationship with Current Program-Level Assessment Process**

20. 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?

Enter text...

21. Considering the indicated program-level learning outcome/s (from question #23), please fill out the following table to show how and where this course fits into the program’s continuous improvement assessment process.

Enter text...

*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 #23)** | Type outcome here. What do you want students to think, know, or do when they have completed the course? |
| Assessment Measure | Please include direct and indirect assessment measure for outcome. |
| Assessment  Timetable | What semesters, and how often, is the outcome assessed? |
| Who is responsible for assessing and reporting on the results? | Who (person, position title, or internal committee) is responsible for assessing, evaluating, and analyzing results, and developing action plans? |

*(Repeat if this new course will support additional program-level outcomes)*

**Course-Level Outcomes**

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

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| **Outcome 1** | Type outcome here. What do you want students to think, know, or do when they have completed the course? |
| Which learning activities are responsible for this outcome? | List learning activities. |
| Assessment Measure | What will be your assessment measure for this outcome? |

*(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. Follow the following guidelines for indicating necessary changes.**  **\*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.**  - Deleted courses/credit hours should be marked with a red strike-through (~~red strikethrough~~)  - New credit hours and text changes should be listed in blue using enlarged font (blue using enlarged font).  - Any new courses should be listed in blue bold italics using enlarged font (***blue bold italics using enlarged font***)  *You can easily apply any of these changes by selecting the example text in the instructions above, double-clicking the ‘format painter’ icon 🡪 , and selecting the text you would like to apply the change to.*  *Please visit* [*https://youtu.be/yjdL2n4lZm4*](https://youtu.be/yjdL2n4lZm4) *for more detailed instructions.* |

**\*Changes affect page 289 of the 2019-2020 Graduate Bulletin:**

**AGEC 6023. Advanced International Agribusiness and Food Marketing Principles, barriers, policies, strategies, and decisions involved in international marketing of agricultural commodities and food products. Combines agribusiness marketing concepts with strategic international marketing, export documentation, market analysis and applications. Include development and presentation of an international agribusiness marketing plan.**

**AGEC 6033. ~~Strategic~~** Quantitative Decision-Making in **Agribusiness and Food Management** Practical mathematical applications ~~of operational and strategic~~ for agribusiness decision-making ~~tools to~~using relevant software, including interpretation and communication of quantitative techniques and the agribusiness decision-making process. ~~It includes~~Emphasis on applied optimization~~strategic~~ concepts, analysis, and problem solving skills to manage agribusiness and food marketing firms. ~~problem recognition and economic analysis to production, marketing, and financial decisions facing agribusiness and food marketing firms.~~

**AGEC 6043. Advanced Agribusiness Management Agribusiness organization and management. Budgeting, input-output relationships, and enterprise analysis in decision making. Application of economics and management principles to manage agribusinesses. Prerequisite: AGEC 1003 or AGEC 4073 or ECON 2313 or ECON 2323 or ACCT 2023 OR ACCT 2033 or MGMT 3123.**