In the box below, describe how this course meets the Foundational Component Area description for Social and Behavioral Sciences. Courses in this category focus on the application of empirical and scientific methods that contribute to the understanding of what makes us human. Courses involve the exploration of behavior and interactions among individuals, groups, institutions, and events, examining their impact on the individual, society, and culture.

How does the proposed course specifically address the Foundational Component Area definition above?

Environmental and Resource Economics is a study of society’s use of the environment and natural resources. The course looks at the economically optimal use of the environment and how the incentives that individuals and firms face do not always lead to the socially optimal outcome. Virtually every element of the course addresses the goals of the Social and Behavioral Sciences’ Foundational Component Area. The first part of the course develops an economic framework to understand the value to the society of the environment. The course then looks at how individuals and groups behave and interact, leading sometimes to environmental problems, other time to environmental solutions. The course focuses on how society can alter those incentives to address environmental problems. Finally, the course considers the challenging problem of the use of renewable and nonrenewable natural resources on which our economy depends. Throughout the class, students work in small groups to discuss concepts and answer questions following the Team-Based Learning approach.

Core Objectives

Describe how the proposed course develops the required core objectives below by indicating how each learning objective will be addressed, what specific strategies will be used for each objective and how student learning of each objective will be evaluated.

Critical Thinking (to include creative thinking, innovation, inquiry, and analysis, evaluation and synthesis of information): Students develop a number of critical learning skills in the class. Graphical analysis of concepts and data is used on a daily basis. Students will utilize the analytical frameworks and paradigms that economists use to solve problems including using graphs, mathematical tools, and economic models to analyze data. Students learn how to frame real-world problems in terms of the theoretical models developed in the class, synthesizing the critical elements of the problems to understand the economic dimensions of each problem.

Learning Outcomes:
Students will develop the ability to creatively apply the conceptual tools of environmental economics to evaluate real-world environmental and resource management problems.
Students will learn how to conduct out-of-class research on environmental problems and use critical thinking skills developed in class to determine the critical elements of the problem and will be able to state their understanding of these complex problems.

Assessment
Students’ critical thinking abilities will be evaluated on midterm and final examinations and short writing assignments. They will be challenged to explain and defend their analysis in small-group and full class discussions.

Communication (to include effective development, interpretation and expression of ideas through written, oral and visual communication): Students enrolled in AGEC 350 will communicate their critical thinking skills through short written assignments and group discussion. Analysis using mathematical and graphical skills is at the center of these discussions; students learn to frame real-world issues using graphical and mathematical tools in order to critically analyze each situation. Because of the often controversial nature of the topics covered in the course, discussion in both small and large groups is an integral part of the class.
Learning Outcomes:
Students will learn to communicate concepts related to environmental and resource economics through in-class discussions, group work to develop the problem, written assignments and short-answers to questions on quizzes and exams. Students must interpret and create their own graphical analysis of economic concepts. Both written and verbal communication skills are developed in AGEC 350. For example:

- Students will learn how to look at an environmental amenity and explain why this is of economic value to individuals and society;
- Students will learn how to read a newspaper article, distill the key elements and present the problem in terms of a graphical model that explains why an economically efficient outcome is or is not achieved.

Assessment
Writing assignments are graded in part on the basis of the students’ ability to effectively communicate their ideas. These are graded by the instructor and the TA based on a carefully designed grading rubric that evaluates whether the student is demonstrating a grasp of the economic concepts at hand and demonstrates the ability to communicate those ideas to a variety of different audiences. For example, an exam question may ask that they write a short note to an aunt or uncle explaining why some level of environmental regulations are necessary to achieve a socially efficient outcome. The students’ verbal communication skills are assessed when they make presentations to the class and to their teams. A student’s ability to verbally communicate will play an important role in the peer evaluations that all team members complete twice during each semester and are given weight in the calculation of the final grade.

Empirical and Quantitative Skills (to include the manipulation and analysis of numerical data or observable facts resulting in informed conclusions):
Students will learn to carry out rudimentary analysis of data to measure the economic value of environmental amenities and carry out cost-benefit analysis.

Learning Outcomes:
Student will develop basic mathematical skills including data analysis including the conversion of data for graphical analysis. Students will learn how to use discounting in order to evaluate benefits and costs that occur at different times.

Assessment:
Students knowledge of these skills will be assessed using in-class individual and group assignments and on examinations. Since this skill can be readily adapted to test the same skills year after year without repeating the exact same question, test questions that evaluate this skill will be reviewed from one semester to the next to provide a particularly meaningful indicator of the course’s success.

Social Responsibility (to include intercultural competence, knowledge of civic responsibility, and the ability to engage effectively in regional, national, and global communities):
The nature of the material covered in AGEC 350 is directly related to social responsibility. First, the economic framework that is used in AGEC 350 focuses specifically on social efficiency. Situations are identified when privately efficient outcomes do and do not lead to socially efficient outcomes. Second, the topics covered in the class, from population to climate change, are directly related to important problems facing society today and students are required to develop factual and scientifically based knowledge to understand these issues.

Learning Objectives:
Students should learn how to identify and synthesize quality sources of information used to inform their opinions on policy questions related to the environment.
Students should understand the differences between social and private benefits and costs and why optimal private actions do not always result in a socially efficient outcome.
Assessment:
The students' ability to understand the issues related to social responsibility are assessed using writing assignments, group work, and examination questions.

Please be aware that instructors should be prepared to submit samples/examples of student work as part of the future course recertification process.