This course satisfies Pathways General Education requirements in Social Science Reasoning, Natural Resources Reasoning, and Ethical Reasoning (see below).

Integration—Students in this course will address complex issues affecting fish and fisheries and critique options and decisions from multiple perspectives. Moral considerations are only one of a set of considerations leading to the selection of solutions. Others include technical, economic, and social viewpoints. The course adopts an approach advocating pragmatic ethics in reasoning through complex decisions. Yet the approach to teaching this course emphasizes holistic matters, interactions between humans and the environment, and the importance of informed and reasoned dialogue for generating solutions.

Inclusivity—Because students from all majors and backgrounds will be enrolled, there will be group work designed to foster student-student learning. Students will be provided a thoughtful, tested approach for ethical reasoning on issues that may bring out multiple cultural perspectives. The protocol begins with the assumption that reasonable people will disagree. With that in mind, the protocol is designed to scaffold civil discourse with a tone of decency with a goal of serving deliberative democracy. Course content, such as subsistence fishing, human trafficking in the fishing industry, fish allocation conflicts, and rights to fish will sensitize the students to issues of diversity and inclusion in local and global contexts.

Relevance—The course asks students to answer the question "Why do you believe what you believe and not something else?" Students across all disciplines and careers must be able to ask and answer this question in their academic, public, and personal lives. The student who completes the course will have moved toward developing their core intellectual power to live ethically and contribute to civil discourse in a democratic society.

Pathways Learning outcomes and how fulfilled in this course

Natural Sciences

1. Explain the foundational knowledge of a particular scientific discipline: Students will learn the basics of the biology of a fish, its sensory capabilities, and the basic adaptations for life in a variety of habitats.

2. Apply principles and techniques of scientific inquiry: Students will learn fundamental principles of experimental design for wild and captive fishes, the importance of controls, and scientific inference. These will be taught via explanation of some of

the now classic experiments that reveal the extensive chemosensory, mechanosensory, and electrosensory perceptions.

3. Evaluate the credibility and the use/misuse of scientific information: Many myths and metaphors will be explored in addition to the proper uses of neutral language in the conduct and communication of scientific findings.

4. Analyze the reciprocal impact of science and society: The term conservation, the careful preservation and protection of some fish, has alternative definitions and fish and fishing have contributed to the practice of conservation in many ways. Societal values dictate what fish may be conserved or managed and which are basically ignored.

Social Sciences

1. Identify the fundamental concepts of the social sciences: Connections between fish and human existence will be explored through the lens of the relations between fish and humans in an historical context and contrasting indigenous, less complex societies and modern industrialized societies. Here, the fundamentals of history, historical and cultural anthropology, geography, and economics will be introduced.

2. Analyze human behavior, social institutions and/or patterns of culture using theories and methods of the social sciences: The following human behavior and social institutions will be explored in this course with a social-ecological framework: (1) widespread introduction of sport fish, such as rainbow trout, via institutions such as acclimatization councils; (2) shark ecotourism; and (3) emergence of conservation organizations. These cases will be explored from the framework of the multiple dimensions of trust theory.

3. Identify interconnections among and differences between social institutions, groups, and individuals: Trust is an important driver of collaboration, conflict resolution, and enhanced group performance in various contexts. The development of community-based co-management of fisheries (Ostrom and others) has been a major innovation that relies on the glue of social networks that permit the sustainable management of fisheries.

4. Analyze the ways in which values and beliefs relate to human behavior and social relationships: At beginning and end of the semester the student will write about their personal values and beliefs about fish, fishing and conservation.

Ethical Reasoning

1. Explain and contrast relevant ethical theories: Connections between fish and human existence will be explored through the lens of utilitarianism, animal welfare, animal rights, contrasting indigenous, less complex societies and modern industrialized societies.

2. Identify ethical issues in a complex context: What fish welfare standards should apply to fish raised for human consumption? What rules and angler codes of ethics should be adopted in recreational fishing where catch and release is practices? What control options apply to the control of invasive fish species? Should use rights or property rights be applied to management of commercial fisheries? What practices should be in place to repatriate fish species extirpated from parts of the native range? What elements of ecofeminist thought apply in coastal communities? What is socially responsible seafood and how should it be labeled? How does the principle of justice apply to management of fisheries? Many of these issues will be explored during class and students will prepare one expository essay

3. Articulate and defend positions on ethical issues in a way that is both reasoned and informed by the complexities of those situations: Students will prepare one expository essay where they develop and defend an ethical position on a controversial fish or fishing issue.