

## **SPECIAL TOPICS COURSE DESCRIPTIONS SUMMER 2022**

### **BIOL 475 Speciation**

What is a species? How do species form? What keeps species from “merging” into each other? Scientists have debated these questions for centuries, and there is no end in sight. This course delves into these questions by focusing on the speciation patterns and processes of animals and plants, with other taxonomic groups covered in lesser detail. Major concepts include the application of species concepts, the biology, ecology, and geography of speciation, hybridization as an evolutionary “force”, speciation rates, the genetics of speciation, and reproductive isolation. The format is asynchronous, yet discussion based, incorporating primary and secondary literature as well as unpublished data sets. Emphasis will be placed on using basic concepts to analyze readings and data to practice implementing the concepts as systematists do. The types of data informing these analyses will be phylogenetic, genetic, morphological, and ecological. Our analyses will largely take place through the lens of discussion; we will not be using analytical software in this course.

### **CCAP 300 Representations of Nature**

Over many millennia people have created visual, auditory, and textual representations of the world around them. In this course we will consider different forms of visual and textual representations of nature using examples spanning Ice Age France to modern Hollywood cinema. Often the creator of nature representations have deliberate purposes that may involve honestly representing nature (i.e., documentary bird and plant art) or presenting a sublime and inspirational work (i.e., the Hudson River School) or reflecting society’s physical and spiritual dependence on nature (i.e., ancient Egyptian art). Nature representations have been used to motivate the consumption and use of nature (i.e., advertising), to inspire an awareness of the human connection to nature (i.e., nature essays), and to provoke the protection and conservation of nature (i.e., nature documentaries). In some cases the specific purposes of environmental representations are unknown (i.e., Paleo-Indian petroglyphs). As we study different representations of nature we will address the questions such as: what can we learn about the nature based on this representation? What motivations did the creator have in making this representation? Does the representation accurately reflect what is known scientifically about nature (recognizing that accuracy may not have been a purpose of the representation)? How does our society today create representations of nature? Throughout the course we will use many examples as a catalyst for examining modern scientific knowledge about the nature depicted in those representations.

### **CCAP 300 Ethical Issues in Healthcare**

This course represents a complex intellectual phenomenon in the canon of newly emerging disciplines. We will consider the ethical principles and values relevant to life, and their application in the face of rapid advancement in technology, medicine and the life sciences. The course introduces students to the historical, theoretical, and thematic dimensions of bioethics. We focus on bioethics main terms and concepts, as well as decision-making procedures that students can use to discern and defend moral courses of action. We will analyze the theoretical challenges of bioethics as an interdisciplinary field and discuss an array of main topics in bioethics relevant to all thinking people on a practical level; some that we will face in some form in our individual lives, as well as the bioethical questions that we all encounter socially.

### **CSTL 110 Introduction to Forensic Chemistry**

This course is designed for non science majors looking to fill their 4 credit CSTL requirement. We will explore a variety of forensic techniques and court cases. We will also perform laboratory experiments using many of the techniques we learn about. During this course, some basic chemistry, biology or physics will be introduced to help explain the science behind the techniques. Do not worry, you do not need an extensive background in science to be able to understand. Anything that you might need will be explained to you before we proceed to the technique.

### **EDUC 460 Leadership, Supervision, and Research**

Is your organization led top-down with a hierarchical organization structure or from the bottom-up where leaders share decision making with those who are the ones to implement changes and new initiatives? Is the leadership adaptive to a changing environment or rigid in policies, practices, and procedures? In this course participants will explore principles and practices of leadership and identify the skills and knowledge to better

lead the learning in their educational setting. Participants will consider the ramifications of providing meaningful feedback to improve educator practice through effective supervision and evaluation. This course will also prepare participants to use data to inform decision making and to critically review research and evidence based practices through reading and interpreting research.

### **EDUC 460 Connecting the Hoosic Watershed to Pk-6 Science Standards**

The Hoosic Watershed is rich with varied natural history and resources. In this course, educators will explore the Hoosic Watershed through a place-based lens. The course will be taught both online and in person, with short multi-day field trips to local waterways and habitats being a key feature. Educators will be provided with ample resources to develop curricula that are specific to their local region and interests. Curricular connections to the PK-6 MA State Science Standards will be integrated throughout the course.

### **HIST 320/POSC 316 Civics in Massachusetts**

Topics to be covered include- history of the United States of America; the Constitution of the United States, including the Bill of Rights; the Declaration of Independence; the constitution of the commonwealth; local history and government; the function and composition of the branches of local, state and federal government; the roles and responsibilities of a citizen in a democracy; the development of skills to access, analyze and evaluate written and digital media as it relates to history and civics; community diversity and historical trends in voter registration and civic participation relative to disenfranchised voter populations; opportunities to identify and debate issues relative to power, economic status and the common good in democracy.

### **HIST 320 American Immigration and Ethnicity**

The goal of this class is for students to gain a knowledge and understanding of American immigration and ethnic history. Through the study of the past, you will also be able to better understand American society today. You will also be exposed to new ways of thinking about history—the point of this class is not to simply memorize dates or events—but to engage with broader themes in American immigration history and explore how things came to be the way they are.

### **IDST 320 Class, Wealth, and Society in America**

This class will explore the ways in which class and wealth influence American society, from the way we vote to the way we socialize, work and learn. We will explore the topic through disciplines such as sociology, economics, political science, psychology and more.

### **PSYC 495 Psychology of Leadership**

This course provides an opportunity for students to explore leadership through the lens of psychology. Essential knowledge, skills, and abilities of effective (and ineffective) leaders are examined, including personality, conflict, communication, and individual/group behavior. Students will complete a number of self-assessments and analyze case studies of famous (and infamous) leaders to understand and apply these psychological constructs in meaningful ways.