

## **ENVIRONMENTAL CONSERVATION (ECR)**

### **ECR 102. Introduction to Forestry. 4 Credits.**

This course provides a general introduction to the practice and profession of forestry. This course will not result in becoming a forester but will equip participants with the tools to understand forest ecology, agroforestry techniques, and forest management decisions. This course will allow you to communicate with foresters and understand forests' complexity, their values, and the factors influencing forest stewardship. We will also plant and tend fruit and nut trees as part of our agroforestry plot. Lab sessions will be hands-on experiences revolving around and applying the topics listed in the lab section of the syllabus. We will also learn from professionals with field trips. The lab and lecture portions of this course frequently take place in one of our many outdoor instructional spaces. Students are to refer to the applicable semester's course syllabus for specifics and expectations. Formerly offered as BIO 102. Prerequisites: ENG 098, FYE 101, MAT 092 or MAT 096, RDG 098, or placement. Fall.

### **ECR 107. Plant Nutrients. 2 Credits.**

Functions of mineral nutrients in plants, effects of mineral deficiencies, and sources of these nutrients to prevent or alleviate deficiencies in crop production. We will dive in and learn how plants take in, use, and move around mineral nutrients. We will also discover how and why plants show different signs and symptoms of nutrient deficiencies and toxicities. We will also discuss ways to alleviate these deficiencies with conventional and natural remedies. The lab and lecture portions of this course frequently take place in one of our many outdoor instructional spaces. Students are to refer to the applicable semester's course syllabus for specifics and expectations. Spring.

### **ECR 108. Plant Pathology. 4 Credits.**

This course will introduce students to the causes of plant diseases, the ecology of plant pathogens, the host response, and management of plant diseases. We will explore their life cycles, basic biology and the different signs and symptoms plants exhibit when affected by these organisms. We will explore these organisms with hands-on laboratories and be attending field trips to local forests and farms. Get ready to learn the crazy lives of microorganisms and how they affect society! Fall.

### **ECR 109. Fruit Production. 1 Credit.**

In this course, students will study the practices used to grow fruit on large and small scales. This class will cover berry crops (strawberries, raspberries/blackberries, blueberries and grapes) and tree crops (apples, pears, peaches and plums). Students study the organic growing of these fruits, IPM as well as new methods being used to grow these crops. A portion of this course will involve field trips to local farms in the region. Students will also have the opportunity to study a fruit crop of their choice as part of their final project. The lab and lecture portions of this course frequently take place in one of our many outdoor instructional spaces. Students are to refer to the applicable semester's course syllabus for specifics and expectations. Spring.

### **ECR 120. Regenerative Agriculture. 4 Credits.**

This course is designed to be season dependent and will vary with hands-on applications of topics specified in the syllabus. We use regenerative practices whenever possible and at a minimum, sustainable ones. What's the difference? Sustainable food production maintains the land in its current state, regenerative practices improves the land to make a better environment for all organisms rather than only maintaining it. Our course is for those students interested in understanding the processes of growing food everywhere and support local ecosystems with native plants and how they are interlinked. A hands-on workshop approach will be used and experiments will be conducted outside, in the greenhouse, and the surrounding forest. Topics include but are not limited to; theory and practice of operation/management of a greenhouse and nursery, regenerative food production, native crop plants, rooting substrates, fertilizer formulations and cover crops, no-till methods, composting, and food injustice. We will also be going on field trips off campus. The lab and lecture portions of this course frequently take place in one of our many outdoor instructional spaces. Students are to refer to the applicable semester's course syllabus for specifics and expectations. Formerly offered as BIO 120.

### **ECR 181. Integrated Pest Management. 1 Credit.**

Our course explores the theory and application of arthropod, disease, and weed management. We will focus on insect pest prevention, identification, control, and management strategies. We will discuss chemical and organic means of control and prevention. We will explore these topics through lectures, field trips, and hands-on experiences. The lab and lecture portions of this course frequently take place in one of our many outdoor instructional spaces. Students are to refer to the applicable semester's course syllabus for specifics and expectations. Fall.

### **ECR 197. Forest Fire Control and Management. 4 Credits.**

Wildland fire has influenced plant and animal life histories, and has been used by humans for generations to shape ecosystems. In Forest Fire Control and Management, the semester begins with learning the basic knowledge necessary to become a federally certified wildland fire fighter (S-130/190). Obtaining the S-130 / 190 Certification is one of many steps required for employment as a wildland fire fighter both locally and nationally. The second half of the course focuses on wildland fire as an ecosystem process and the use of prescribed fire as a forestry management tool. This course is highly recommended for Natural Resources (NRD) and Fire Science Technology (FST) Majors. The lab and lecture portions of this course frequently take place in one of our many outdoor instructional

spaces. Students are to refer to the applicable semester's course syllabus for specifics and expectations. Formerly offered as NRD 197. Prerequisites: ENG 098, RDG 098, FYE 101, MAT 092 or MAT 096 or placement. Spring.

**ECR 201. Environmental Conservation. 3 Credits.**

This introduction to conservation biology and biodiversity covers the factors that make a species vulnerable to extinction and the strategies and tools that can be used to protect species and ecosystems. The main focus of this course is biological, but it is interdisciplinary and reaches into ethics, economics, and sociology. The explicit goal of this discipline is to conserve biodiversity at all levels of organization from genetics to populations, species, communities and ecosystems. Prerequisites: Completion of at least 4 of the following courses: BIO 116, BIO 122, BIO 130, BIO 140, CHE 120, EAS 115, EAS 120, EAS 125, EAS 126, EAS 130, ECR 102, ECR 108, ECR 120, ECR 197. Fall.

**ECR 220. Practicum In Environmental Conservation. 1 Credit.**

This experience allows students practice in a field specific to their interest. The practicum, developed and defined in cooperation with appropriate faculty, student and the practicum supervisor, requires a minimum of a 30 hours commitment. This practicum will involve either a project, research, or fieldwork as well as the reading of a book of their choosing and approved by faculty, relating to their field of study. The practicum will be monitored with regular progress updates and at the conclusion will require at the minimum a presentation of the work completed. Students are to meet with the department chair for approval of their project before they can enroll in this class. Formerly offered as NRD 220. Prerequisites: Completion of at least 4 of the following courses: BIO 116, BIO 122, BIO 130, BIO 140, CHE 120, EAS 115, EAS 120, EAS 125, EAS 126, EAS 130, ECR 102, ECR 108, ECR 120, ECR 197.