

# GONZAGA-IN-FLORENCE SYLLABUS

Course: BIOL 199: The Biology of Food  
Credits: 3 Credits  
Instructor: Dr. David L. Boose



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## COURSE PHILOSOPHY, OVERVIEW AND OBJECTIVES:

One of the most direct ways that we as humans interact with the rest of the biological world is through our food, yet most of us give it little thought as a topic for scientific study. The primary objective of this course is to introduce students to the practice and implications of thinking scientifically, and we will use food as a focus for that thinking. In Florence, students will be exposed to new foods, new cuisines, and new connections between food and culture. This course will take advantage of those new experiences and encourage a thoughtful, scientific, understanding of how our food choices impact us and the rest of the planet.

The course is divided into four sections of unequal length:

**Part 1: Why we eat.** This section introduces the fundamental concepts of food as energy and matter, and examines the place of humans in global food chains.

**Part 2: What we eat.** In this section, we will examine our food from the biological perspective. Topics will include such things as the difference between fruits and vegetables, genetically modified foods, and the biology and chemistry of fermentation.

**Part 3. Why we eat what we eat.** The third part of the course will be a brief sampling of the intersection between food and culture, both historically and in the present, including such topics as how Italy got tomatoes, and the birth of the “slow food” movement.

**Part 4: Why it matters.** In this last section, we will look at the impacts of our food choices on the global ecosystem. Topics will include the costs and benefits of modern agriculture, and the impact of diet choices on individual and ecosystem health.

Students will be expected to keep a food journal, in which they record and reflect on the foods they encounter and eat during their time in Florence and their travels elsewhere. Grades will be based on a combination of exams, short written assignments, the food journal, and a paper. Optional field trips may be arranged to visit locations relevant to the course. Course readings will come from a variety of sources, most of which will be available electronically.

At the end of the class, students should:

- be able to ask questions and evaluate possible answers in a scientific manner, understanding the roles of logic and evidence in the process,
- be able to apply scientific thinking and scientific concepts to their food choices, and
- have a greater appreciation for the impacts that those choices have on their individual well-being and that of others on the planet.

Details of the course schedule will be updated closer to the beginning of the summer session.