

Academic Unit / Office Department of Biology & Biochemistry

Catalog Year of Implementation 2019-2020

Course (Prefix / Number) BIOL / 2315

Course Title Biology of Food

Core Proposal Request

Add to Core Curriculum

Revise course already in Core Curriculum

	Current Core Categorization (New additions: select N/A for this column)	Proposed Categorization for Upcoming Core
Foundational Component Area (required)	N/A (Not currently a Core course)	Life and Physical Sciences (30)
Component Area Option (optional)	N/A (No Component Area Option)	Select proposed COA status:
Category Listing: Single or Double?	Select current category listing status:	Select proposed category listing status:

Core Proposal Rationale - Please provide a rationale for including, or continuing to include, this course in the UH Core Curriculum:

This course is not currently part of the core. I developed it over the past few years to give students an introduction to a broad range of topics in Biology that they may not get from other courses, using a topic that most of us are inherently interested in--food. The activities and topics are appropriate for non-majors and will provide them with skills in all of the core objectives described below.

Core Objectives (see [THECB Core objectives](#))

Critical Thinking

Teamwork

Communication

Social Responsibility

Empirical & Quantitative Skills

Personal Responsibility

Please explain how the Core Objectives selected above will be met:

Critical Thinking and Communication: Agricultural Biodiversity activity. Students are provided with a general reason of why biodiversity matters in agriculture, e.g. in controlling pests and disease. They must research that topic to understand the issue, then find a specific example of where biodiversity has been useful for this purpose. Students are required to clearly present their findings as they relate to the original issue in the form of a brief essay, with appropriate citations, in a manner that skillfully communicates the purpose of their work and their findings.

Empirical and Quantitative Skills and Teamwork: Lactase Persistence activity. In learning about lactase persistence and cow domestication, students watch a series of videos, which include data presented in graphical form. To answer a series of questions about this topic, students work in teams to decide which data are appropriate to address the question, use those data understand how natural selection has acted in the evolution of lactase persistence, and explain what these data mean for how we currently understand the issues.

When submitting this proposal form, please remember to attach a syllabus, learning objectives, and/or sample lesson(s).

BIOL 2397 (23150) Selected Topic in Biology: BIOLOGY OF FOOD

You are what you eat—but what is that you are eating? Most of our food has biological origins: plants, animals, fungi, and bacteria. In this course we will explore those origins by considering the biological diversity, physiology, cell biology, genetics, and evolution of the organisms that we eat. We will learn how organisms have been modified to become food, from domestication to genetic engineering and the role of modern agriculture in food production and sustainability. We will consider why we eat some organisms, but not others. And we will think about how the biology of our food affects our biology. The course consists of lectures, presentations, demonstrations, movies, and projects.

This is a 2000-level course. It is a 'mixed-majors' course. If you are a Biology major, please note that this course will NOT count toward your advanced biology electives.

Meeting information: Fall 2017, Tues/Thurs 11:30-1:00, Farish Hall Rm 219

Instructor: Dr. Rebecca Zufall, 321D Science and Research 2, rzufall@uh.edu.

Office hours by appointment.

Website: All course materials and communication will be posted on Blackboard. Please check there regularly.

Textbook: On Food and Cooking: The Science and Lore of the Kitchen, 2nd edition (Harold McGee, 2004). Available in the bookstore, Amazon, and as a pdf online.

Additional readings will be posted on Blackboard throughout the semester.

Classroom response system: We will be using the **Top Hat** classroom response system (tophat.com). You will be able to submit answers to in-class questions and assignments using a phone, tablet, or laptop.

Go to: <https://success.tophat.com/s/article/Student-Top-Hat-Overview-and-Getting-Started-Guide> to register for a Top Hat account and learn more about the system. Top Hat requires a paid subscription to use.

You should get an invitation to register by email, but you can also register here: <https://app.tophat.com/e/563196>

Note: our Course Join Code is **563196**.

If you have any problems with Top Hat, contact their support team at support@tophat.com, or use the in-app support button.

Grades:

Attendance: Attendance and participation are required in order to get the most out of this course. Thus, 5% of your grade will be based on your attendance, which will be recorded with Top Hat. Attendance generally will be taken at the beginning of class, so in order to have your attendance count, you must be on time.

Class assignments: There will be a variety of in-class activities throughout the semester (some of which will require preparation before class). Your active and successful participation in these will count toward 15% of your grade.

Homework: Homework will be assigned throughout the semester and will be submitted through Blackboard. Check Blackboard regularly so you do not miss these. Homework will count toward 15% of your grade.

Exams: There will be three in-class exams. There will not be a final exam. Each exam is worth 15% of your grade (45% total).

Campus garden tour: Attendance at the class tour of the campus garden will count for 5% of your grade.

Final project: The remaining 15% of your grade will come from a final project. The details about this project will be available in the following weeks.

Extra credit: There may be opportunities for extra credit throughout the semester. Details will be announced in class and/or posted on Blackboard. These are not guaranteed, however, so do not count on them to replace work in the rest of the class.

UH CAPS Statement

Counseling and Psychological Services (CAPS) can help students who are having difficulties managing stress, adjusting to college, or feeling sad and hopeless. You can reach CAPS (www.uh.edu/caps) by calling 713-743-5454 during and after business hours for routine appointments or if you or someone you know is in crisis. No appointment is necessary for the “Let's Talk” program, a drop-in consultation service at convenient locations and hours around campus.

http://www.uh.edu/caps/outreach/lets_talk.html

Tentative Course Schedule

Aug 22	Introductions (READ: McGee pp. 1-4)
Aug 24	Biological diversity of food
Aug 29	
Aug 31	
Sept 5	Movie: The Botany of Desire: Apples and Potatoes
Sept 7	Plant and apples (READ: McGee pp. 243-273, 353-356)
Sept 12	What's that fruit? (See assignment on Bb; READ: McGee pp. 353-356)
Sept 14	GMOs—Guest lecture by Dr. Erin Kelleher
Sept 19	GMOs, part 2
Sept 21	Agricultural Biodiversity
Sept 26	EXAM 1
Sept 28	Fungi and Fermentation (READ: McGee pp. 344-351, 713-716, 771-773)
Oct 3	Grains and nuts (READ: McGee pp. 451-459, 461-482, 501-514)
Oct 5	What's that vegetable? (See assignment on Blackboard)
Oct 10	Milk (READ: McGee pp. 7-21)
Oct 12	Milk products (READ: McGee pp. 27-59)
Oct 17	Campus garden—group 1 and Global Waste—group 2
Oct 19	Campus garden—group 2 and Global Waste—group 1
Oct 24	EXAM 2
Oct 26	Chocolate (READ: McGee pp. 694-703)
Oct 31	Sweet tooth (READ: McGee pp. 645-680)
Nov 2	The chicken and the egg (READ: McGee pp. 68-78)
Nov 7	Entomophagy—Guest lecture by Dr. Tiffany Shin
Nov 9	Animals as food (READ: McGee pp. 119-129)
Nov 14	Something's fishy (READ: McGee pp. 181-202)
Nov 16	EXAM 3
Nov 21	NO CLASS—see out-of-class activity posted on Blackboard
Nov 23	NO CLASS—Happy Thanksgiving
Nov 28	Final project prep
Nov 30	Final project prep
Dec 7	Final project presentations 11:00-2:00

Whenever possible, and in accordance with 504/ADA guidelines, the University of Houston will attempt to provide reasonable academic accommodations to students who request and require them. Please call 713-743-5400 for further assistance.