



# SYLLABUS

# FDSCTE/4600

Food Composition and Function

Autumn 2020 – Online

2 credit hours

Online

## COURSE OVERVIEW

### Instructor

Dr. Emmanuel Hatzakis

Department of Food Science and Technology

Office: 233 Parker Food Science and Technology Building

Email address: [chatzakis.1@osu.edu](mailto:chatzakis.1@osu.edu) (This is the preferred method of communication)

Phone number: 614-688-2731

Office hours: By appointment

### Support

Dr. Monica Giusti

Email address: [giusti.6@osu.edu](mailto:giusti.6@osu.edu)

Phone number: 614-247-8016

Office hours: By appointment

### Prerequisites

None

### Course description

Foods are complex mixtures of different components that act together to produce wonderful flavors, aromas, and textures, while delivering nutrition. The purpose of this course is to provide students an overview of the different compounds present in foods, including macro and micro-components, and how they work together in a food product. At the end of the course, students will have a better understanding of the macro-components (water, proteins, lipids and carbohydrates) and micro-components (such as vitamins, minerals, additives) that make up our foods, the main chemical reaction that we can expect, and understand the relationship between composition and functionality in foods. In addition, students will recognize the impact of steps such as processing, storage, and transportation on food composition and quality and be familiar with the most common analytical techniques for food and nutrient analyses.

## Course learning outcomes

- Recognize the general chemical structures of macro- and micro- nutrients and describe their major chemical and physical properties
- Understanding the relationship between biochemical composition and sensory perception-quality of raw and finished food products
- Gain knowledge about the nutritional value and potential changes in structure and composition of the major food categories
- Understand the effect of food processing, storage and transportation in food composition
- Understand the basics of metabolism and nutrition
- Name and describe the basic analytical techniques used in food analysis and give specific application examples
- Be able to critically evaluate research publications and reports in the field.

## HOW THIS COURSE WORKS

**Mode of delivery:** This course is 100% online. It is an asynchronous class but there will be ten required sessions when students must be logged in to Carmen at a scheduled time. The ten required sessions are from 11:30 am to 12:25 pm on the first date of class (8/24/2020), before and after each quiz (09/11/20, 09/18/2020, 11/06/2020, 11/13/2020), before and after midterm exam (9/25/2020, 10/02/2020), presentations date (11/23/2020) and review dates (11/16/2020, 11/20/2020). Attendance in these sessions is mandatory. Exceptions will be made in cases of health issues family emergencies etc.

**Pace of online activities:** This course is divided into **weekly modules** that are released one week ahead of time. Students are expected to keep pace with weekly deadlines but may schedule their efforts freely within that time frame.

**Credit hours and work expectations:** This is a **2-credit-hour course**. According to [Ohio State policy](#), students should expect around 2 hours per week of time spent on direct

instruction (instructor content and Carmen activities, for example) in addition to 3 hours of homework (reading and assignment preparation, for example) to receive a grade of (C) average.

**Attendance and participation requirements:** Because this is an online course, your attendance is based on your online activity and participation. The following is a summary of everyone's expected participation:

- **Participating in online activities for attendance: TWICE PER WEEK**  
You are expected to log in to the course in Carmen every week. (During most weeks you will probably log in many times.) If you have a situation that might cause you to miss an entire week of class, discuss it with me *as soon as possible*.
- **Office hours: By appointment**
- **Participating in discussion forums: THE PARTICIPATION WILL BE DURING THE ORIGINALLY SCHEDULED TIME FOR THE CLASS; AT THE START OF THE CLASS, AND ONE BEFORE AND AFTER EACH QUIZ AND MIDTERM EXAM. PARTICIPATION IS ALSO REQUIRED FOR PRESENTATIONS AND THE REVIEW.**

## COURSE MATERIALS AND TECHNOLOGIES

### Textbooks

#### REQUIRED

- N/A

#### RECOMMENDED/OPTIONAL

- Murano – Understanding Food Science and Technology (Available in OSU library)

### Course technology

For help with your password, university email, Carmen, or any other technology issues, questions, or requests, contact the Ohio State IT Service Desk. Standard support hours are available at [ocio.osu.edu/help/hours](https://ocio.osu.edu/help/hours), and support for urgent issues is available 24/7.

- **Self-Service and Chat support:** [ocio.osu.edu/help](https://ocio.osu.edu/help)
- **Phone:** 614-688-4357(HELP)
- **Email:** [servicedesk@osu.edu](mailto:servicedesk@osu.edu)
- **TDD:** 614-688-8743

## BASELINE TECHNICAL SKILLS FOR ONLINE COURSES

- Basic computer and web-browsing skills
- Navigating Carmen: for questions about specific functionality, see the [Canvas Student Guide](#).

## REQUIRED TECHNOLOGY SKILLS SPECIFIC TO THIS COURSE

- [CarmenZoom virtual meetings](#)
- [Recording a slide presentation with audio narration](#)
- [Recording, editing, and uploading video](#)

## REQUIRED EQUIPMENT

- Computer: current Mac (OS X) or PC (Windows 7+) with high-speed internet connection
- Webcam: built-in or external webcam, fully installed and tested
- Microphone: built-in laptop or tablet mic or external microphone
- Other: a mobile device (smartphone or tablet) or landline to use for BuckeyePass authentication

## REQUIRED SOFTWARE

- [Microsoft Office 365](#): All Ohio State students are now eligible for free Microsoft Office 365 ProPlus through Microsoft's Student Advantage program. Full instructions for downloading and installation can be found [at go.osu.edu/office365help](http://go.osu.edu/office365help).

## CARMEN ACCESS

You will need to use [BuckeyePass](#) multi-factor authentication to access your courses in Carmen. To ensure that you are able to connect to Carmen at all times, it is recommended that you take the following steps:

- Register multiple devices in case something happens to your primary device. Visit the [BuckeyePass - Adding a Device](#) help article for step-by-step instructions.
- Request passcodes to keep as a backup authentication option. When you see the Duo login screen on your computer, click **Enter a Passcode** and then click the **Text me new codes** button that appears. This will text you ten passcodes good for 365 days that can each be used once.
- Download the [Duo Mobile application](#) to all of your registered devices for the ability to generate one-time codes in the event that you lose cell, data, or Wi-Fi service.

If none of these options will meet the needs of your situation, you can contact the IT Service Desk at 614-688-4357 (HELP) and IT support staff will work out a solution with you.

## GRADING AND FACULTY RESPONSE

### How your grade is calculated

ASSIGNMENT CATEGORY	POINTS
Midterm Exam	20
Two Quizzes	10
Journal club session/presentation	30
Final exam	40
Total	100

*See course schedule below for due dates.*

### Descriptions of major course assignments

Quizzes: 10-15 simple questions that cover the most basic concepts taught in the class. Each quiz requires max 30 min.

Midterm exam: The midterm exam will cover the macronutrients, micronutrients, food additives and basics of metabolism.

Journal club presentation: Each student will give a 15 min presentation of a topic that will be assigned to her/him. The presentation will be followed by a 5 min Q/A session.

Final exam: Final exam will cover the topics after macronutrients.

### Late assignments

Late submissions will not be accepted. Please refer to Carmen for due dates. Exceptions will be made in cases of illness, family emergencies, etc.

### Grading scale

93–100: A  
90–92.9: A-  
87–89.9: B+  
83–86.9: B  
80–82.9: B-  
77–79.9: C+  
73–76.9: C  
70 –72.9: C-  
67 –69.9: D+  
60 –66.9: D  
Below 60: E

## Instructor feedback and response time

I am providing the following list to give you an idea of my intended availability throughout the course. (Remember that you can call **614-688-HELP** at any time if you have a technical problem.)

- **Grading and feedback:** For large weekly assignments, you can generally expect feedback within **7 days**.
- **Email:** I will reply to emails within **24 hours on days when class is in session at the university**.
- **Discussion board:** I will check and reply to messages in the discussion boards every **24 hours on school days**.

## OTHER COURSE POLICIES

### Discussion and communication guidelines

The following are my expectations for how we should communicate as a class. Above all, please remember to be respectful and thoughtful.

- **Writing style:** While there is no need to participate in class discussions as if you were writing a research paper, you should remember to write using good grammar, spelling, and punctuation. A more conversational tone is fine for non-academic topics.
- **Tone and civility:** Let's maintain a supportive learning community where everyone feels safe and where people can disagree amicably. Remember that sarcasm doesn't always come across online.

- **Citing your sources:** When we have academic discussions, please cite your sources to back up what you say. For the textbook or other course materials, list at least the title and page numbers. For online sources, include a link.
- **Backing up your work:** Consider composing your academic posts in a word processor, where you can save your work, and then copying into the Carmen discussion.
- **Preferred communication method:** By email

## Academic integrity policy

See **Descriptions of major course assignments**, above, for my specific guidelines about collaboration and academic integrity in the context of this online class.

### OHIO STATE'S ACADEMIC INTEGRITY POLICY

Academic integrity is essential to maintaining an environment that fosters excellence in teaching, research, and other educational and scholarly activities. Thus, The Ohio State University and the Committee on Academic Misconduct (COAM) expect that all students have read and understand the university's *Code of Student Conduct* ([studentconduct.osu.edu](http://studentconduct.osu.edu)), and that all students will complete all academic and scholarly assignments with fairness and honesty. Students must recognize that failure to follow the rules and guidelines established in the university's *Code of Student Conduct* and this syllabus may constitute "Academic Misconduct."

The Ohio State University's *Code of Student Conduct* (Section 3335-23-04) defines academic misconduct as: "Any activity that tends to compromise the academic integrity of the university or subvert the educational process." Examples of academic misconduct include (but are not limited to) plagiarism, collusion (unauthorized collaboration), copying the work of another student, and possession of unauthorized materials during an examination. Ignorance of the university's *Code of Student Conduct* is never considered an excuse for academic misconduct, so I recommend that you review the *Code of Student Conduct* and, specifically, the sections dealing with academic misconduct.

**If I suspect that a student has committed academic misconduct in this course, I am obligated by university rules to report my suspicions to the Committee on Academic Misconduct.** If COAM determines that you have violated the university's *Code of Student Conduct* (i.e., committed academic misconduct), the sanctions for the misconduct could include a failing grade in this course and suspension or dismissal from the university.

If you have any questions about the above policy or what constitutes academic misconduct in this course, please contact me.

Other sources of information on academic misconduct (integrity) to which you can refer include:

- Committee on Academic Misconduct web page ([go.osu.edu/coam](http://go.osu.edu/coam))

- Ten Suggestions for Preserving Academic Integrity ([go.osu.edu/ten-suggestions](https://go.osu.edu/ten-suggestions))
- Eight Cardinal Rules of Academic Integrity ([go.osu.edu/cardinal-rules](https://go.osu.edu/cardinal-rules))

## Copyright for instructional materials

The materials used in connection with this course may be subject to copyright protection and are only for the use of students officially enrolled in the course for the educational purposes associated with the course. Copyright law must be considered before copying, retaining, or disseminating materials outside of the course.

## Safe and Healthy Buckeyes (include also on your Carmen site):

Health and safety requirements: All students, faculty and staff are required to comply with and stay up to date on all university safety and health guidance (<https://safeandhealthy.osu.edu>), which includes wearing a face mask in any indoor space and maintaining a safe physical distance at all times. Non-compliance will result in a warning first, and disciplinary actions will be taken for repeated offenses.

## Creating an environment free from harassment, discrimination, and sexual misconduct

The Ohio State University is committed to building and maintaining a community to reflect diversity and to improve opportunities for all. All Buckeyes have the right to be free from harassment, discrimination, and sexual misconduct. Ohio State does not discriminate on the basis of age, ancestry, color, disability, ethnicity, gender, gender identity or expression, genetic information, HIV/AIDS status, military status, national origin, pregnancy (childbirth, false pregnancy, termination of pregnancy, or recovery therefrom), race, religion, sex, sexual orientation, or protected veteran status, or any other bases under the law, in its activities, academic programs, admission, and employment. Members of the university community also have the right to be free from all forms of sexual misconduct: sexual harassment, sexual assault, relationship violence, stalking, and sexual exploitation.

To report harassment, discrimination, sexual misconduct, or retaliation and/or seek confidential and non-confidential resources and supportive measures, contact the Office of Institutional Equity:

1. Online reporting form at [equity.osu.edu](https://equity.osu.edu),
2. Call 614-247-5838 or TTY 614-688-8605,
3. Or Email [equity@osu.edu](mailto:equity@osu.edu)



The university is committed to stopping sexual misconduct, preventing its recurrence, eliminating any hostile environment, and remedying its discriminatory effects. All university employees have reporting responsibilities to the Office of Institutional Equity to ensure the university can take appropriate action:

- All university employees, except those exempted by legal privilege of confidentiality or expressly identified as a confidential reporter, have an obligation to report incidents of sexual assault immediately.
- The following employees have an obligation to report all other forms of sexual misconduct as soon as practicable but at most within five workdays of becoming aware of such information: 1. Any human resource professional (HRP); 2. Anyone who supervises faculty, staff, students, or volunteers; 3. Chair/director; and 4. Faculty member.

This course adheres to The Principles of Community adopted by the College of Food, Agricultural, and Environmental Sciences. These principles are located on the Carmen site for this course; and can also be found at <https://go.osu.edu/principlesofcommunity>. For additional information on Diversity, Equity, and Inclusion in CFAES, contact the CFAES Office for Diversity, Equity, and Inclusion (<https://equityandinclusion.cfaes.ohio-state.edu/>). If you have been a victim of or a witness to a bias incident, you can report it online and anonymously (if you choose) at <https://studentlife.osu.edu/bias/report-a-bias-incident.aspx>.

## Your mental health

As a student you may experience a range of issues that can cause barriers to learning, such as strained relationships, increased anxiety, alcohol/drug problems, feeling down, difficulty concentrating and/or lack of motivation. These mental health concerns or stressful events may lead to diminished academic performance or reduce a student's ability to participate in daily activities. The Ohio State University offers services to assist you with addressing these and other concerns you may be experiencing. If you or someone you know are suffering from any of the aforementioned conditions, you can learn more about the broad range of confidential mental health services available on campus via the Office of Student Life Counseling and Consultation Services (CCS) by visiting [ccs.osu.edu](https://ccs.osu.edu) or calling (614) 292- 5766. CCS is located on the 4th Floor of the Younkin Success Center and 10th Floor of Lincoln Tower. You can reach an on-call counselor when CCS is closed at (614) 292-5766 and 24 hour emergency help is also available through the 24/7 National Prevention Hotline at 1-(800)-273-TALK or at [suicidepreventionlifeline.org](https://suicidepreventionlifeline.org).

David Wirt, [wirt.9@osu.edu](mailto:wirt.9@osu.edu), is the CFAES embedded mental health counselor. He is available for new consultations and to establish routine care. To schedule with David, please call 614-292-5766. Students should mention their affiliation with CFAES when setting up a phone screening.

# ACCESSIBILITY ACCOMMODATIONS FOR STUDENTS WITH DISABILITIES

## Requesting accommodations

The university strives to make all learning experiences as accessible as possible. In light of the current pandemic, students seeking to request COVID-related accommodations may do so through the university's request process, managed by Student Life Disability Services. If you anticipate or experience academic barriers based on your disability (including mental health, chronic, or temporary medical conditions), please let me know immediately so that we can privately discuss options. To establish reasonable accommodations, I may request that you register with Student Life Disability Services. After registration, make arrangements with me as soon as possible to discuss your accommodations so that they may be implemented in a timely fashion. SLDS contact information: [slds@osu.edu](mailto:slds@osu.edu); 614-292-3307; [slds.osu.edu](http://slds.osu.edu); 098 Baker Hall, 113 W. 12th Avenue.

## Accessibility of course technology

This online course requires use of CarmenCanvas (Ohio State's learning management system) and other online communication and multimedia tools. If you need additional services to use these technologies, please request accommodations with your instructor.

- Canvas accessibility ([go.osu.edu/canvas-accessibility](http://go.osu.edu/canvas-accessibility))
- Streaming audio and video
- CarmenZoom accessibility ([go.osu.edu/zoom-accessibility](http://go.osu.edu/zoom-accessibility))
- Collaborative course tools

## COURSE SCHEDULE

Week	Dates	Topics, Readings, Assignments, Deadlines
1	08/28/2020	Overview and learning outcomes
2	08/31/2020 09/04/2020	Water Lipids
3	09/07/2020 09/11/2020	No classes Proteins

<b>Week</b>	<b>Dates</b>	<b>Topics, Readings, Assignments, Deadlines</b>
4	09/14/2020 09/18/2020	Carbs, Quiz 1 Micronutrients
5	09/21/2020 09/25/2020	Food additives Nutrition and Metabolism
6	09/28/2020 10/02/2020	Midterm Exam: September 29 Meats
7	10/05/2020 10/09/2020	Dairy
8	10/12/2020 10/16/2020	Fruits and Vegetables
9	10/19/2020 10/23/2020	Fruits and Vegetables
10	10/26/2020 10/30/2020	Cereals
11	11/02/2020 11/06/2020	Beverages
12	11/09/2020 11/13/2020	Quiz 2, Methods of Analyses Methods of Analyses
13	11/16/2020 11/20/2020	Review-
14	11/23/2020 11/27/2020	Students presentations No classes
15	11/30/2020 12/03/2020	Concluding topics