



FAB 475: The Science of Cuisine

Instructor Name:

Phone:

E-Mail:

Office Hours:

Office Location:

COURSE DESCRIPTION

Science principles that influence the safety, sensory quality, and nutrient content of foods. Understand human food digestion, absorption and metabolism. Develop and analyze recipes and menus designed to meet customers' health needs, and ethnic and sensory preferences. Address the food related global disease epidemics and the sustainability of food production.

COURSE PREREQUISITES

- Minimum grade of C in HMD 130
- General Education Lab-based Science

COURSE OBJECTIVES

1. Understand the basic principles and practices of the fields of Food Science and Nutrition.
2. Understand how to control the fundamental chemical reactions that occur during food storage, cooking and holding.
3. Describe the characteristics, functions, and best sources of macro- and micro-nutrients, and phytochemicals.
4. Describe the basics of human digestion, absorption and metabolism.
5. Utilize the science of food color, food flavor, nutrition, sensory evaluation and food microbiology to develop and improve the nutrient content, palatably, shelf-life, and safety of foods.
6. Evaluate single factor-experiments designed to answer culinary related questions.
7. Discuss barriers to humans being able to create a sustainable food system and propose potential solutions.
8. Develop and answer food-related research questions using scholarly sources and laboratory experimentation.
9. Evaluate and utilize food analysis software to calculate the nutrient content of recipes and prepare nutrient labels.

10. Debate contemporary food topics such as genetically modified organisms, plant-based life-styles, gluten-free eating, low carbohydrate diets and eating organic versus conventional foods.

COLLEGE OF HOSPITALITY PROGRAM OUTCOMES

1. Communicate effectively in written, spoken, visual and digital modes to different audiences (e.g. industry leaders, employees, employers, faculty and peers).
2. Develop knowledge of the global and multicultural hospitality industry.
3. Understand issues in ethics, diversity, and inclusion.
4. Apply critical thinking to hospitality management problems.
5. Evaluate critical hospitality management concepts.

REQUIRED TEXT, READINGS, AND INSTRUCTIONAL RESOURCES

- Textbook: Linda Trakselis and Eric Stein. 2014. Culinary Nutrition: Principles and Applications. American Technical Publishers. ISBN 978-0-8269-4221-0.
- Laboratory Fee: Same as FAB 370

GRADING POLICIES

Course Evaluation*

Project #1: Research White Papers (50 points x 2 papers)	100
Project #2: Nutrient Analysis	60
Project #3: Plot to Plate Assignment (i.e., Class for CCSD Students)	125
Project #4: Group Laboratory Assignment (Experiments)	125
Laboratory Reports (15 points x 10 reports)	150
Quiz : On-Line (10 points x 14)	140
In Class Participation, Professionalism and short Biography with Picture	100
Final Exam (Comprehensive)	200
Total Points = 1,000	

*There are no make-up quizzes or in-class assignments. Projects will not be accepted late unless the same documented excuse rule that applies for exams is met.

Grading Scale:

93+ = A; 90-92 = A-; 87-89 = B+; 83-86 = B; 80-82 = B-; 77-79 = C+; 73-76 = C; 70-72 = C-; 67-69 = D+; 63-66 = D; 60-62 = D-; <60 = F

NOTE: You can calculate your grade at any point in the class using the following equation:

(Your total points to date ÷ course total points possible to date) x 100 = _____ %

Attendance and Participation:

Each student will choose whether to attend each class or not. It should be kept in mind that final exam and quiz questions will be from the text and material provided in class through lectures, films, guest speakers), hand-outs, exercises, etc.

There are NO Make-Up Quizzes or in-class assignments unless there is a **documented** excuse (e.g., JURY DUTY or HOSPITALIZATION). Choosing to go to work rather than attend class is **NOT a documented excuse**. Documentation of the absence must be provided on the first day back to class. Any make-up activities will usually contain different questions and may be of a different format than the in-class assignment or quiz.

Late Submissions:

Clients and employers in the hospitality industry do not accept late work, so it will not be accepted in this class and will earn zero points without a documented excuse

Incomplete Policy:

The grade of I — incomplete — can be granted when a student has satisfactorily completed at least three-fourths of the course, but for reason(s) beyond the student's control, and acceptable to the instructor, cannot complete the last part of the course, and the instructor believes that the student can finish the course without repeating it. A student who receives an I is responsible for making up whatever work was lacking at the end of the semester. The incomplete work must be made up before the end of the following regular semester. If course requirements are not completed within the time indicated, a grade of F will be recorded and the GPA will be adjusted accordingly. Students who are fulfilling an incomplete do not register for the course but make individual arrangements with the instructor who assigned the I grade.

Course Schedule – Spring 2022

Monday Lecture (In-Person)

Date	In-Class	Out of Class
<p>Monday, January 17th <i>Martin Luther King Jr. Day</i> NO CLASS</p>	<ul style="list-style-type: none"> • Overview of Food and Nutrition Sciences • Discussion: Health Status of Humans Globally: Why a Topic for Hospitality Majors and Students in General • Overview of Food & Nutrition Film • Syllabus Review 	<ul style="list-style-type: none"> • Read Syllabus • Study Food and Nutrition Fundamentals Chapter • Take Online Quiz #1. All Quizzes are due on the day of the <u>next class at 2:15 PM</u>. Each one will cover <u>In-Class and Out of Class study materials and activities</u>. (For example, Quiz #1 must be completed by 01/24 at 2:15 PM and will cover the following: Food and Nutrition Sciences: Powerpoint on Health Status of Humans Globally and Why an Important Topic for Hospitality Majors and Students in General; Overview of Nutrition Film, Syllabus; Food and Nutrition Fundamentals Chapter)
<p>Monday, January 24th</p>	<ul style="list-style-type: none"> • Overview of Food Science Film, Food Science versus Nutrition Activity • Activities related to Food and Nutrition Fundamentals 	<ul style="list-style-type: none"> • Study Powerpoint on Nutrition Introduction • Study Nutritious Menu Planning Chapter • Take Online Quiz #2
<p>Monday, January 31st</p>	<ul style="list-style-type: none"> • Digestion Video • Digestion, Absorption and Metabolism Activity • Description of White Paper Assignments • Identifying Scholarly Sources of Nutrition and Food Science Information 	<ul style="list-style-type: none"> • Study Dietary Recommendations and Food Guides Powerpoint • Take Online Quiz #3

Date	In-Class	Out of Class
Monday, February 7th	<ul style="list-style-type: none"> • Dietary recommendations and Food Guides ' Activities • Label Reading • Cycle Menu Activity • Experimental Design Discussion and related Laboratory (report #1) 	<ul style="list-style-type: none"> • Study Chapter on Shaping Eating Behaviors • Take Online Quiz #4
Monday, February 14th	<ul style="list-style-type: none"> • Sensory Science and Evaluation Discussion and Laboratory (report #2) • Discuss Plot to Plate Assignment • Learn How to Design a Lesson Plan 	<ul style="list-style-type: none"> • Study Chapter on Lipids • Study Chapter on Vegetables/Legumes • Take Online Quiz #5
Monday, February 21st	<ul style="list-style-type: none"> • Lipids Activities • Vegetables and Legumes Laboratory (report #3) • Discuss Group Laboratory Assignment 	<ul style="list-style-type: none"> • Study Powerpoint on Vitamins, Minerals, and Water • Read Water, Minerals and Vitamins Chapters • Take Online Quiz #6
Monday, February 28th	<ul style="list-style-type: none"> • Lipids Activities • Water, Minerals and Vitamins Activities 	<ul style="list-style-type: none"> • Work on Group Laboratory Assignment • Take Online Quiz #7
Monday, March 7th	<ul style="list-style-type: none"> • Water, Minerals and Vitamins Activities • Dietary Supplements Activities 	<ul style="list-style-type: none"> • Read Articles Posted on WebCampus Sustainability Folder • View: The Future of Food: Sustainability and Security Video • Take Online Quiz #8 • First White Paper Due
Monday, March 14th	No Class	Spring Break
Monday, March 21st	<ul style="list-style-type: none"> • Recipe modification and nutrient analysis • Description of Nutrient Analysis Assignment • Laboratory Groups work on developing their experiments with professor/consultant 	<ul style="list-style-type: none"> • Study Protein Powerpoint and Protein Chapter • Study Pastas, Grains, and Bread Chapter • Take Online Quiz #9
Monday, March 28th	<ul style="list-style-type: none"> • Protein Activities and Poultry and Meats Group Laboratory (report #4) • Pastas, Grains, and Bread Laboratory (report #5) 	<ul style="list-style-type: none"> • Study <u>first half</u> of Carbohydrates Chapter • Study Carbohydrates Powerpoint • Take Online Quiz #10

Date	In-Class	Out of Class
Monday, April 4th NO CLASS	<ul style="list-style-type: none"> • Carbohydrate activities online only • Class will not meet 	<ul style="list-style-type: none"> • Study <u>second half</u> of Carbohydrates Chapter • Study Eggs, Soy and Dairy Chapter • Take Online Quiz #11 • 4. Nutrient Analysis Assignment
Monday, April 11th	<ul style="list-style-type: none"> • Carbohydrate activities • Eggs, Soy and Dairy Laboratory (report #6) 	<ul style="list-style-type: none"> • Study Fruits, Nuts and Seeds Chapter • Study Phytochemicals Powerpoint • Take Online Quiz #12
Monday, April 18th	<ul style="list-style-type: none"> • Phytochemicals • Fruits, Nuts and Seeds Group Laboratory (report #7) 	<ul style="list-style-type: none"> • Study Chapter on Fish and Shellfish • Take Online Quiz #13 • Second White Paper Due
Monday, April 25th	<ul style="list-style-type: none"> • Food Additives Discussion • Fish and Shellfish Group Laboratory Assignment (report #8) 	<ul style="list-style-type: none"> • Study Desserts and Beverages Chapters • Take Online Quiz #14
Monday, May 2nd	<ul style="list-style-type: none"> • Nutrition/Food Science Controversies • Desserts Group Laboratory (report #9) • Beverage Group Laboratory (report #10) • Final Exam Review 	<ul style="list-style-type: none"> • Study for Final Exam • Plot to Plate Report Due (i.e., Healthy cooking demonstration for students)
Monday, May 9th	<ul style="list-style-type: none"> • Final Exam (In-Class) 	

**This course schedule may be modified to suit the needs of the class or in cases when event changes dictate a need to modify the schedule.*

ACADEMIC REQUIREMENTS

Brief explanation of type of course assessments including papers, projects, case studies, discussions, quizzes, and exams.

Quizzes:

A quiz will be posted to WebCampus during each of 14 weeks of the semester. The material covered on each quiz will come from out of class study materials for that week and all materials studied in-class the previous week.

Projects:

White Paper Assignment

Students will learn how to formulate and answer food related questions. Each question topic will be developed by the student and enhanced by the professor. Scholarly sources will be identified by the student and used to support their answer to the question in a one-page paper.

Nutrient Analysis Assignment

Students will record the serving size and amounts of each food and beverage they consume over a three-day period. This data will be entered into a commercial nutrition analysis application, analyzed, and compared to various scientifically based nutrition guidelines.

Plot to Plate Group Assignment

Groups of students will create and deliver a Nutrition and Cooking Class for CCSD children in a gardening program. Professor will serve as a consultant for the group. Each student will prepare and submit a report after giving their presentation. It will include an abstract, introduction, materials and methods, and summary/recommendations. Students will be placed in groups according to their daytime schedule.

Group Laboratory Assignment:

Students will learn how to formulate and answer food related questions. Groups of students will develop food science and nutrition related questions. These questions will be answered using laboratory experiments designed by the student group. The professor will serve as a consultant for each group. This requires each group to meet with the professor at least one time. Laboratory experiments will be carried out in-class using classmates as the study's experimental subjects. Each student will be randomly placed in their laboratory group.

Final Exam:

Final exam questions will be from the material provided through lectures, text reading, assignments, films, guest speakers, handouts, activities, etc.

University Policies

Public Health Directives

Face coverings are currently mandatory for all faculty and students in the classroom. Students must follow all active UNLV public health directives while enrolled in this class. UNLV public health directives are found at [Health Requirements for Returning to Campus](https://www.unlv.edu/coronavirus/health-requirements), <https://www.unlv.edu/coronavirus/health-requirements>. Students who do not comply with these directives may be asked to leave the classroom. Refusal to follow the guidelines may result in further disciplinary action according to the [UNLV Student Conduct Code](https://www.unlv.edu/sites/default/files/page_files/27/StudentConduct-Code.pdf), https://www.unlv.edu/sites/default/files/page_files/27/StudentConduct-Code.pdf, including being administratively withdrawn from the course.

Academic Misconduct

Academic integrity is a legitimate concern for every member of the University community. We all share in upholding the fundamental values of honesty, trust, respect, fairness, responsibility, and professionalism. By choosing to join the UNLV community, students accept the expectations of the Student Academic Misconduct Policy, and are encouraged to always take the ethical path whenever faced with choices. Students enrolling at UNLV assume the obligation to conduct themselves in a manner compatible with UNLV's educational mission. An example of academic misconduct is plagiarism. Plagiarism is using the words or ideas of

another person, from the Internet or any other source without proper citation of the source(s). See the [Student Conduct Code](https://www.unlv.edu/studentconduct/student-conduct), <https://www.unlv.edu/studentconduct/student-conduct>.

Auditing a Course

Auditing a course allows a student to continue attending the lectures and/or laboratories and discussion sessions associated with the course, but the student will not earn a grade for any component of the course. Students who audit a course receive the same educational experience as students taking the course for a grade, but will be excused from exams, assessments, and other evaluative measures that serve the primary purpose of assigning a grade.

Classroom Conduct

Students have a responsibility to conduct themselves in class and in the libraries in ways that do not interfere with the rights of other students to learn, or of instructors to teach. Use of devices such as cellular phones and pagers, or other potentially disruptive activities are only permitted with the prior explicit consent of the instructor. Students are specifically prohibited to record classes without instructor authorization, including online/remote classes (either audio only, or video and audio). The instructor may rescind permission at any time during the class. If a student does not comply with established requirements or obstructs the functioning of the class, the instructor may initiate an administrative withdrawal of the student from the course. Since the COVID-19 pandemic forced some instruction to be delivered remotely starting in Spring 2020, numerous students have asked instructors to record their synchronous classes, so that they can access them at their convenience. Instructors who agree to record their classes (audio only, or video and audio) should inform students in advance. Recorded lectures may not be broadly released to anyone, but made available exclusively to those students enrolled in the class during the particular academic term. Recorded lectures must be stored securely, and are subject to the Nevada System of Higher Education's Records Retention Policy, meaning that the recordings can only be deleted 120 days after the end of class (i.e., after grades are posted). Once this requirement is met, the recordings should be deleted. Class recordings are protected from disclosure, as they are deemed part of an educational record under the Family Educational Rights and Privacy Act (FERPA).

Copyright

The University requires all members of the University Community to familiarize themselves with, and to follow copyright and fair use requirements. You are individually and solely responsible for violations of copyright and fair use laws. The University will neither protect nor defend you, nor assume any responsibility for student or employee violations of fair use laws. Violations of copyright laws could subject you to federal and state civil penalties and criminal liability, as well as disciplinary action under University policies. Additional [copyright policy information](https://www.unlv.edu/provost/copyright) is available at <https://www.unlv.edu/provost/copyright>.

Disability Resource Center (DRC)

The [UNLV Disability Resource Center](https://www.unlv.edu/drc) (Student Services Complex, SSC-A, Room 143, <https://www.unlv.edu/drc>, telephone 702-895-0866) provides resources for students with disabilities. Students who believe that they may need academic accommodations due to a permanent disability, temporary or permanent medical need, or academic support due to pregnancy are encouraged to contact the DRC as early as possible in the academic term. A

Disabilities Specialist will discuss what options may be available to you. Students who are already registered with the DRC should request their accommodations online each semester, and make an appointment to discuss their accommodations with their instructors.

Final Examinations

The University requires that final exams given at the end of a course occur on the date and at the time specified in the Final Exam schedule. The Final Exam schedule is typically available at the start of the semester, and the classroom locations are available approximately one month before the end of the semester. See the [Final Exam Schedule](https://www.unlv.edu/registrar/calendars), <https://www.unlv.edu/registrar/calendars>.

Identity Verification in Online Courses

All UNLV students must use their Campus-issued ACE ID and password to log in to WebCampus-Canvas.

UNLV students enrolled in online or hybrid courses are expected to read and adhere to the [Student Academic Misconduct Policy](https://www.unlv.edu/studentconduct/misconduct/policy), <https://www.unlv.edu/studentconduct/misconduct/policy>, which states that “acting or attempting to act as a substitute for another, or using or attempting to use a substitute, in any academic evaluation or assignment” is a form of academic misconduct. Intentionally sharing ACE login credentials with another person may be considered an attempt to use a substitute, and could result in investigation and sanctions, as outlined in the Student Academic Misconduct Policy.

UNLV students enrolled in online courses are also expected to read and adhere to the [Acceptable Use of Computing and Information Technology Resources Policy](https://www.it.unlv.edu/policies/acceptable-use-computing-and-information-technology-resources-policy), <https://www.it.unlv.edu/policies/acceptable-use-computing-and-information-technology-resources-policy>, which prohibits sharing university accounts with other persons without authorization.

To the greatest extent possible, all graded assignments and assessments in UNLV online courses should be hosted in WebCampus-Canvas or another UNLV-managed platform that requires ACE login credentials for access.

Incomplete Grades

The grade of “I” (Incomplete) may be granted when a student has satisfactorily completed three-fourths of course work for that semester/session, but cannot complete the last part of the course for reason(s) beyond the student’s control and acceptable to the instructor, and the instructor believes that the student can finish the course without repeating it. For undergraduate courses, the incomplete work must be made up before the end of the following regular semester. Graduate students receiving “I” grades in 500-, 600-, or 700-level courses have up to one calendar year to complete the work, at the discretion of the instructor. If course requirements are not completed within the period indicated, a grade of “F” will be recorded, and the student’s GPA will be adjusted accordingly. Students who are fulfilling an Incomplete grade do not register for the course, but make individual arrangements with the instructor who assigned the “I” grade.

Library Resources

Librarians are available to consult with students on research needs, including developing research topics, finding information, and evaluating sources. To make an appointment with a subject expert for this class, please visit the [Libraries’ Research Consultation](#) website,

<https://guides.library.unlv.edu/appointments/librarian>. You can also [ask the library staff](#) questions via chat and text message at <https://ask.library.unlv.edu/>.

Missed Classwork

Any student missing class, quizzes, examinations, or any other class or laboratory work because of observance of religious holidays will be given an opportunity during that semester to make up the missed work. The make-up opportunity will apply to the religious holiday absence only. It is the responsibility of the student to notify the instructor within the first 14 calendar days of the course for Fall and Spring courses (except for modular courses), or within the first 7 calendar days of the course for Summer and modular courses, of their intention to participate in religious holidays which do not fall on state holidays or periods of class recess. For additional information, please visit the Missed Classwork policy, under Registration Policies, on the [Academic Policies](#) webpage,

<https://catalog.unlv.edu/content.php?catoid=32&navoid=8271&hl=>.

In accordance with the policy approved by the Faculty Senate regarding missed class time and assignments, students who represent UNLV in any official extracurricular activity will also have the opportunity to make up assignments, provided that the student submits official written notification to the instructor no less than one week prior to the missed class(es).

The spirit and intent of the policy for missed classwork is to offer fair and equitable assessment opportunities to all students, including those representing the University in extracurricular activities. Instructors should consider, for example, that in courses which offer a “Drop one” option for the lowest assignment, quiz, or exam, assigning the student a grade of zero for an excused absence for extracurricular activity is both contrary to the intent of the Faculty Senate’s policy, and an infringement on the student’s right to complete all work for the course.

This policy will not apply in the event that completing the assignment or administering the examination at an alternate time would impose an undue hardship on the instructor or the University that could be reasonably avoided. There should be a good faith effort by both the instructor and the student to agree to a reasonable resolution. When disagreements regarding this policy arise, decisions can be appealed to the Department Chair/School Director, College/School Dean, and/or the Faculty Senate Academic Standards Committee.

For purposes of definition, extracurricular activities may include, but are not limited to academic recruitment activities, competitive intercollegiate athletics, fine arts activities, liberal arts competitions, science and engineering competitions, and any other event or activity sanctioned by a College/School Dean, and/or by the Executive Vice President and Provost.

Rebelmail

Rebelmail is UNLV's official email system for students and by University policy, instructors and staff should only send emails to students' Rebelmail accounts. Rebelmail is one of the primary ways in which students receive official University communications, information about deadlines, major Campus events, and announcements. All UNLV students receive a Rebelmail account after they have been admitted to the University. Sending emails within WebCampus-Canvas is also acceptable.

Tutoring and Coaching

The Academic Success Center (ASC), at the Claude I. Howard Building, provides tutoring, academic success coaching, and other academic assistance for all UNLV undergraduate students. For information regarding tutoring subjects, tutoring times, and other ASC programs and services, please visit the [ASC website](https://www.unlv.edu/asc), <https://www.unlv.edu/asc>, or call 702-895-3177. The ASC is located across from the Student Services Complex (SSC). Academic success coaching is located on the second floor of SSC A, Room 254. Drop-in tutoring is located on the second floor of the Lied Library, and on the second floor of the College of Engineering building (TBE A 207).

UNLV Writing Center

One-on-one or small group assistance with writing is available free of charge to UNLV students at the [Writing Center](https://writingcenter.unlv.edu/), <https://writingcenter.unlv.edu/>, located in the Central Desert Complex, Building 3, Room 301 (CDC 3-301). Walk-in consultations are sometimes available, but students with appointments receive priority assistance. Students may make appointments in person or by calling the Center, telephone 702-895-3908. Students are requested to bring to their appointments their Rebel ID Card, a copy of the instructions for their assignment, and two copies of any writing they have completed on their assignment.

Diversity Statement

As an institution of higher learning, UNLV represents a rich diversity of human beings among its faculty, staff, and students, and is committed to aspiring to maintain a Campus environment that values that diversity. Accordingly, the University supports understanding and appreciation of all members of its community, regardless of race, sex, age, color, national origin, ethnicity, creed, religion, disability, sexual orientation, gender, gender identity, marital status, pregnancy, genetic information, veteran status, or political affiliation. Please see [University Statements and Compliance](https://www.unlv.edu/about/statements-compliance), <https://www.unlv.edu/about/statements-compliance>.

A successful learning experience requires mutual respect and trust between the students and the instructor. Accordingly, the instructor asks that students be willing to listen to one another's points of view, acknowledging that there may be disagreements, keep discussion and comments on topic, and use first person, positive language when expressing their perspectives.