

IDS2334

CHEMISTRY in the *COCINA LATINA*

Wednesdays p. 4 , Fridays p. 4-6

General Education: Quest 2; P (Physical Sciences); N (International)

A minimum grade of C is required for General Education

Part of the UF International Scholars Program



*NOTE: In this class we will be working with a variety of food ingredients. If you have **any** food sensitivities or religious preferences that might impact your participation, or have any personal concerns regarding sampling the dishes we make, please let the professors know ASAP.*

Syllabus subject to change. Please check in CANVAS for the latest information

COURSE DESCRIPTION

This cross-disciplinary Quest 2 course presents the role of science in our everyday lives, and how chemistry is essential to our understanding of the world, while developing a critical sense for the use (and misuse) of scientific language and evidence in everyday discourse. In the state of Florida – and increasingly throughout all of the United States – Hispanic and LatinX cultures are an integral part of our cultural makeup, and nowhere is this more evident than in the culinary products and practices that have become a part of the Floridian landscape. Combining the learning of chemistry with Hispanic/LatinX food becomes the natural setting where to integrate science with the appreciation of our current multicultural society.

This course will be of interest to students who want to develop an understanding of the societal relevance of chemical concepts while acquiring a global understanding of the culture and tradition in Hispanic/LatinX food and their influence in our society. The course does not require prior knowledge of college-level chemistry or math, nor it requires any Spanish-language experience. Chemistry concepts are introduced as needed to understand the science of food and cooking.

Specifically, we explore the chemical processes and reactions that are inherent in all aspects of cooking fulfilling the General Education Student Learning Outcomes of Physical Sciences, as described in more detail on the student catalogue. By approaching the domain food preparation through the lens of a physical science, we provide students with the opportunity to learn to understand and appreciate the processes of hypothesis formation, experimental design, and data analysis in real-world, practical scenarios. At the same time, we integrate a humanistic approach to these investigations by exploring the crucial roles that language, culture and human interaction play in virtually all aspects of food preparation and consumption, fulfilling also the International Students Learning Outcomes.

By combining these two approaches, we allow students to recognize not only the chemistry in their everyday lives, but also the increasing presence of Hispanic migrant voices in the world around them. As such, this course moves away from a simple introduction to chemistry, or survey of Hispanic cultures, to create an integrated exploration of the ways in which scientific and humanistic viewpoints and analyses are truly interdependent.

INSTRUCTOR INFORMATION*

Dr. Valeria Kleiman (she, her, ella)
Office: 311B Chemistry Lab Building
Email: kleiman@ufl.edu
Office hours: Wednesday 12-2 pm or by appt.

Dr. Gillian Lord (she/ella)
Office: 2035 Farrior Hall
Email: glord@ufl.edu
Office hours: Monday 9am-11am or by appt.

TA: Namodhi Wijerathne
Office:
Email: wijerathne.h@chem.ufl.edu
Office hours: TBD

**This is an equally co-taught course. As such, both professors are present during all class meetings, and actively participate in all activities, including lectures, which are cooperatively taught. All assignments are jointly graded.*

NOTE

It is important to us that you feel welcome and safe in this class; and that you are comfortable communicating with us, your TA, and your classmates.

⇒ *If your preferred name is not what shows on the official UF roster, please let us know. We would like to acknowledge the name and pronouns that reflect your identity. You may also change your "Display Name" in*

Canvas by logging in to ONE.UF and clicking on the profile icon at the top right. Select “View & Update Profile Information” and click “Edit” for the Name option. Uncheck “Use my legal name” and update how you wish your name to be displayed as Chosen Name. Click “Submit” at the bottom. This change may take up to 24 hours to appear in Canvas. This does not change your legal name for official UF records.

COURSE MATERIALS

- REQUIRED: *Mi Comida Latina: Vibrant, Fresh, Simple, Authentic*. By Marcella Kriebel. Lea Burgess Press (2015). ([Approximately \\$25 on Amazon](#))
- REQUIRED: Videos, podcasts and additional readings will be made available via Canvas.
- The course fee of \$36.75 is used to cover the cost of chemicals and food used in class.

MEETING SPACES and EXPERIENTIAL ACTIVITIES

This course will make use of three different spaces across campus for our regular meetings:

- Wednesday classes and Friday lectures will take place in the rooms assigned by the registrar's office (Wednesdays @Matherly 4, Fridays @Matherly 18).
- The chemistry experiments on Fridays will take place in the laboratory in SFH110.
- The cooking sessions on Fridays will take place in the IFAS Food Lab, located in the Food Science and Human Nutrition Lab Building, room 130.

In addition, we may visit other locations both on and off UF’s campus, as relevant to course content. Transportation will be provided if necessary.

ASSESSMENT

Grade Scale and Policies

A = 100-93	C(S) = 76-73
A- = 92-90	C-(U) = 72-70
B+ = 89-87	D+ = 69-67
B = 86-83	D = 66-63
B- = 82-80	D- = 62-60
C+ = 79-77	E = 59-0

NOTE: A grade of C- will not be a qualifying grade for Gen Ed courses. For further information regarding passing grades and grade point equivalents, please refer to the Undergraduate Catalog at

<https://catalog.ufl.edu/ugrad/current/regulations/info/grades.aspx>.

Graded Course Components

Your performance in this class will be assessed via a variety of measures and assignments. Detailed information on each assignment, as well as guidelines for successful completion, can be found on the calendar (see the end) of this syllabus, and on Canvas. Some course time will be devoted to explaining/introducing the assignments as well, but you are encouraged to reach out to the instructors with any questions or doubts *prior* to the due date. The following components will be assessed to determine your final grade for the course. Each is described in further detail below.

- Engagement = 5%
- Homework = 12%
- Lab Activities (4x4%) = 16%
- Kitchen Activities (4x4%) = 16%
- Interview Project = 10%
- Unit mini-projects (4x4%) = 16%
- Final project = 25%

A note on class attendance: Given the hands-on nature of the course material, class attendance is required. Absences that are deemed acceptable by UF policy (see “POLICIES” section, below) may be excused if they are justified, properly documented, and discussed with the professor in a timely manner. Due to space and scheduling limitations, though, *laboratory and kitchen sessions cannot be rescheduled or made up*.

Class engagement = 5%

In order to engage with the course material and your classmates, active participation is expected at all class sessions. Furthermore, because each class has a different format (lecture, invited lecture, experiential activity, laboratory experiment, kitchen work) it is imperative that students be ready to participate in every lecture, every lab, and every kitchen session.

Rather than attempting to quantify an arbitrary “class participation” construct, in this class you will be assessed on any and all demonstrations of your willingness and ability to engage with the course material, with your classmates, and with your professors. Evidence of engagement can take many formats, ranging from (but by no means limited to):

- Offering thoughts and reactions to readings

- Asking questions in or out of class
- Treating classmates, colleagues, professors with respect
- Visiting office hours
- Sharing additional readings or resources with classmates
- Offering assistance/guidance/advice
- There are a number invited lectures on diverse topics (cookbooks and nation building, food and labor relations for Latinx workers, nutrition, Food (in)security in the Gainesville Community, etc.). It is expected that you will have direct interaction the speakers (asking questions, offering thoughts, comments, or a self-reflection on how the talk affects your perspective on the specific topic).

We will keep track of your Engagement throughout the semester, with grades assigned approximately every three weeks, on the dates and with the rubric found in Canvas.

Homework = 12%

To ensure that you are adequately prepared for each session, you will be assigned short readings, videos, and/or podcasts to complete prior to class. These will be accompanied by comprehension-check quizzes in Canvas, which will form the basis of your homework grade. Guest lectures will be followed by short reflection assignments, which will form part of the homework grade as well. Additionally, there may be pop quizzes during class time to ascertain your preparation for the day's material. All homework and quizzes will be averaged at the end of the semester to comprise the homework grade.

Kitchen Activities (4 @ 4% each) = 16%

On four Fridays throughout the semester (January 20, February 10, March 10, April 7th), class will meet in the Institute of Food and Agricultural Science (IFAS)'s Food Lab space, located in the Food Science and Human Nutrition Lab Building (FSHN 130), to prepare the recipes associated with that unit. Much like with the laboratory days, your grade for kitchen activities will come from three areas:

1. Before the kitchen period: Prior to each of these visits, you will be expected to review the planned recipes from the text (*Mi Cocina Latina*). Additionally, you will be asked to identify certain ingredients from the recipes and determine a chemical compound associated with that ingredient, along with providing the chemical structure and name of each compound. This will be completed on Canvas prior to each kitchen activity.
2. During the kitchen period: During class you will work in small groups to prepare the dish(es) following the book instructions and with instructor guidance. At the end of the period, we will share and sample the dishes from all groups. *You are expected to stay to clean up the kitchen and return all utensils etc. to the proper locations.*
3. After the kitchen period: Following each kitchen activity, you will be required to complete a short assignment about the recipes and their preparation. These must be completed individually and will be turned in via Canvas.

Your successful completion of these activities depends upon your thorough preparation for the kitchen period, your active participation in all activities, your adherence to proper protocols, and your ability to work well with your group members.

Lab Activities (4 @ 4% each) = 16%

On four Fridays throughout the semester (January 27, February 24, March 24, April 14) class will meet in a chemistry laboratory space (SFH 110) to carry out the experiments and reactions that have been discussed during that unit. Your grade for each of these activities will come from three areas:

1. Before the lab period: Prior to each of these labs, you will be expected to review the "Background", "Context" and "Procedure" as described in the laboratory pages in Canvas. A quiz due before the beginning to the laboratory time will assess your preparation and readiness to perform experiments. You will not be allowed in the lab until a passing grade is achieved in this quiz.
2. During the lab period: Working with a partner, you will carry out the designated experiment, including worksheets to complete while carrying out the activities. This data collection and analysis must take place during class time, and will be used in the culminating assignment.
3. After the lab period: You will be required to complete a short, culminating activity based on the activities in the lab. These must be completed individually and will be turned in via Canvas.

Your successful completion of these activities depends upon your thorough preparation for the lab period, your active participation in all classroom activities, your adherence to proper lab safety protocols, and your ability to work well with your lab partner(s).

Unit mini-projects (4 x4% = 16%)

At the completion of each of the four main units (Primer Plato, Plato Principal 1, Plato Principal 2, Postre) you will submit a "mini-project" that showcases what you have learned about the culture, history, chemistry, and gastronomy of that unit. The format of your mini-project is completely open and up to you, and we encourage you to be as creative as you can! The only requirements for the mini-projects are that they:

- Contain relevant cultural and historical information or references discussed in the unit.
- Show your understanding of the relevant chemical components and processes in the unit.
- Include reference to or mention of the specific dishes prepared in the unit.

The rubric used to assess the projects can be found on Canvas. Mini-Projects can be done individually or in pairs (but not in larger groups). In the case of pair work, the same grade will be assigned to both students.

Remember, be creative – we welcome art, TikToks, poetry, music, short stories, skits, games, Pinterest boards, photography displays . . . and more!

Interview project (10%)

In addition to the content and critical thinking goals of this course, our communication objective aims to connect you with members of the Hispanic/Latinx community. To that end, you will need to carry out an interview with a Hispanic/Latinx person to learn more about their relationship with food and food in their culture. The person you interview can NOT be an immediate family member or a current roommate, but can be a family friend, a friend of a friend, a chef or restaurant worker, etc. If you are concerned about finding someone to interview or need help making contacts, your professors can assist you.

The assignment consists of two submissions:

1. **Interview Plan:** You must submit the plans you have made to carry out the interview, including whom you will interview, when and where the interview will take place, and what questions you intend to ask the interviewee.
2. **Interview Write-up:** After carrying out the interview, you will write an essay describing your interviewee's culture and experience with food and food culture. Your essay should summarize the interview in narrative form, but not be a list of direct quotations. What can you conclude about your interviewee's culture or culinary culture? Crucially, you will also need to reflect on how the interviewee has impacted your own perception of your relationship to food and culture. [Note: It will not be necessary to record or transcribe the entire interview. However, you will need to turn in documentation of the interview, including a signed consent form from your interviewee and a photo or short oral recording confirming that the interview took place.]

More specific guidelines are provided on Canvas, but in general you will want to consider issues such as the following:

- Where is your interviewee (or her/his family) from?
- What foods/dishes are typically associated with that culture? Why?
- What is your interviewee's favorite cultural dish, if different? Why?
- Is this person's experience with food the same, or are other dishes more representative/iconic? Why?
- Does your interviewee cook? What is her/his relationship to food?
- What is the value/importance of a meal within the family tradition?
- Has your interviewee's relationship with food and food culture changed over time? Why (e.g., as a result of moving to the US, different family traditions, etc.)?

Final project (25%)

For the final project you will have the opportunity to synthesize everything that you have learned throughout the course, from the linguistic and cultural, to the chemical, to the culinary. You will select a recipe from the Kreibel text to discuss and analyze – please confirm with the professors prior to finalizing your recipe choice.

The project will have two parts:

1. You will prepare a VoiceThread presentation in which you visually and textually discuss the relevant culture, history and Spanish-language vocabulary necessary to understand the recipe, and then explain the chemical compounds and processes involved in the creation of the dish. You will also reflect on why you chose this dish, and if it has any special significance to you. Finally, reflect on how your own relationship to food and culture has changed over the course of the semester, and why.
 - o After posting your own VoiceThread project, you are required to view and respond to *at least 10* other projects in the class!
2. For the last day of class, you will prepare the recipe yourself and bring it to class to share with everyone! Be prepared to answer questions about the food, the chemistry, or the cultural significance of the project.

****If you do not have access to a kitchen, please speak to the professors ASAP so we can help make arrangements.****

Further details are provided on Canvas, along with the rubric used to evaluate the projects.

UNIVERSITY POLICIES AND RESOURCES

Attendance and make-ups: Requirements for class attendance and make-up exams, assignments, and other work in this course are consistent with university policies that can be found in the online catalog at: <https://catalog.ufl.edu/ugrad/current/regulations/info/attendance.aspx>.

Accommodations: Students requesting classroom accommodation must first register with the Dean of Students Office. The Dean of Students Office will provide documentation to the student who must then provide this documentation to the Instructor when requesting accommodation. For more information see <http://www.dso.ufl.edu/drc>.

Course Evaluations: Students are expected to provide professional and respectful feedback on the quality of instruction in this course by completing course evaluations online via GatorEvals. Guidance on how to give feedback

in a professional and respectful manner is available at <https://gatorevals.aa.ufl.edu/students/>. Students will be notified when the evaluation period opens, and can complete evaluations through the email they receive from GatorEvals, in their Canvas course menu under GatorEvals, or via <https://ufl.bluera.com/ufl/>. Summaries of course evaluation results are available to students at <https://gatorevals.aa.ufl.edu/public-results/>

Academic Integrity: UF students are bound by The Honor Pledge which states, “We, the members of the University of Florida community, pledge to hold ourselves and our peers to the highest standards of honor and integrity by abiding by the Honor Code. On all work submitted for credit by students at the University of Florida, the following pledge is either required or implied: “On my honor, I have neither given nor received unauthorized aid in doing this assignment.” The Honor Code (<http://www.dso.ufl.edu/sccr/process/student-conduct-honorcode/>) specifies a number of behaviors that are in violation of this code and the possible sanctions. Furthermore, you are obligated to report any condition that facilitates academic misconduct to appropriate personnel. If you have any questions or concerns, please consult with the instructor or TAs in this class.

Resources Available to Students:

Health and Wellness

- U Matter, We Care: umatter@ufl.edu; 352-392-1575
- Counseling and Wellness Center: <http://www.counseling.ufl.edu/cwc/>; 352-392-1575
- Sexual Assault Recovery Services (SARS): Student Health Care Center; 352-392-1161
- University Police Department: <http://www.police.ufl.edu/>; 352-392-1111 (911 for emergencies)

Academic Resources

- E-learning technical support: Learningsupport@ufl.edu; <https://lss.at.ufl.edu/help.shtml>; 352-392-4357 (opt. 2)
- Career Resource Center: Reitz Union; <http://www.crc.ufl.edu/>; 352-392-1601
- Library Support: <http://cms.uflib.ufl.edu/ask>
- Teaching Center: Broward Hall; 352-392-2010 or 352-392-6420
- Writing Studio: 302 Tigert Hall; <http://writing.ufl.edu/writing-studio/>; 352-846-1138

Procedure for Conflict Resolution

Any classroom issues, disagreements or grade disputes should be discussed first between the instructor and the student. If the problem cannot be resolved, please contact the Undergraduate Coordinator for the Department of Spanish and Portuguese Studies (Dr. Greg Moreland, moreland@ufl.edu) or the Department of Chemistry (advising@chem.ufl.edu). Be prepared to provide documentation of the problem. Issues that cannot be resolved departmentally will be referred to the University Ombuds Office (<http://www.ombuds.ufl.edu>; 352-392-1308) or the Dean of Students Office (<http://www.dso.ufl.edu>; 352-392-1261). For further information refer to https://www.dso.ufl.edu/documents/UF_Complaints_policy.pdf.

Course Recording:

Pursuant to Florida House Bill 233, which you can see [here](#), please note the following:

Students are allowed to record video or audio of class lectures. However, the purposes for which these recordings may be used are strictly controlled. The only allowable purposes are (1) for personal educational use, (2) in connection with a complaint to the university, or (3) as evidence in, or in preparation for, a criminal or civil proceeding. All other purposes are prohibited. Specifically, students may not publish recorded lectures without the written consent of the instructor.

A “class lecture” is an educational presentation intended to inform or teach enrolled students about a particular subject, including any instructor-led discussions that form part of the presentation, and delivered by any instructor hired or appointed by the University, or by a guest instructor, as part of a University of Florida course. A class lecture does not include lab sessions, student presentations, clinical presentations such as patient history, academic exercises involving solely student participation, assessments (quizzes, tests, exams), field trips, private conversations between students in the class or between a student and the faculty or lecturer during a class session. Publication without permission of the instructor is prohibited. To “publish” means to share, transmit, circulate, distribute, or provide access to a recording, regardless of format or medium, to another person (or persons), including but not limited to another student within the same class section. Additionally, a recording, or transcript of a recording, is considered published if it is posted on or uploaded to, in whole or in part, any media platform, including but not limited to social media, book, magazine, newspaper, leaflet, or third-party note/tutoring services. A student who publishes a recording without written consent may be subject to a civil cause of action instituted by a person injured by the publication and/or discipline under UF Regulation 4.040 Student Honor Code and Student Conduct Code.

COURSE GOALS, OBJECTIVES and LEARNING OUTCOMES

This course is multidisciplinary and can be used to fulfill requirements for Gen Ed, Quest, and the International Scholars Program, as is explained further below.

Quest 2

As part of QUEST 2 this course complies with the SLOs identified by the UFQUEST Curriculum Committee.

General Education, Physical Science

As part of Gen Ed, this course complies with the SLOs identified by the Gen Ed curriculum Committee in the area of Physical Sciences (P).

General Education, International

As part of Gen Ed, this course complies with the SLOs identified by the Gen Ed curriculum Committee in the area of International (N).

International Scholars Program

As part of the International Scholars Program, this course complies with the QEP-ISP Student Learning Outcomes identified by the UF International Center.

CALENDAR

This calendar is subject to change for pedagogical or logistical motivations, especially with respect to the guest visits/lectures. To the extent possible, students will be notified in advance of any such changes. Always check Canvas for the latest information.

Yellow highlight = Chem laboratory

Green highlight = Food laboratory

Blue highlight = guest lectures

DATES	UNIT	Wednesday (per. 4)	Friday (per. 4-6)
January 11 th January 13 th	INTRO	MAT 0004	MAT 0018
		<ul style="list-style-type: none"> • Introductions • Discussion of syllabus, expectations • Safety in the lab and kitchen 	<ul style="list-style-type: none"> • Cookbooks and nationalism (talk about LACC) • Food and culture, imagined communities • Scientific method, chemical and physical changes. • Chemical bonds • Molecules in food
January 18 th January 20 th	PRIMER PLATO Water	MAT 0004	FSHN130
		<ul style="list-style-type: none"> • Plantains • Chayote • Jicama 	<ul style="list-style-type: none"> • Chifles, patacones, maduros • Chayote & jícama salad
January 25 th January 27 th	PRIMER PLATO Water	MAT 0004	SFH 110
		<ul style="list-style-type: none"> • Water, pH • Lab preparation (pH) 	Lab experiment: <ul style="list-style-type: none"> • Unit conversions • Edible indicators
February 1 st February 3 rd	PLATO PRINCIPAL Proteins	MAT 0004	MAT 0018
		<ul style="list-style-type: none"> • Proteins 	<ul style="list-style-type: none"> • “Nutrition education: facts and myths” (Dr. Jeannette Andrade) • Seafood • Dairy
February 8 th February 10 th	PLATO PRINCIPAL Proteins	MAT 0004	FSHN130
		<ul style="list-style-type: none"> • Latin-Fusion Menu (Chef Cable Smith, The Royal) 	Recipes: <ul style="list-style-type: none"> • Ceviche • Coconut rice with shrimp
February 15 th February 17 th	PLATO PRINCIPAL Proteins	MAT 0004	MAT 0018
		<ul style="list-style-type: none"> • Interview workshop 	<ul style="list-style-type: none"> • Proteins • “Rheology” (Dr. Scarlett Godinez)
February 22 nd February 24 th	PLATO PRINCIPAL Proteins	MAT 0004	SFH 110
		<ul style="list-style-type: none"> • Cheese 	Lab experiment: <ul style="list-style-type: none"> • Making Mozzarella cheese • Testing elasticity and viscosity

DATES	UNIT	Wednesday (per. 4)	Friday (per. 4-6)
March 1 st March 3 rd	PLATO PRINCIPAL Fats	MAT 0004	MAT 0018
		<ul style="list-style-type: none"> Lipids and fats 	<ul style="list-style-type: none"> Spices and peppers
MAT 0004		FSHN130	
<ul style="list-style-type: none"> Capsaicin 		Recipes: <ul style="list-style-type: none"> Chiles rellenos Salsas 	
March 15 th March 17 th		SPRING BREAK	
March 22 nd March 24 th		MAT 0004	SFH 110
		<ul style="list-style-type: none"> Spectroscopy 	Lab experiment: <ul style="list-style-type: none"> How hot is my pepper (capsaicin)?
March 29 th March 31 st		MAT 0004	MAT018
		<ul style="list-style-type: none"> Carbohydrates and sugars 	<ul style="list-style-type: none"> TBD
April 5 th April 7 th		MAT 0004	FSHN130
	<ul style="list-style-type: none"> Desserts Coconuts 	Recipes: <ul style="list-style-type: none"> Flan Cocadas Alfajores 	
April 12 th April 14 th	MAT 0004	SFH 110	
	<ul style="list-style-type: none"> Phase transitions Discussion of final project/food plans 	Lab experiment: <ul style="list-style-type: none"> Melting point of sugar, caramelization 	
April 19 th April 21 st	MAT 0004	TBD	
	<ul style="list-style-type: none"> Class time to work on final project 	<ul style="list-style-type: none"> Invited Guest: Marcella Kriebel Final feast 	
April 26 th	MAT 0004		
	<ul style="list-style-type: none"> Coffee/Mate 		