



## KIIS PARIS-MUNICH, Winter 2019-2020

### CHEM 101: Introduction to Chemistry: Chemistry in the Kitchen

**Professor:** Dr. Rosalynn Quiñones

**Email:** quinonesr@marshall.edu

*Syllabus subject to change*

#### COURSE DESCRIPTION

This 3-credit course is designed for non-science majors, though welcomes students of science. We will introduce students to some basic chemistry related with cooking. Daily activities will consist of field trips to fresh and organic markets, historical eateries outing, ethnic food, and “fast food” places. Our attention centers on Paris and Munich, in coordination with the program itinerary. In lectures and discussions, we will examine some basic principles about chemical changes and reaction, and the role of water, proteins, fats, sugars, and leavening agents in food, among other topics. Students will perform food chemistry-based experiments, workshops or demos that will provide opportunities for students to observe, manipulate, and explore model food systems. Course work will include class participation, papers, journal, quizzes, and presentations. An independent group project will be the basis for several assignments including oral presentations. Through discussions and written assignments, students will develop critical thinking skills.



[https://makefoodyourbusiness.org/product/ticket-sku\\_3552-food-chemistry-101-ph-2018-04-18-2018-04-18/](https://makefoodyourbusiness.org/product/ticket-sku_3552-food-chemistry-101-ph-2018-04-18-2018-04-18/)

This course fulfills the science requirement for Marshall University and may do the same at other schools.

#### Student Learning Objectives:

1. Acquire a general background in chemistry and other relevant areas of science.
2. Develop and understanding of how individual food components contribute to the overall quality of foods.
3. Achieve an understanding of the chemical and physical properties of the major and minor food components and their changes during processing, handling and storage that take place with food components.
4. Identify the key chemical features and characteristics of basic food ingredients and explain how these properties affect and determine their handling, use, and taste.

5. Analyze and compare ingredients, recipes and protocols and be able to predict the purpose of and test the effectiveness of ingredients in recipes and dishes.
6. Use scientific principles to produce dishes using novel techniques and explain how they were constructed.

### **Attendance Policy and Class Notes**

Attendance **is mandatory** and will be monitored by Instructor. Students must attend all classes and excursions. You are responsible for all announcements and material given during class. KIIS program participants are expected to be punctual to and in attendance at all classes, presentations, meetings and required excursions, and to remain with the program for the full academic period. Unexcused absences from classes and/or mandatory meetings will result in a lowering of the student's final grade, as will excessive tardiness. Multiple unexcused absences could result in expulsion from the program. Any absence from an academic class session must be excused for medical reasons.

### **Study Material**

Required readings and PowerPoints will be made available electronically and in hard copy. Readings must be completed by the dates given in the syllabus.

A WebSpace *Dropbox* will be utilized in this class. Please check your *Dropbox* regularly before leaving to the trip. Your homework, resources, useful websites, grades and announcements will be posted there.

### **Course Assessments:**

**Journal Assignment.** Each student must complete daily Journal Reflections each of approximately one page. The Journal Reflections must draw connections between the scientific and cooking. The final reflection, due prior to the departure from airport, is to explore how the course will help individuals to better understand the relationship between science and cooking. Daily journaling will be based on key features and concepts; these will range from observation to responding to an experience. This journal will be part of the assessment of this course. The Journal Questions are keyed to the travel experience and connect the course material to the site visit experiences. Questions focus on the relevance of cooking and food for the scientists to the current culture. The journals will be handed in for grading at the beginning of the longer bus trip and promptly returned to provide feedback. Students will need to buy a composition notebook to make class annotations before departure of USA.

**Quiz.** Background and lecture objectives will be assessed by a quiz (10 points- 5 quizzes total). Quizzes missed due to unexcused absence cannot be made up.

**Class Assignments.** Class assignments will be given daily assignments to complete prior to lecture.

**Independent group project.** At the end of the term, each student (in a small group) will be required to present in depth a complete recipe or cooking procedure project of your choice relating to food chemistry. Several of the graded assignments will relate to this project: a presentation to convey your project results (10 – 15 mins presentation), a written report (6 to 8 pages report), and a peer-reviewed evaluation. The topic be backed by at least one major scientific publication (ie. J. Agric. Food Chem) and must be first approved by the course facilitators.

**Participation.** Group discussions will be scheduled daily to ensure active learning for all students. Students are expected to attend every class and to participate in out-of-class activities as directed

by the instructor. Attitude: students must be willing to remain open-minded to cultural differences. In- class participation and participation in the field trips are highly recommended.

### Textbooks:

Students will be expected to read the following books prior to and during the study abroad experience.

1. What Einstein Told His Cook: Kitchen Science Explained (2008)

### Course Point Allocation

Course Point Allocation	
Daily journal	150 pts
5-Quizzes (20 points each)	100 pts
Class assignments	100 pts
Independent group project	100 pts
Student attitude/ Participation	50 pts
<b>Total</b>	<b>500 pts</b>

### Grade Scale

Grade Chart	
100-90 %	A
89-80 %	B
79-70 %	C
69-60 %	D
59-0 %	F

### Changes Disclosure:

The included schedule of class assignments and events is tentative and subject to change. Any changes announced during the program supersede the contents of this outline. When possible, two days' notice will be given when a date for a graded assignment is changed. It is **always** the student's responsibility to keep abreast of changes to the syllabus.

### TENTATIVE SCHEDULE

Lecture 1: Water

Lecture 2: Fats, Oils, and Lipids

Lecture 3: Carbohydrates

Lecture 4: Proteins

Lecture 5: Flavor and taste

*\*Class will include additional group excursions listed on KIIS website\* T*

### UNIVERSITY POLICIES

#### Disability Accommodation

KIIS will make every reasonable effort to provide accommodations for program participants with special

needs or disabilities, but we cannot guarantee that we will be able to do so. Be aware that many foreign countries do not have comprehensive legislation comparable to the Americans with Disabilities Act (ADA). As a result, businesses and other establishments operating in foreign countries may not be able to provide accommodations.

If you have a disability accommodation need, we recommend you contact your KIIS Campus Representative, <https://www.kiis.org/about-kiis/contact-us/campus-representatives/> early in your program selection process so that s/he has time to discuss any specific needs, including which KIIS programs may be best suited. You also are welcome to contact KIIS Assistant Director, Rebekah Golla, [rebekah.golla@wku.edu](mailto:rebekah.golla@wku.edu), to discuss your disability accommodation needs (e.g. housing, transportation, excursions, class schedule, etc.).

Immediately after acceptance, notify KIIS Assistant Director, Rebekah Golla, or KIIS Office Manager, Haley McTaggart, [haley.mctaggart@wku.edu](mailto:haley.mctaggart@wku.edu), if you have a special need or disability that might require any form of accommodation abroad. Failure to notify KIIS may prevent you from participating on your KIIS program.

If you require any accommodations abroad, you must provide KIIS Assistant Director, Rebekah Golla, or KIIS Office Manager, Haley McTaggart, an accommodation letter from your home campus' disability accommodation office that lists the accommodations you are eligible to receive. Please do not request accommodations directly from your KIIS Program Director or other KIIS Faculty; the KIIS Office will notify your KIIS Program Director and/or Faculty after we have received your above accommodation letter.

In some cases, you may need to make arrangements for a caregiver to join you on your KIIS program, should your physician, campus disability accommodation office, or KIIS make such a recommendation or require it.

#### **Title IX / Discrimination & Harassment**

Recent attention to gender discrimination and sexual harassment at colleges and universities reminds us of the importance of adhering to standards of ethical and professional behavior. KIIS Study Abroad is committed to supporting and encouraging safe and equitable educational environments for our students, faculty, and program directors. Students, faculty, and program directors are required to be civil and treat each other with dignity and respect. As such, harassment and/or discrimination of any kind will not be permitted or tolerated.

Sexual misconduct (sexual harassment, sexual assault, and sexual/dating/domestic violence) and sex discrimination are violations of KIIS policies. If you experience an incident of sex/gender-based discrimination, harassment and/or sexual misconduct, you are encouraged to report it to a) KIIS Assistant Director Rebekah Golla (+1-270-779-8091) or KIIS Executive Director, John Dizgun (+1-270-227-2288), b) WKU's Title IX Coordinator, Andrea Anderson (270-745-5398 / [andrea.anderson@wku.edu](mailto:andrea.anderson@wku.edu)) or WKU's Title IX Investigators, Michael Crowe (270-745-5429 / [michael.crowe@wku.edu](mailto:michael.crowe@wku.edu)) or Joshua Hayes (270-745-5121 / [joshua.hayes@wku.edu](mailto:joshua.hayes@wku.edu)). Please note that while you may report an incident of sex/gender based discrimination, harassment and/or sexual misconduct to a KIIS program director and/or faculty member, KIIS program directors and faculty are considered "Responsible Employees" of Western Kentucky University and MUST report what you share to WKU's Title IX Coordinator or Title IX Investigator.

If you would like to speak with someone who may be able to afford you confidentiality, you may contact WKU's Counseling and Testing Center, <https://www.wku.edu/heretohelp/> at 270-745-3159.

For more information on KIIS Title IX, see <https://www.kiis.org/students/health-safety/title-ix-clery/>; additional Title IX resources can be found here <https://www.wku.edu/eoo/documents/titleix/titleixbrochure.pdf>.

Everyone should be able to participate on a KIIS program, attend a KIIS event, or work in a KIIS environment (e.g. KIIS office) without fear of sexual harassment or discrimination of any kind. Be respectful of each other.