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Fall 2015

CHEM 1001

Sean P. Hickey
University of New Orleans

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Course Syllabus
Lights, Cameras, ACTION: The Chemistry of Movies and TV
CHEM 1001—section 001

Instructor: Sean P. Hickey

College: University of New Orleans

Semester: Fall 2015 **Credit Hours:** 3

Class Time: Lecture—TTh 11:00 - 12:15, CSB 103

Office: UNO CSB 112

Office Phone: 280-1273 (or email at **sphickey@uno.edu)**

Office Hours: TTh, 4-530 pm or by appointment

Class websites:

https://itunes.apple.com/us/course/lights-camera-action-chemistry/id689417710

https://www.facebook.com/CHEMISTRYofMoviesandTV

http://www.facebook.com/UNO.Chemistry

http://www.facebook.com/sean.hickey

http://www.uno.edu/moodle/iTunesU.aspx

https://www.youtube.com/channel/UC1WVjpGmMynNelUqjabKJtA

Course Materials:

The text below is the "Official" textbook of the course. It is available for $52 as an etext from the publisher. But it is not a required textbook. I will be providing you all the basic chemistry information you need. But it might be helpful if you had an "introductory" or "GOB" chemistry textbook. You can find another inexpensive textbook or even check out one from the library. Most of the material is also easily found online. So only buy the text if you are interested in learning more about everyday chemistry. It is a very good visual text aimed at non-chemistry majors.

http://www.wiley.com/WileyCDA/WileyTitle/productCd-EHEP003213.html?filter=TEXTBOOK#purchase

These are two books that I am using for some of my reference material

Hollywood Chemistry: When Science Met Entertainment by Sidney Perkowitz, Donna Nelson and others, ISBN 978-0841228245

ReAction! Chemistry in the Movies by Mark Griep and Marjorie Mikasen, ISBN 978-0-19-532692-5

Course Description:

This is one of two introductory courses that can be taken individually or both taken (in any order) to satisfy either 3 or 6 credits of required science electives for non-science majors. Science majors, allied-health majors and science education majors may take this course for general elective credit but it will not count for science elective credits. This course will explore how chemistry is portrayed in TV and movies. Students will take basic chemistry principles and learn how to apply them to pop-culture references such as found in shows like Breaking Bad, Game of Thrones, Star Trek…and movies such as Jurassic Park.

The course will be broken down into smaller units focusing on either a specific TV/movie or a chemical concept. For each unit, the theory of a chemical concept will be introduced and then explained using pop culture references (Wildfire in Game of Thrones; Cooking Meth in Breaking Bad...) and real-world references (Car combustion, Neon signs, cloning, bombs and explosives...).

Study Methods:

There will be discussions and/or written assignments in class many days. These problems of the day (POD) will make up part of your homework grade. Additionally, a standing homework assignment will be to read any materials I assign before coming to lecture. By reading the material you will be better prepared to ask questions on the material and will be better able to understand the material being lectured.

Student Learning Outcomes:

After successful completion of this course, Students should:

1. **Have an understanding of the Scientific Method and how to apply it to everyday life.**
2. **Have an understanding of basic chemistry principles including:**
    a. **Classification of Matter**
    b. **Atomic and Molecular Theory**
    c. **Chemical and Physical Changes**
    d. **Chemical Reactions**
    e. **Energy transformations**
    f. **Atomic Structure and Periodicity**
    g. **Basic Quantum Mechanics**
    h. **Chemical Bonding and Geometry**
    i. **Topics in Nuclear Chemistry**
    j. **Topics in Organic Chemistry**
    k. **Topics in Environmental Chemistry**
    l. **Topics in Medicinal Chemistry**
    m. **Topics in Biochemistry**
3. **Have an appreciation for the complexity and diversity of chemical processes**
4. **Understand the difference between "entertainment" chemistry and real chemistry**
5. **Understand how chemistry affects almost all of our day to day activities**
6. **Think critically and evaluate portrayal of science in the media**
7. **Think critically and evaluate day-to-day processes and how science affects those processes.**

Grading and Classroom Procedures:

The drop date is September 8th (nothing will appear on your transcript) and the withdrawal date is October 15th (W will appear on your transcript).

There will be three lecture tests, in-class POD and 3 out of class presentations totaling 1000 points:

- **The three tests will be worth 450 points (150 points each)**
- **The POD will be worth 100 points**
- **Attendance and Class participation will be worth 100 points (critiquing other assignments…)**
- **The 3 out of class presentations will be worth 350 points.**

Final grades will be based on total points earned during the semester:
A is 900-1000; B is 800-899; C is 700-799; D is 600-699: F is < 600

A missed test or assignment will be a zero unless there is an excused, documented absence. Any makeup test must be arranged at least 48 hours before the test date except for extreme circumstances. You are on your honor to do your own work. Cheating will result in a zero or failure for the term. There will be no homework in general for this course but there will be the presentations and projects. There is no final exam for the course either…just the tests and presentations.

Final grades will be based on total points earned during the semester:

A is 900-1000; B is 800-899; C is 700-799; D is 600-699: F is < 600

Lecture tests:

There will be three lecture tests. They will occur roughly once a month. The tests will be based on information from the study guides and in-class discussions. About 100 points will come from facts we learn in class. The other 50 points will come from "thinking" questions.

Out of class creative projects:

There will be three out of class projects. These projects must relate to an example of chemistry seen in a specific piece of media (TV, movie….). The first two will be completely creative…you can be as creative as you want on these projects. You can create a song, do a video or a demonstration or just give an "informative web" presentation. They should be 3-5 minutes long. I will be posting these online (on our YouTube page). You will be graded on your originality, creativity and how well you explain the chemistry. Check our YouTube page for examples of what was done last semester. The third project will be a more formal presentation.

You will also have to give a critical review of your fellow students' presentations via a survey you can complete anonymously online. Your grade will be based 50% on my critique and 50% your fellow classmates critique.

Third Out of Class Project:

The third project will be to do an analysis of the chemistry concepts as portrayed in a movies or TV show (not about the TV show or movie but about the chemistry in that show).

You will pick a scene (or scenes) involving chemistry from a movie or TV show and analyze the portrayal of that chemistry.

- **Topics will need to be approved**
- **All students will critique each of the presentations via an online survey**
- **Project is worth 150 points**
- **100 points for the presentation (50 points for your individual presentation and 50 points for the group presentation)**
- **Presentations grades will come from me and your classmates**
- **50 points for the power point the group turns in to accompany presentation**

Attendance Policy:

Attendance is mandatory and will be taken daily in this course.

Excessive absences (more than two classes in a row or more than 5 total absences) may be reported to the Provost's Office and may result in termination of federal financial aid as well as negatively effect the student's grade.

Any student with excessive absences will forfeit all bonus points and may not be eligible to benefit from any curve for the class. This is in addition to the loss of attendance points on your grade.

Cell Phone Utilization Policy:

Cell Phone usage is prohibited in class. Cell phones must be silenced upon entering the classroom. Cell phones may not be used as calculators or for note taking. Any type of cell phone utilization can be cause for dismissal from class. Any exceptions to this regulation must be cleared with the instructor prior to the beginning of class.

Academic Integrity:

Academic integrity is fundamental to the process of learning and evaluating academic performance. Academic dishonesty will not be tolerated. Academic dishonesty includes, but is not limited to, the following: cheating, plagiarism, tampering with academic records and examinations, falsifying identity, and being an accessory to acts of academic dishonesty. Refer to the Student Code of Conduct for further information. The Code is available online at http://www.studentaffairs.uno.edu.

Accommodations for Students with Disabilities:

It is University policy to provide, on a flexible and individualized basis, reasonable accommodations to students who have disabilities that may affect their ability to participate in course activities or to meet course requirements. Students with disabilities should contact the Office of Disability Services as well as their instructors to discuss their individual needs for accommodations. For more information, please go to http://www.ods.uno.edu.

Schedule:

Week #1, August	20	Introduction; Syllabus; What is Chemistry?
Week #2, August	25 and 27	Basic Chemistry Principles
Week #3, September	1 and 3	Chemistry of Game of Thrones and Fantasy
Week #4, September	8 and 10	Chemistry of Game of Thrones and Fantasy
Week #5, September	15 and 17	Chemistry of Poisons, Virus…; **Project #1 Due**
Week #6, September	22	**Test #1**
Week #6, September	24	Chemistry of Jurassic Park and Others (Genetics)
Week #7, Sept/Oct	29 and 1	Chemistry of Jurassic Park and Others (Genetics)
Week #8, October	6 and 8	Chemistry of Super Heroes
Week #9, October	13 and 15	**No Class (13); Fall Break Holiday (15)**
Week #10, October	20 and 22	Chemistry of Super Heroes; **Project #2 Due**
Week #11, October	27 and 29	Chemistry of Classic Movies and Books
Week #12, November	3	**Test #2**
Week #12, November	5	Chemistry of Breaking Bad
Week #13, November	10 and 12	Chemistry of Breaking Bad
Week #14, November	17 and 19	Chemistry of Breaking Bad
Week #15, November	24	Chemistry of ???; **Project #3 Due**
Week #15, November	26	**THANKSGIVING HOLIDAY**
Week #16, December	1	**Test #3**
Week #16, December	3	Last Day of Class,