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Chemistry 104 The Chemistry of Everyday Life Online Fall 2015

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**CHE 104: The Chemistry of Everyday Life
Course Syllabus**

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Office Hours: Office Hours: Monday through Friday: 8:00am to 9:00 or by appointment.
See Manny's schedule posted on Cobra for other available times.

Course Information

CHE 104: The Chemistry of Everyday Life (Online)

This course is designed for non-science majors to explore the chemistry involved in processes people experience and talk on daily bases.

Important Due Dates

Midterm Paper: October 15th 2015 @ midnight CT Final Paper: December 10th 2015 @ midnight CT

Cumulative Final Exam (Proctored): By Wednesday, December 16th @ 5:00pm CT

The final cumulative exam must be taken at a proctored testing center during the dates assigned, so please plan accordingly. *For more information about proctored testing, final exam on page 5 and/or Cobra.*

Required Materials

Textbook: Chemistry in Context: Applying Chemistry to Society (7th Edition), with access to Connect homework system and Learn-Smart.

Lab Manual: Lab procedures are posted as .doc and .pdf on Cobra.

Others:

- (1) Microsoft Word (for lab notes), scientific calculator and safety goggles.
- (2) Daily access to a computer with reliable internet connection and office program (Microsoft word, Excel and PowerPoint), Adobe Acrobat Reader, Java Runtime, and Macromedia Flash. Some of these are available free through the Online Learning website: <http://online.parkland.edu/downloads.html>.
- (3) Goggles, for eye protection while completing the laboratory experiment at home.

Important Notes

Due Dates

Parkland is in the **Central Time Zone!** If you are in the Eastern Time Zone, you should subtract 1 hour to get Parkland time. Mountain Time Zone (add 1 hour) and Pacific Time Zone (add 2 hours), etc.

Work Ethic

All assignments in this course will be subjected to an originality test. An originality test detects plagiarism in all writing documents. Plagiarism is copying or "borrowing" other people's work or ideas without correctly citing the author. Plagiarism is illegal and plagiarizing in this course will result in a zero on the assignment and depending on the degree of plagiarism, the student might be referred to the Academic Honesty Committee.

For more information about plagiarism and how to avoid it, please see writing guidelines on **page 6**.

Parkland College Mission Statement

To Engage the Community in Learning.

About CHE104...

General Educational Objectives and Assessments

Following Parkland's Mission Statement and Parkland's General Education Objectives, this course will help students achieve the following General Education Objectives:

I. Critical Thinking and Information Literacy

Demonstrate information literacy and their ability to think critically, which includes identifying biases and selecting and evaluating sources from varying as well as conflicting positions

II. Civic Engagement and Global Awareness

Demonstrate their understanding of worldwide political, social, behavioral, environmental and economic issues and ideas, as well as historical, cultural, and geographical perspectives

III. Technology

Demonstrate their ability to use technology, especially computer technology, to access, retrieve, process, and communicate information

Assessment of General Education Objectives:

Students will be assessed on their progress toward accomplishing the General Education Objectives by;

1. Performing literature research and creating a presentation on a chemistry-related topic (objective I),
2. Analyzing and reporting experimental results by writing lab reports (objective II),
3. Effectively presenting literature and experimental information online to classmates and instructor (objective III).

Course General Objective

Introduce chemical concepts using everyday activities as examples to fulfill the following goals:

- increase scientific literacy in a general population of students;
- increase an appreciation of, and enjoyment for scientific endeavors among a general population of students,
- create an environment that illustrates the importance of chemistry as an experimental science through experiments, and by evaluating current issues associated to chemistry,
- identify and describe physical phenomena in everyday products, activities and events

General course policies; online posts, laboratory reports and make-ups

For more specific information about a particular assignment, please see individual assignments below.

Course Entry Activities:

There will be a set of activities due during the first week of the course. These activities are designed to introduce you to the various features of Cobra that you will be required to use during the semester. They will help you make sure you have the proper technical skills needed to complete this online course. These assignments will not be graded, instead will be extra credit.

Even though this assignments are for extra credit, failure to complete these assignments by the due date will result in an automatic drop from the course!

Laboratory:

Twelve kitchen/virtual labs will be available for students to complete throughout the semester. Students must complete at least 5 laboratories to successfully complete this course. Failure to complete **5 laboratories/submit** will result in an automatic F in the class.

Note. There is no Lab Kit available for this course. All lab materials should be available at any local grocery store. Students are expected to purchase the materials needed to complete the lab. Since each student can choose the labs complete, this should help decrease the amount of money spent on this course. Students are allow to complete the laboratories in groups. However, each student must submit their own lab journal and report.

Due Date/Working Ahead:

All assignments in the course are due by 11:59 PM (central time zone) on the date posted on the Cobra calendar – unless otherwise indicated. Late work will be accepted but will be subject to a late penalty. Unless is a quiz, which must be completed within the scheduled dates.

Working ahead is encouraged in the course. The only exceptions to working ahead are the Final Exam (unless a special arrangement is made with the instructor), the semester project discussions, and group activities. Final exams are available only during the times listed on the Cobra calendar. If access to a future module that is not open is needed, simply send me an email to the instructor.

Extended Absence from Classes

If you are absent for more than one day due to: an emergency, an accident, illness or being hospitalized, you or your family need to contact the Office of the Dean of Students at (217) 353-2048, so that notification can be sent to your instructors.

Please note that your instructors have their own attendance policies and you are responsible for reading each course syllabus to know these policies. Only your instructors can decide whether an absence is excused. Your instructors decide if you can turn in late work or make up missed quizzes and/or exams.

Make up and late work

No make-up assignments and no late submissions will be accepted.

Specific Course Objectives and Assessments

See specific course objectives on Cobra under “content”, “general information”, “course objectives”..

Course major Assignments.

All weekly assignment due dates are on a Tuesday. However, it is recommended that students do not try to complete all assignments the day of or the day prior the due day. Instead it is recommended that students work AHEAD and complete all assignments at their earliest convenience. The main reason why all module assignments are due the same day, is to encourage students to create an working schedule that would fit their schedule, rather than having the instructor create one for them that might not fit the schedule of all the students in the class.

Online Assignments through Connect (McGraw Hill: connect.mcgraw-hill.com)

Online assignments are tools for students to review and assess their understanding of the material presented on each chapter. Each online assignment provides students with automatic feedback so the students can determine whether they understand the material or they need help studying. As online platforms, they require students to have computer up to date with updates on common (free) software such as Java (<http://www.java.com/en>) and Flash (<http://www.adobe.com/software/flash/about/>).

However, having online homework doesn't mean you cannot ask your instructor for help. Instructors are here to help and if you need extra help with homework, feel free to email/contact your instructor.

Accessing Learn-Smart and Connect Homework assignments through connect site.

1. There is a .pdf document on Cobra with two important components:
 - a. Course link
 - b. Course code
2. Download the pdf file containing the connect link titled "Connect LearnSmart Registration Instructions" on Cobra under "content", "general information".
3. Click or copy the link provided under "online registration instructions" and paste it into a browser.
4. Select "register now" and proceed to create an account, using the connect access code purchased from the bookstore or online (individual or as a bundle with the book).
5. If you do not have an access code by the time the first online connect-based assignment is due, please use the free trial option offered by McGraw Hill to obtain free access for the first three weeks, until you get your book with your own access code.
6. More information/instruction on how to access connect homework system will be posted on Cobra.

Learn-Smart Reading Assignment

Learn-Smart are reading assignments due at the beginning of each chapter. Learn Smart assignments are designed to help students assess their understanding of the material while reading the chapter prior start working on homework and other module-specific assignments. Twelve Learn-Smart activities will be assigned on this course, **where three of them will count as extra credit.** Each Learn Smart assignment is worth **10 points** and each of them will be graded based on percent completion. **No late Learn Smart assignments will be accepted.**

Connect Homework

Students are required to complete an online homework through **Connect** for each chapter discussed in class. **Connect** is a web-based platform provided by McGraw Hill with problems related to the material discussed on each chapter. The homework will consists of mainly multiple choice questions that test the understanding of the concepts presented in the book, specifically the one listed as learning outcomes for the chapter (see **Course Learning Objectives**). Connect homework worth **20 points** each and **closes at 11:59pm (Central Time)**. To obtain credit for a homework assignment, students **must** submit their answers before the due date. **Unsubmitted** or late homework problems will **not** be counted for grade. For more information about homework due date, contact your instructor. Twelve **Connect Homework** activities will be assigned on this course, **where three of them will count as extra credit.**

Discussion Forum

Post on current issues

As part of each module students will write a main post, including a short interpretation of the article presented and the student opinion on whether they agree or not with the author's arguments; and will also reply to other two posts from their classmates. The objective of this assignment is to complement the information presented in class with current chemical and environmental issues. This discussion forum will provide a place for students to interchange ideas about what was learned throughout the chapter and to reflect on how important is chemistry/or science in general in understanding their surroundings. Students are required to **make 3 posts**, one original post based on their opinion/understanding of the case study and two posts replying to other student's opinion. **Be careful when replying to other people's post, it is important to respect everyone's opinion whether you agree with them or not.** Each case study will be selected by the instructor, but feel free to contact the instructor with ideas about case studies. Each case study assignment worth **20 points** (10 points for the main post and 5 points for each reply) and each due date will be posted on Cobra.

Discussion Forum Repository

Case Study Project

The objective of this assignment is to encourage students to apply the knowledge acquired throughout the course to a real life scenario. This session, students in this course students will be studying the Great Garbage Patch and the Kamilo Beach in Hawaii. Each week students will research and discuss different aspects of the Great Garbage Patch and the Kamilo Beach from an environmental, ecological, chemical, economic and social point of view. Using their science/chemistry knowledge acquired throughout the course, students will be asked to propose a long-term and sustainable solution to issue facing the Kamilo Beach. This assignment will be graded individually, however, team work is extremely encouraged. **Participation in the Case Study Project is crucial since the Midterm and Final papers are both based on the student's progress on this project.** Each post worth 10 points. Feel free to work ahead and complete more than one weekly post per week.

Quizzes

Students will be required to complete **one quiz per chapter**. Quizzes will be available within Cobra. Each quiz is designed to test students in their understanding of the material, usage of simple math to answer questions and their capability of applying the concepts presented to solve or explain processes and techniques used in daily life. All the quizzes will contain a combination of objective (e.g. mostly multiple choice) and subjective (e.g. short answer) questions. Each quiz question will be related to the course learning objectives as described in the Course Learning Objectives. **Each quiz counts as 30 point** towards the final grade of the student. There are **no retakes** on the quizzes and **no extensions** on the deadlines for any reason. Since some of the quiz questions will be short answer and/or fill in blanks, quizzes will not be automatically graded; however they will be graded in a timely and systematic fashion.

Since quizzes are to be taken outside of a traditional classroom, usage of your text or any other resources is allowed. However, **each quiz has a time limit** associated with it and it is mandatory that the quiz is completed in the given time allowance. It is recommended to study and review the material before taking the quizzes in order to successfully complete the quiz during the assigned time. Be aware, however, this is not the case when taking the exam (see below for more information on the final). This means students should endeavor to understand the material and not just get in the bad habit of looking up information as needed.

Midterm Paper, Final Paper and Final Exam

Papers and a final exam will be used as methods to assess the student's understanding on the concepts discussed in class. More information and guidelines about the paper will be provided on Cobra under content. The final exam might include but not limited to multiple choice questions, free response, true and false, matching, etc. The final exam will be administered in Cobra and is cumulative, what means that some

material from previous exam could be included in the test. ***The Final Exam must be completed in a proctored environment and each student is responsible for finding their own proctor*** during the dates assigned. Note: this exam is a major portion of the course grade and you will not be allowed to use all your normal resources (notes, textbook, internet, other people, etc.) while completing it. Only a calculator and an 8 by 11 in cheat sheet will be allowed to bring to the final proctored exam. Thus, it is imperative to prepare for this exam from the very beginning of the semester by learning the material rather than overly relying on the use of your normal resources such as notes, book and/or online resources. Each paper **worth 200 points. The final exam worth 400 points. No grades from this category will be dropped** at the end of the semester.

Special Project

The purpose of the special project is to connect the information learned throughout the chapters with everyday life scenarios. Students will use the chemistry knowledge acquired during the semester to analyze and present a contemporary issue. This project will involve identifying a contemporary issue of interest to the student, finding reliable resources to study the issue and to analyze and present the student's finding through some sort of virtual communication method. More specific information about the special project and the delivery method to be used will be provided by the instructor through Cobra.

Laboratory Report

Students will review some of the concepts covered in each chapter by performing laboratory experiments. Each laboratory experiment will consist on an experimental aspect and a reporting aspect. The experimental part of the lab will be completed online or as a kitchen lab. The reporting part of the lab will be completed using word or any other word processor program. Each laboratory report must contain a **journal** part where students describe the procedure as their completed while performing the lab, and a **report** part that consist or a reflection over the lab. More information about the lab journal and lab report, including a guide will be posted on cobra. Students are encourage to look over the guidelines and examples posted on Cobra before submitting their lab reports, in order to assure the report contains all required information.

Writing Guidelines (By Catherine Britt Carlson)

Students must follow these guidelines when completing writing assignments in CHE104, in order to avoid any type of plagiarism.

- A primary research journal article can be found in a peer-reviewed scientific journal. Expect to spend time on this. These research articles are not easy to read. I can also help you if you are having problems understanding your article.
- Both <http://www.chemistrycentral.com/> and <http://www.biomedcentral.com/> are open access databases for journal articles. Also, the Library has resources available, which will be discussed during a lab session. If you have trouble finding articles or if you would like confirmation that the article you found is appropriate, you can come talk to me.
- Plagiarism of any form will NOT be tolerated and will result in a grade of zero. Please refer to www.plagiarism.org, the library, and the CAS Writing Lab for help. These sources are highly recommended. Many students have received 0% because they did not fully understand what plagiarism is and unintentionally plagiarized.
- You must include a references/works cited page and you must include references within the body of your paper.
- Within the body of the paper, you need parenthetical references, even if the material is paraphrased and not a direct quote (scientific paper style, not newspaper style). Use the MLA standards for in-text citations and the Works Cited, which can be located at the following website: http://owl.english.purdue.edu/handouts/research/r_mla.html. Papers that do not include appropriate references pages, use of quotation marks, and in-text parenthetical citations (as appropriate) will result in a grade of zero.

- Notes on some of the most common errors: Word-for-word sections must be in quotes with in-text citations; Paraphrased content must have in-text citations; Don't rely too much on direct quotations – paraphrasing lets me know that you know the information. Use your own sentence structure to avoid mosaic plagiarism.

A Few Selected Examples from Papers:

Good: Lowenstein explains, “calcium is essential to our body’s ability to function and our ability to think. The cardiovascular system and the nervous system both utilize calcium, and it’s also vital for blood clotting” (Lowenstein). Calcium is so crucial to the body, that without it, my cognitive-thought processing could possibly become impaired, and I wouldn’t even be able to write this paper. In fact, deprivation of proper calcium-intake can also result in hypocalcemia, tingling fingertips, muscle cramps, or osteoporosis (Timberlake, 126). [Here, the student uses a word-for-word section and has it in quotes with an in-text citation. After that, she uses a paraphrased section with the in-text citation only].

Wrong: Polycystic kidney disease is an inherited disorder in which multiple cysts develop that are noncancerous, and these cysts grow predominantly in a person’s kidneys (“Polycystic Kidney Disease”). [Here, the underlined section was taken word-for-word from the source, and has an in-text citation, but quotes are missing. This is plagiarism. The underlined section should be in quotes].

Wrong: Naproxen is an aromatic compound containing two benzenes, a carboxylic acid, a hydrocarbon/methyl group, and somewhat of an ether group. The two benzenes are the 6-carbon rings bonded to each other, each carbon in the rings have a hydrogen atom attached to it. The carboxylic acid is on the right benzene containing COOH bonded to a CH. There is a methyl group, or hydrocarbon, bonded to the carbon in the carboxylic acid. On the left benzene ring, there is somewhat of an ether bonded to a carbon, the ether contains CH₃O. Naproxen has a melting point of 153 degrees Celsius. It is insoluble in water and has a pH lower than 4. [This is paraphrased, and some of it is based on the student’s knowledge gained from class, but it is either based on outside information or is not her original thoughts. The textbook should be referenced in an in-text citation for the functional groups and the last sentence should refer to an outside source. This is plagiarism].

Mosaic Plagiarism:

The source says: “Adenoviruses force quiescent cells to re-enter the cell cycle to replicate their DNA, and for the most part, this is accomplished after they express the E1A protein immediately after infection.”

Wrong: Adenoviruses make sleeping cells restart the cell cycle to make new copies of their genetic material. This is done by making the protein E1A right away following infection (Dazard et al. 2011). [Here the student has just popped in some synonyms, but has used the source’s sentence structure. This is mosaic plagiarism -- a mix of original and source writing. When you paraphrase, you need to use your own words and structure].

Good: In order to increase the number of adenoviruses made by an infected cell, the adenovirus produces a protein called E1A (Dazard et al. 2011). This protein induces the host cells to enter into the cell cycle and start cell division (Dazard et al. 2011). This drives the cells to replicate the viral DNA, thus increasing the copies of viruses that can be made (Dazard et al. 2011).

For all of these, there should be a Works Cited (references in MLA format).

Parkland's Important Dates

Important Dates

August 30th: Last day for students to withdraw the class and get full tuition back without a record.

August 31st: If a student has NOT attended up to this point, then they will be dropped from this class with no refund of tuition and fees.

December 4th: Last day for students to withdraw from this class is before 5:00 P.M with a "W".

Summary of Assignments and Grades

Category	Assignment	Point per Unit	Modules	Drops	Total	Extra Credit Assignments
First Week Activities	Introduction Main Post	3	1	0	3	0
	Introductions Reply 1	1	1	1	0	1
	Introductions Reply 2	1	1	1	0	1
	Syllabus Quiz	5	1	0	5	0
	Email to Manny	2	1	0	2	0
	Introductions Drop Box	2	1	1	0	0
	Login to Connect	1	1	1	0	1
Activities Per Module	LearnSmart	10	12	3	90	3
	Connect HW	20	12	3	180	3
	Discussion Forum	20	12	2	200	2
	Case Study	10	12	2	100	2
	Quiz	30	12	3	270	3
Laboratory	Lab Reports	30	12	5	210	5
Special Project	Topic	10	1	0	10	0
	Prezi	100	1	0	100	0
	Evaluations	10	3	0	30	0
Examinations	Midterm Paper	200	1	0	200	0
	Final Paper	200	1	0	200	0
	Final Exam	400	1	0	400	0
Total Course Points					2000	

**Modifications of the syllabus will be notified to the students by the instructors in class and through Cobra.*

Point Scale

F	D	C	B	A
0 - 1199	1200 - 1399	1400 - 1599	1600 - 1799	1800 - 2000

Week	Tuesday	Thursday	Week	Tuesday	Thursday
Wk. 1 8/24 – 8/28		Introductions	Wk. 9 10/19 – 10/23	Learn Smart Ch.6	
		Syllabus Quiz		Homework Ch.6	
		Introductory Guide		Discussion Forum 6	
		Expectations Email		Case Study Topic 6	
		Login Connect		Quiz Ch.6	
				Lab 6/Lab 7	
Wk. 2 8/31 – 9/4	Learn Smart Ch.0		Wk. 10 10/26 – 10/30	Learn Smart Ch.7	
	Homework Ch.0			Homework Ch.7	
	Discussion Forum 0			Discussion Forum 7	
	Case Study Topic 0			Case Study Topic 7	
	Quiz Ch.0			Quiz Ch.7	
Wk. 3 9/7 – 9/11	Learn Smart Ch.1	Special project topic due (Cobra Discussion Forum)	Wk. 11 11/2 – 11/6	Special project Prezi Link Share – Discussion Forum	Prezi Evaluations (classmates)
	Homework Ch.1				
	Discussion Forum 1				
	Case Study Topic 1				
	Quiz Ch.1				
	Lab 1				
Wk. 4 9/14 – 9/18	Learn Smart Ch.2		Wk. 12 11/9 – 11/13	Learn Smart Ch.8	
	Homework Ch.2			Homework Ch.8	
	Discussion Forum 2			Discussion Forum 8	
	Case Study Topic 2			Case Study Topic 8	
	Quiz Ch.2			Quiz Ch.8	
				Lab 8/Lab 9	
Wk. 5 9/21 – 9/25	Learn Smart Ch.3		Wk. 13 11/16 – 11/20	Learn Smart Ch.9	
	Homework Ch.3			Homework Ch.9	
	Discussion Forum 3			Discussion Forum 9	
	Case Study Topic 3			Case Study Topic 9	
	Quiz Ch.3			Quiz Ch.9	
	Lab 2/Lab 3			Lab 10/Lab 11	
Wk. 6 9/28 – 10/2	Learn Smart Ch.4		Wk. 14 11/23 – 11/27	Learn Smart Ch.10	Thanksgiving
	Homework Ch.4			Homework Ch.10	
	Discussion Forum 4			Discussion Forum 10	
	Case Study Topic 4			Case Study Topic 10	
	Quiz Ch.4			Quiz Ch.10	
				Learn Smart Ch.10	
Wk. 7 10/5 – 10/9	Learn Smart Ch.5		Wk. 15 11/30 – 12/4	Learn Smart Ch.11	
	Homework Ch.5			Homework Ch.11	
	Discussion Forum 5			Discussion Forum 11	
	Case Study Topic 5			Case Study Topic 11	
	Quiz Ch.5			Quiz Ch.11	
	Lab 4/Lab 5			Lab 12	
Wk. 8 10/12 – 10/16		Midterm Paper Due (Dropbox)	Wk. 16 12/7 – 12/11		Final Paper Due (Dropbox)