CH-201 General Chemistry for Nursing

Instructor:	Angelique Showman
Section:	*-01* T Th 11:30 – 12:50 Wesselkamper Science Center 120
	-02 W F 14:30 – 15:50 Henry Hall 109
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Office Hours:	T/Th 08:30 - 10:30

Course Requirements:

Scientific hand-held calculator with log function
Textbook or eBook: General, Organic and Biochemistry 8th Edition, Denniston (McGraw Hill) -
Connect Plus: LearnSmart (Access Code Required)
iClicker
eCollege (chaminade.ecollege.com)
Twitter.com
Quizlet.com

Prerequisites:

BI 151/151L and BI 152/152L.
MA 107 or equivalent with grade of C or better.

Course Description:

CH201 is a college level general chemistry course designed with nursing majors in mind. The level is comparable to CH203/203L and CH204/204L but at an accelerated pace with emphasis made to nursing and health related majors. This is a math intensive course, thus an adequate understanding of algebra is required. In one semester, atomic structure, concentration measurements/conversions, states of matter, stoichiometry, acids and bases, electrochemistry, thermodynamic, chemical bonds and molecular structure are covered.

Course Competencies:

Understand and employ the scientific method in solving complex problems associated with natural science.
Recognize the importance of maintaining health and the hazards of common chemicals found in a laboratory.
Understand how technology and science impacts daily lives.
Awareness of ethical values and how they relate to personal values.
Develop the ability to make sound judgment based on quantitative/qualitative assessment using logical deductive reasoning.

Integrate knowledge and concepts learned from the various scholarly disciplines within natural science.
Possess college level quantitative literacy.
Apply mathematical skills for solving day-to-day problems.
Apply algebraic and statistical analysis for solving real-world problems.
Ability to understand/create graphical and/or tabulated data to represent results.

Course Objectives:

Determine the number of subatomic particles in a given isotope of any element.
Write chemical formulas and give the chemical name of ionic and simple molecular compounds.
Understand and apply the mole concept in a variety of chemical calculations, including the calculation of the number of particles in a given mass of substance, and the quantitative relationship between reactants and products in a chemical reaction.
Use conversion factors to change units and application of conversions in a clinical setting.
Recognize different types of chemical reactions and transformations: acid-base, precipitation, and redox reactions.
Perform gas law calculations.
Understand the basic principles of energy transfer involving chemical systems.
Understand the various models of atomic structure and the basic principles of quantum theory.
Write ground-state electron configurations for atoms and ions of any representative element and the 3D transition metals
Describe the molecular geometry of simple molecules.
Discuss the properties of solids, pure liquids and solutions.
Understanding Le Chatelier's Principle and the effect of changes on concentration on the system.
Calculate equilibrium constant.
Calculate molarity and dilutions.
Understand solubility and the effects of temperature and pressure.
Perform pH calculations.
Calculate energy changes in reactions and determine if reactions or endothermic or exothermic.
Predict acid/base equations and calculate mols required to reach neutrality.
Explain the affect of buffers on the acidity and basicity of a solution and understand how buffers work in the environment and in the body.
Identify functional groups and name basic organic compounds.

Class Policies and Reminders:

Attendance: In class quizzes/exams **cannot** be made up at a later time. If you miss a midterm exam, a written explanation is for your absence is required (doctor's note or other document may be needed to determine if the absence is excused). Unexcused absences will result in a score of zero for that exam. Any student who does not take the final exam will fail the course.

Student Conduct: Please refer to the Student Handbook for the CUH policies on Classroom Behavior and Academic Dishonesty.
ADA Accommodations: Students with special needs who meet criteria for the Americans with Disabilities Act (ADA) provisions must provide written documentation of the need for accommodations from the CUH Counseling Center (Dr. June Yasuhara; phone 735-4845) by the end of week three of the class, in order for the instructor to plan accordingly. Failure to provide written documentation will

prevent your instructor from making the necessary accommodations. Please refer any questions to the Dean of Students and review the procedures at http://www.chaminade.edu/student_life/sss/counseling_services.php.

Music Devices and Cellphones: As a courtesy to other students and the instructor, the use of music devices, cell phones, smart phones, PDAs (personal digital assistant), pagers or any other electronic device with the potential to make noise is prohibited during all Natural Science and Mathematics classes at Chaminade, unless specifically permitted by your instructor. These devices must be turned off or placed on silent (not vibrate) during the entire lecture time. During quizzes and exams, these devices need to be turned off and stored with the professor until completion of the exam/quiz. If during an exam, your electronic device makes noise (this includes vibrating), you may be asked to turn in your exam/quiz for a grade of zero and leave the room while the rest of the class finishes. The use of any other electronic device other than an approved scientific calculator during exams or quizzes will be considered a form of academic dishonesty and will result in a failing grade for that assignment. Students who cannot comply with this rule will be asked to leave class. Please refer any questions to the Dean of Natural Sciences and Mathematics.

Opportunities for Help: If you need assistance with the material for this course, come to my office for help! I have set office hours, but I am often available at other times. Feel free to drop by or send me an email angelique.showman@chaminade.edu (using your Chaminade account; do **NOT** email me through eCollege!) to make a specific appointment. In addition, there are Chemistry tutors available at the AAP. ***Do NOT wait until the last minute to get help!***

Websites:

Textbook with Connect Plus Access: This course requires both a textbook and online access to ConnectPlus. A Loose-leaf-Binder Ready Edition w/ Connect Plus Access for Chemistry Access card (includes digital version of ebook--2 semester access) was ordered through Chaminade's Bookstore - Package ISBN: 9780078130649. If you prefer an online edition only or have purchased the book, you should be able to also purchase the 2-semester access code, through the website for this course; ISBN is 9780077510312. There will be homework/quiz assignments for a grade given throughout the course on ConnectPlus. Also available will be tutorials, study cards, etc. to help you succeed in this course.

To register for the ConnectPlus portion of this course or for more information and overview of ConnectPlus, go to http://www.connectstudentsuccess.com/

Section-01: http://connect.mheducation.com/class/a_showman-01
Section-02: http://connect.mheducation.com/class/a_showman_02

eCollege: I will be utilizing eCollege primarily as a document depository. I will be uploading slide handouts for the lectures by the Monday before the first lecture date for you to print out (if you choose) and follow along during the lecture. Submission for the Applied Chemistry Paper will also be through this platform. In addition, I urge you to use the discussion feature to discuss homework problems or other questions you may have regarding the material. I will be monitoring any discussions, so I can provide additional information and assistance if needed. Periodically, I will post current points and grades on eCollege (usually following grading of exams).

Twitter: You will be required to have a Twitter account for class announcements, science articles and access to ShowMe examples used in lecture/lab. Please use your first and last name when creating your Twitter account. Follow me on Twitter: https://twitter.com/CUH_nrschem_Ang

Quizlet: I have provided a few study cards for this course. You can join the course via http://quizlet.com/join/4WDDFpTzR. It is free to create a Quizlet account; please use your first and last name in your account name.

Grading, Homework and Exams

iClicker Quizzes: Clicker quizzes may be given at the beginning of every class and based on the previously lecture material and are often based on homework questions. Additional questions may be asked during lecture on the material currently being presented. Points for clicker quizzes are the basis of your participation points for this class. Not having your iClicker with you is the equivalent of being absent from class and participation points will not be given.

Worksheets: Worksheets will be provided throughout the semester to prepare you for the exams. It is strongly urged that you form study groups to work through these problems as exam problems may be very similar. Worksheets will be posted on eCollege, and after the last lecture for the exam, the answer key will be posted on eCollege for your review. If you do not understand how a problem was solved, come see me. Review session may be scheduled before the exam; attendance to these are optional but I strongly encourage you to attend.

Exams: Exams include two midterms and one final comprehensive exam. Scientific hand-held calculator is allowed. No other electronic devices are permissible including cellular or smart phones (iPhone, Blackberry, etc.).

> **Final Exam Dates**: Final exam dates will be announced later in the semester. **Do NOT schedule work, plane tickets home, etc during the Monday-Thursday exam week scheduled by the university as the final exam time can fall during any time this week.** This exam will be cumulative, covering all of the material presented in class over the semester. Any student who does not take the final exam will fail the course.

Applied Chemistry Paper: We will watch the documentary *Food, Inc.* Robert Kenner, producer/director 2008. From this documentary, each student will select two chemicals mentioned in the film (check with me first) and research the chemical to include the formula. You will be expected to briefly explain the application of the chemical, any health and environmental issues associated with the chemical (i.e. use, production, disposal or byproducts formed, etc.). You are required to include in your resources a Material Safety Data Sheet (MSDS/SDS) on each of the chemicals you choose. Additionally, provide a one to two paragraph review of the film expressing your opinion (do you agree, disagree, does this change the way you will eat, why or why not?). It is important that you carefully select the sources that you use to write this paper; non-credible sources will cost you points on this paper. You must cite any sources that you use (use APA formatting for inline citation and works cited page); failure to cite references is plagiarism and a form of academic dishonesty. This is no more than two to three-page paper, double spaced, font size 12, 1 inch margins. Questions on the film will be included on the midterm and final exams.

Course Grades: The course grades will be based on the following scale (650 total points). Any changes will be announced in class.

Participation (iClicker Quizzes) – 50 points
ConnectPlus Quizzes – 100 points
ConnectPlus Homework – 50 points
Applied Chemistry Paper – 50 points
Midterm exams – 200 points (100 each)
Final exam 200 points

Letter grade (based on 650 points): A = 90 - 100% (582 – 650 points)
B = 80 - 89% (517 – 581 points)
C = 70 - 79% (452 – 516 points)
D = 60 - 69% (387 – 451 points)
F = 59% and below (<386 – 0 point)

Tentative Class Schedule and Important Dates:

Week	Dates	Description
1	8/26 & 27	Course Information, Pre-Test Assessment
	8/28 & 29	Chapter 1: Chemistry
2	9/3	***Add-Drop Last Day***
	9/2 & 3	Chapter 1: Chemistry
		Connect HW/Quiz 1 on Chapter 1 (Due 9/8 @ 00:00)
	9/4 & 5	Chapter 2: The Structure of the Atom and the Periodic Table
3	9/9 & 10	Chapter 2: The Structure of the Atom and the Periodic Table
		Connect HW/Quiz 2 on Chapter 2 (Due 9/15 @ 00:00)
	9/11 & 12	Chapter 9: The Nucleus, Radioactivity, and Nuclear Medicine
		Connect HW/Quiz 3 on Chapter 9 (Due 9/17 @ 00:00)

4	9/16 & 17	Chapter 3: Structure and Properties of Ionic and Covalent Compounds **Connect HW/Quiz 4 on Chapter 3 (Due 9/22 @ 00:00)**
	9/18 & 19	Chapter 3: Structure and Properties of Ionic and Covalent Compounds
5	9/23 & 24	**EXAM I: Ch 1, 2, 9 & Ch 3.1-3.2**
	9/25 & 26	Chapter 3: Structure and Properties of Ionic and Covalent Compounds **Connect HW/Quiz 5 on Chapter 3 (Due 10/1 @ 00:00)**
6	9/30 & 10/1	Chapter 10: An Introduction to Organic Chemistry: The Saturated Hydrocarbon
	10/2 & 3	Chapter 10: An Introduction to Organic Chemistry: The Saturated Hydrocarbon *Food, Inc.* Part I **Connect Quiz on HW/Chapter 10 (Due 10/8 @ 00:00)**
7	10/7 & 8	*Food, Inc.* Part 2
	10/9 & 10	Chapter 4: Calculations and the Chemical Equations
8	10/14 & 15	Chapter 4: Calculations and the Chemical Equations **Chemical Selection due for Applied Chemistry Paper** **Connect HW/Quiz 6 on Chapter 4 (Due 10/20 @ 00:00)**
	10/16 & 17	Chapter 5: States of Matter: Gases, Liquids and Solids
9	10/21 & 22	Chapter 5: States of Matter: Gases, Liquids and Solids **Connect HW/Quiz 7 on Chapter 5 (Due 10/27 @ 00:00)**

9	10/23 & 24	**TBA**
10	10/28 & 29	Chapter 6: Solutions
	10/30 & 31	**EXAM II: Ch 3, 4, 10, 5**
11	11/4 & 5	Chapter 6: Solutions
		Connect HW/Quiz 8 on Chapter 6 (Due 11/10 @ 00:00)
	11/6 & 7	Chapter 7: Energy, Rate, and Equilibrium
	11/7	***Last Day to Withdraw, Credit/No Credit***
12	11/11 & 12	**NO CLASS: Veterans' Day**
	11/13 & 14	Chapter 7: Energy, Rate, and Equilibrium
		Connect HW/Quiz 9 on Chapter 7 (Due 11/19 @ 00:00)
13	11/18 & 19	Chapter 8: Acids and Bases and Oxidation-Reduction
	11/20 & 21	Chapter 8: Acids and Bases and Oxidation-Reduction
		Applied Chemistry Paper Due
		Connect HW/Quiz 10 on Chapter 8 (Due 10/26 @ 00:00)
14	11/25 & 26	Introduction to Organic Acids and Bases
	11/27 & 28	**NO CLASS: Thanksgiving**
15	12/2 & 3	Post Assessment
		Review for Final: **Emphasis on 6, 7, 8, 9 &** ***Food, Inc***
	12/4 & 5	TBA

Class schedule is subject to change and will be announced in class as needed.