

**Eastern WV Community & Technical College
Master Course Record**

Course Prefix and Number: CHM 214 CHM 214L
Course Title: Principles of Chemistry II Principles of Chemistry II Lab
Recommended Transcript Title (if over 40 characters)
Date Approved/Revised: 12/6/17; 10/5/17
Lecture Credit Hours: 3 Lab Credit Hours: 1 Contact hours per week (Based on 15 week term): Lecture: 3 Lab: 2
Prerequisite: CHM 213 and CHM 213L Corequisite: CHM 214 and CHM 214L Pre/Corequisite:
Grading Mode: Letter
Catalog Description: A continuation of CHM 213, this course deals with intermolecular forces, solution properties, kinetics, and acid-base reactions. This course will also cover gas laws, chemical equilibrium, thermodynamics, and electrochemistry. CHM 213L: Application and demonstration of concepts presented in CHM 214 Principles of Chemistry II lecture.
Course Outcomes: <ol style="list-style-type: none"> 1. Describe the basic properties of solutions 2. Integrate the fundamentals of acid/base equilibria, including pH calculations, buffer behavior, acid/base titrations, and their relationship to electrophiles and nucleophiles 3. Explain the thermodynamic and kinetic forces involved in chemical reactions which determine how much and how soon products are formed 4. Discuss the basics of electrochemistry, and the relationship of electrical parameters to thermodynamic and stoichiometric parameters 5. Utilize current bonding models for simple inorganic and organic molecules in order to predict structures and important bonding parameters 6. Describe general periodicity patterns of (organic/inorganic) molecules, and the ability to design synthetic approaches to such species 7. Complete general chemical equilibria 8. Complete solubility and complex ion equilibria 9. Discuss basic aspects of nuclear chemistry
Implementation Cycle: Spring
Role in College Curriculum: (Check all that apply) <input checked="" type="checkbox"/> General Education Core: Natural Science <input type="checkbox"/> Technical Core <input type="checkbox"/> Restricted Elective

Course Number & Title: CHM 214 Principles of Chemistry II and CHM 214L Principles of Chemistry II lab

Date Prepared/Revised: 5/4/07; 12/10/01; 9/11/17

Date Course Approved by Curriculum Committee: 12/6/16; 10/5/17

Date Course Approved by I/OE: 12/12/16; 10/16/17

<input checked="" type="checkbox"/> General Elective
<input type="checkbox"/> Workforce Education
<input type="checkbox"/> Other (Please specify)
Course Fee: None
Instructor's Qualifications: Master's degree with a minimum of 18 hours graduate work in related science courses.
Expanded Course Description Lecture, class discussion, and class participation will be the main instructional procedures for the lecture portion of this course. A two hour lab will be conducted each week.

Revised by:

Amo Oliverio, Science Instructor
Name Title

9/11/17
Date

Approved Per LOT Minutes

Dean of Teaching and Learning

Date