

#### COURSE DESCRIPTION

This course is designed to teach elementary principles of chemistry, organic chemistry, and chemical elements and compounds. It includes an investigation of the constituents of matter, electron arrangement, the periodic table, chemical bonds and reactions, phase states, solutions, acids, bases and electrolytes.

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#### LEARNING OBJECTIVES

Upon completion of this course, the student will be able to understand the pervasiveness of the application of chemical principles of daily life.

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#### COURSE PREREQUISITIES

None

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#### REQUIRED TEXTS

**Hills, Feigl, and Baum, Chemistry and Life, 5th edition. Macmillan, New York, 1993.**

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#### RECOMMENDED TEXTS

Morrison and Boyd, Organic Chemistry, 3rd edition. Allyn and Bacon, Inc., New York, 1973.

Weast, Handbook of Chemistry and Physics, 53rd edition. CRC Press, Cleveland, 1973.

DuPraw, The Biosciences: Cell and Molecular Biology, Stanford Press, Stanford, 1972.

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#### COURSE REQUIREMENTS

##### Out-of-Class Work

To successfully complete the program, students need to plan studying a minimum of 2 hours out-of-class for each academic in-class hour; and half an hour out-of-class for each hour of clinical training.

20%= Attendance And Quizzes ( Only 2 Absences Permitted)

40%=mid-term Examination

40%=final Examination

Classroom Lectures Represent The Instructor's Emphasis And Focus On Certain Aspects Of The Course Material. The Student Is Responsible For The Assigned Readings.

GRADING SCALE: 100-90% A, 89-80% B, 79-70% C, 69% and below F

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#### SPECIAL NOTES

**Professionalism and Full and Prompt Attendance:** To pass any course (separate from academic performance) all students must meet requirements for professionalism in coursework. Professionalism includes full and prompt attendance: students who miss more than 2 class meetings in a 10-week course or 1 class meeting in a 7-week course will earn an F in that course. Additionally, students who arrive more than 15 minutes to class or leave class before it ends will be given ½ absence towards attendance. NOTE: Students who leave and return to class late from a break or leave during the class (especially if this is repeated) or who disrupt the class in other ways may earn an F in that class and/or be referred to the Academic Dean for professionalism.

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CLASS ONE (The syllabus is subject to change at the discretion of the instructor.)

Introduction  
Matter And Measurement  
Unit Conversion  
Atomic Theory  
Electron Arrangement  
Periodic Table

Assignment: Hill Chapters 1,2

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CLASS TWO

Electron Configuration  
Ionic Bonds  
Covalent Bonds  
Electronegativity  
Polar And Non-polar Molecules.

Assignment: Hill Chapters 4

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CLASS THREE

Balancing Chemical Reactions  
Volume Relationships  
Avagadro's Number  
Mole And Mass Relationships  
Reaction Rates, Equilibrium

Assignment: Hill Chapters 5

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CLASS FOUR

Oxidation And Reduction, Chemical Properties Of Oxygen, Chemical Properties Of Hydrogen  
Oxidizing And Reducing Agents.

Assignment: Hill Chapters 6

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CLASS FIVE

**Mid- Term Examination (take Home)**

Air: Mixture Of Gasses  
Kinetic-molecular Theory  
Atmospheric Pressure  
Gas Laws

Assignment: Hill Chapters 7

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CLASS SIX

Intermolecular Forces  
Interionic Forces  
Dipole Forces  
Hydrogen Bonds  
Phases and phases changes

Course Code **WS200**  
3 Units  
30 Hours

**EMPEROR'S COLLEGE**  
**MTOM COURSE SYLLABUS**  
**CHEMISTRY**

*Redmond, Michael*  
*Winter 2019*

Assignment: Hill chapters 8

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CLASS SEVEN

Solutions  
Solubility  
Molarity  
Concentration  
Solutions And Cell Membranes  
Colloids

Assignment: Hill Chapters 9

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CLASS EIGHT

Acids  
Acid Strength  
Bases  
Base Strength  
Anydrides  
Neutralization Reactions

Assignment: Hill Chapters 10

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CLASS NINE

Acid And Base Concentration  
Acid-base Titration  
The Ph Scale  
Salts  
Buffers

Assignment: Hill Chapters 11

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CLASS TEN

Electrolytes  
Electrochemistry  
Ionization And Dissociation  
Electrolysis  
The Activity Series

Assignment: Hill Chapters 12

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CLASS ELEVEN

**Final Examination**

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REFERENCE MATERIAL

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FACULTY INFO

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Redmond, Michael

Course Code **WS200**  
3 Units  
30 Hours

**EMPEROR'S COLLEGE**  
**MTOM COURSE SYLLABUS**  
**CHEMISTRY**

**Redmond, Michael**  
*Winter 2019*

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Please check with instructor during class to get updated contact info.  
310.676.2209  
Kampfwagen@sbcglobal.net

Michael Redmond has taught Western medicine courses to TCM students for many years. His previous clinical experiences include trauma, intensive care, anesthesia, and home health. Currently Redmond teaches several courses in the MTOM Program including Biology, Chemistry, Biochemistry, Western Physical Assessment, Anatomy and Physiology and Western Medical Terminology among others.