

# PRINCIPLES OF CHEMISTRY II

CHEM 1220

Spring 2024

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<b>Instructor:</b>	Matthew Rowley	<b>Office Hours:</b>	Daily 10:00 am – 11:00 am
<b>Telephone:</b>	(435) 586-7875		
<b>Email:</b>	matthewrowley1@suu.edu	<b>Office:</b>	SC-220

Please include the course number in the subject line of all correspondence.

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## Tentative Schedule

Class will meet on Mondays, Wednesdays, Thursdays, and Fridays

- Section 01 will meet from 11:00-11:50 in room SC-302
- Section 04 will meet from 2:00-2:50 in room SC-228

For the best lecture experience, read the indicated textbook chapter *before* viewing each lecture

	Date	Topic	Chapter
Week 1	M, Jan. 8	Intermolecular Forces and Liquid Properties	12.1-12.2
	T, Jan. 9	Phase Changes and Heating Curves	12.3
	W, Jan. 10	Vapor Pressure and Phase Diagrams	12.4-12.5
	F, Jan. 12	Classifying Solids and Unit Cells	12.6-12.7
Week 2	M, Jan. 15	<b>Martin Luther King Day - No Class!</b>	
	T, Jan. 16	Solvation and Saturation	13.1-13.2
	W, Jan. 17	Concentration Units	13.3
	F, Jan. 19	Colligative Properties	13.4-13.5
Week 3	M, Jan. 22	<b>Catch-up/Review Day - Midterm Exam 1 (Ch. 12–13)</b>	
	T, Jan. 23	Rates and Rate Laws	14.1-14.2
	W, Jan. 24	Integrated Rate Laws	14.3
	F, Jan. 26	Temperature and Activation Energy	14.4

	Date	Topic	Chapter
Week 4	M, Jan. 29	Reaction Mechanisms and Catalysis	14.5-14.6
	T, Jan. 30	Equilibrium Constants	15.1-15.2
	W, Jan. 31	Equilibrium Expressions and Q	15.3-15.4
	F, Feb. 2	ICE Tables	15.5
Week 5	M, Feb. 5	Le Châtelier's Principle	15.6
	T, Feb. 6	<b>Catch-up/Review Day - Midterm Exam 2 (Ch. 14–15)</b>	
	W, Feb. 7	Acid and Base Reactions	16.1-16.2
	F, Feb. 9	Autoionization and pH	16.3-16.4
Week 6	M, Feb. 12	Weak Acids and Bases	16.5
	T, Feb. 13	Polyprotic Acids and Salts	16.6-16.7
	W, Feb. 14	Acid Strength and Lewis Acids	16.8-16.9
	F, Feb. 16	Buffers and the H-H Equation	17.1-17.2
Week 7	M, Feb. 19	<b>President's Day - No Class!</b>	
	T, Feb. 20	Strong Acid/Base Titrations	17.3
	W, Feb. 21	Weak Acid/Base Titrations	17.4-17.5
	F, Feb. 23	Solubility	17.6-17.7
Week 8	M, Feb. 26	<b>Spring Break - No Class!</b>	
	T, Feb. 27	<b>Spring Break - No Class!</b>	
	W, Feb. 28	<b>Spring Break - No Class!</b>	
	F, Mar. 1	<b>Spring Break - No Class!</b>	
Week 9	M, Mar. 4	Precipitation and Q	17.8
	T, Mar. 5	Metal Ions and Complexation	17.9-17.10
	W, Mar. 6	<b>Catch-up/Review Day - Midterm Exam 3 (Ch. 16–17)</b>	
	F, Mar. 8	Entropy and Spontaneity	18.1

	Date	Topic	Chapter
Week 10	M, Mar. 11	Entropy Changes and Temperature	18.2-18.3
	T, Mar. 12	Gibbs Energy and Temperature	18.4-18.5
	W, Mar. 13	Gibbs Energy and Equilibrium	18.6
	F, Mar. 15	Redox Reactions	19.1-19.3
Week 11	M, Mar. 18	Voltaic Cells	19.4-19.5
	T, Mar. 19	Free Energy and Cell Potential	19.6
	W, Mar. 20	Nernst Equation and Applications	19.7
	F, Mar. 22	Electrochemical Cell Applications	19.8-19.9
Week 12	M, Mar. 25	Radioactivity	20.1-20.2
	T, Mar. 26	<b>Festival of Excellence - No Class!</b>	
	W, Mar. 27	Half-Life and Radiometric Dating	20.3-20.4
	F, Mar. 29	Fission and Fusion	20.5
Week 13	M, Apr. 1	Energy and Nuclear Reactions	20.6-20.7
	T, Apr. 2	<b>Catch-up/Review Day - Midterm Exam 4 (Ch. 18-20)</b>	
	W, Apr. 3	Hydrocarbons	21.1-21.2
	F, Apr. 5	Isomers	21.3
Week 14	M, Apr. 8	Classes of Organic Compounds	21.4-21.5
	T, Apr. 9	Polymers	21.6
	W, Apr. 10	Transition Metals and Coordination Compounds	22.1-22.3
	F, Apr. 12	Nomenclature and Isomerism	22.4-22.5
Week 15	M, Apr. 15	Crystal Field Theory and Spectroscopy	22.6-22.7
	T, Apr. 16	Carbohydrates	23.1-23.2
	W, Apr. 17	Lipids, Amino Acids, and Nucleic Acids	23.3-23.5
Finals Week	M, Apr. 22	<b>Section 01</b> Final Exam 11:00-12:50	Bring a pencil and scantron
	R, Apr. 25	<b>Section 04</b> Final Exam 1:00-2:50	Bring a pencil and scantron