

Grade 12 University Chemistry Final Review Guideline

Check	Content/Topics
	1. Periodic Trend
	2. Naming
	3. No atomic model history
	4. Quantum number & Pauli & Hund's & Aufbau
	5. Electron configuration (exceptions) & potential energy diagram & possible charges
	6. VSEPR theory & electron geometry & molecular geometry & polarity
	7. Hybridization
	8. Intermolecular force and intramolecular bond
	9. Enthalpy and bond energy
	10. Enthalpy and Hess's Law
	11. Standard enthalpy of formation
	12. Calorimetry & $\Delta H = -mc\Delta T$
	13. Endothermic and exothermic reaction potential energy diagram
	14. Use enthalpy and entropy to predict spontaneous reaction
	15. Reaction rate and Rate Law
	16. Chemical equilibrium (ICE table) & Le Chatelier principle
	17. Solubility product & molar solubility & common ion effect
	18. Arrhenius & Bronsted-Lowry Acids and bases
	19. Titration strong acids and strong bases
	20. Titration weak acids and strong bases
	21. Buffer solution & indicator
	22. redox reaction & balance using half reaction method or oxidation number method
	23. Galvanic cell & select preferred reaction