

## Chemical kinetics (332 Chem)

Topics		
<b>Introduction</b> <ul style="list-style-type: none"> <li>✓ Basic Kinetic Concepts</li> <li>✓ Types of Chemical reactions</li> <li>✓ Types of Systems</li> <li>✓ Rate of Chemical reactions</li> <li>✓ Factors affecting chemical reaction rates</li> </ul>	<b>Quiz (1)</b>	<b>Mid-term Exam (1)</b>
<b>Rate of reactions and Rate Laws</b> <ul style="list-style-type: none"> <li>✓ Effect of Concentration on the reaction rate</li> <li>✓ Order of a Reaction</li> <li>✓ Rate Law</li> <li>✓ Reaction Rate Constant</li> <li>✓ Reaction Mechanism</li> <li>✓ Order and Molecularity</li> <li>✓ Effect of Temperature on the Reaction Rate</li> <li>✓ Arrhenius Relation</li> <li>✓ Energy of Activation</li> </ul>		
<b>Kinetics of Simple Reactions</b> <ul style="list-style-type: none"> <li>✓ Zero Order Reaction</li> <li>✓ First Order Reaction</li> <li>✓ Second Order Reaction</li> <li>✓ Third Order Reaction</li> <li>✓ Pseudo Order Reaction</li> <li>✓ n<sup>th</sup> Order Reaction</li> <li>✓ Half -life of a Reaction</li> </ul>	<b>Quiz (2)</b>	
<b>Experimental Methods and Data Analysis</b> <ul style="list-style-type: none"> <li>✓ <i>Chemical Methods</i></li> <li>✓ <i>Physical Methods</i></li> <li>✓ Integral Method</li> <li>✓ Half-life Method</li> <li>✓ Differential Method</li> <li>✓ Isolation Method</li> </ul>	<b>Quiz (3)</b>	
<b>Kinetics of Complex Reactions</b> <ul style="list-style-type: none"> <li>✓ Reversible Reaction</li> <li>✓ Parallel Reaction</li> <li>✓ Consecutive Reaction</li> <li>✓ Chain Reaction</li> <li>✓ Steady-State Approximation</li> </ul>	<b>Quiz (4)</b>	
<b>Theories of Elementary reactions</b> <ul style="list-style-type: none"> <li>✓ Collision Theory</li> <li>✓ Transition State Theory</li> </ul>		