

Focus on understanding mechanism steps where provided in notes for Exam 4.
Practice drawing reacting atoms with all bonds, lone pairs, charges, and curved arrows.
O's always have 1-3 lone pairs, N's always have 0-2 lone pairs, C⁻¹ has one lone pair.
Understand how resonance is an interaction between lone pairs and Π bonds.
Pay attention to details like where each atom is located and what it is bonded with.
Use homework and pictures in notes as guides.

Ch 23 (Carbonyl Condensations)

- Aldol Condensation Mechanism
Create aldehyde enolate (with resonance), add to 2nd carbonyl, then protonate
- Conjugated Dehydration of Aldols
Lose alpha H and beta OH to create C=C-C=O
- Claisen Condensation Mechanism
Create ester enolate (with resonance), add to 2nd carbonyl, then expel LG
- Michael Reaction Mechanism
Create dicarbonyl enolate, add to beta C of conjugated enone, then protonate

Ch 24 (Amines)

- Reductive Amination Mechanism
Create imine, then reduce with NaBH(OAc)₃
- Hoffman Rearrangement Mechanism
Convert amide to isocyanate, carbamic acid, then amine
- Curtius Rearrangement Mechanism
Convert azide to isocyanate, carbamic acid, then amine
- Sandmeyer Reaction Sequence
Create aromatic amine from benzene, create diazonium, replace diazonium.