

Reactions Generally Covered in Organic Chemistry Textbooks	Where Those Same Reactions are Named and Worked in <i>Understanding Organic Chemistry</i>
Electrophilic Addition Reaction (Alkene with H – X or with ROH and acid)	Chapter 6
Hydroboration-Oxidation	Chapter 7
Halogenation	Chapter 7
Oxymercuration-Demercuration/Alkoxymercuration-Demercuration	Chapter 7
Halohydrate	Chapter 7
Hydrogenation	Chapter 7
Pi-Complex Formation During Reaction of an Alkyne with H – X	Chapter 7
Halogenation of an Alkyne	Chapter 7
Reactions with Organometallics (Grignard)	Chapter 9
Hydration of an Alkyne and Keto-Enol Tautomerization	Chapter 9
Hydroboration/Oxidation of an Alkyne	Chapter 9
Acidity of an sp Carbon	Chapter 9
1,2 – 1,4 Addition Reactions (Including Thermodynamic vs. Kinetic Controls)	Chapter 9
Diels-Alder Reactions	Chapter 9
Reactions at the α -carbon (including acidity of the α -carbon, keto-enol tautomerization, Aldol, Claisen, Halogenation of the α -carbon)	Chapters 9 and 12
Electrophilic Aromatic Substitution Reactions (Halogenation, Nitration, Sulfonation, Friedel-Crafts Alkylation, Friedel-Crafts Acylation, Types of Directors)	Chapter 10
SNAr Reactions and Reactions of Arenediazonium Salts	Chapter 12
Nucleophilic Acyl Substitution Reactions	Chapter 12
Nucleophilic Addition Reactions	Chapter 12
Nucleophilic Addition-Elimination Reactions (Schiff Base, Hemi-Acetal, Acetal, Hemi-Ketal, and Ketal)	Chapter 12
Wittig	Chapter 12
Nucleophilic Addition to α,β -Unsaturated Aldehydes and Ketones	Chapter 12
SN1, SN2, E1, and E2 Reactions of Alkyl Halides, Alcohols, Ethers, Amines, and Sulfur Compounds (Including use of	Chapter 13

SOCl ₂ , TsCl, PX ₃ , POCl ₃ , H – X, H ₂ SO ₄ /H ₃ PO ₄ , Hoffman Elimination, Cope Elimination, etc.)	
Hydrogenation, Lindlar's, Reaction of an Alkyne with Na in NH ₂	Chapter 17
Addition of a Peroxyacid to an Alkene	Chapter 17
Ozonolysis	Chapter 17
Radical-Based Reactions of Alkanes	Chapter 17
Wolff-Kishner Reduction	Chapter 17

Functional Groups Covered in Organic Chemistry Textbooks	Where Those Same Functional Groups are Covered in <i>Understanding Organic Chemistry</i>
Alcohols	Chapter 13
Alkanes	Chapter 17
Alkenes	Chapters 6, 7, 8 and 9
Alkyl Halides	Chapter 13
Alkynes	Chapters 7, 8 and 9
Amines	Chapter 13
Aromatic Compounds	Chapters 10 and 12
Carbonyl Compounds	Chapters 11 and 12
Epoxides	Chapter 13
Ethers	Chapter 13
Thioesters	Chapter 13