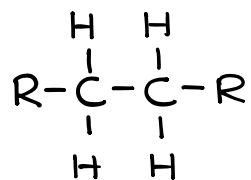
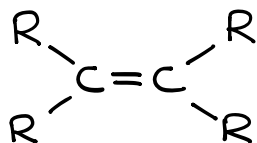


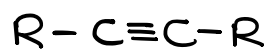
MUST-KNOW FUNCTIONAL GROUPS



alkane



alkene



alkyne



arene / benzene



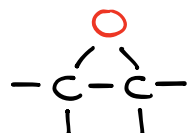
haloalkane



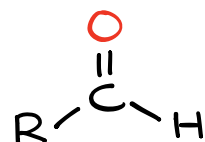
alcohol



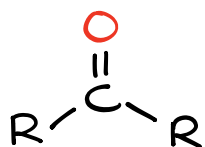
ether



epoxide



aldehyde



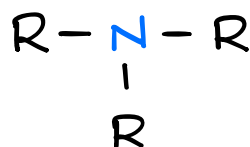
ketone



thiol



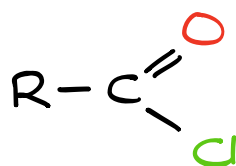
sulfide



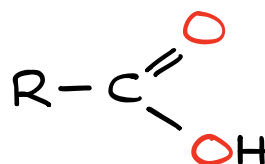
amine



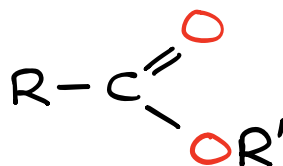
nitrile



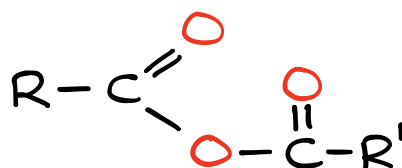
acid
halide



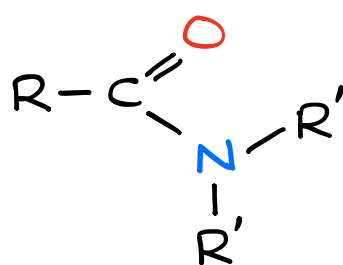
carboxylic
acid



ester



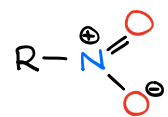
anhydride



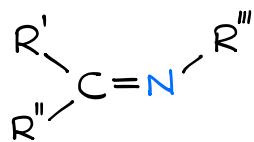
amide

OTHER NOTEWORTHY FUNCTIONAL GROUPS

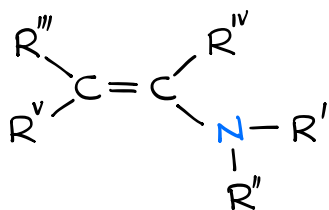
You are likely to encounter these functional groups in your course, however, you're probably won't have to give the IUPAC names to any molecules containing these functional groups.



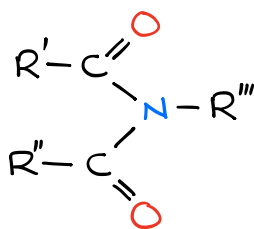
Nitro



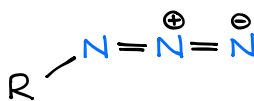
Imine



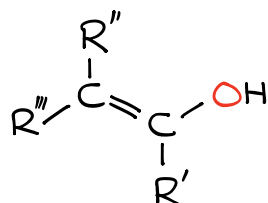
Enamine



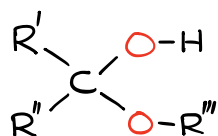
Imide



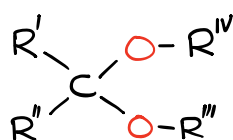
Azide



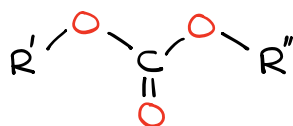
Enol



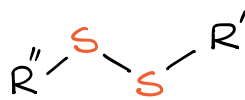
Hemiacetal



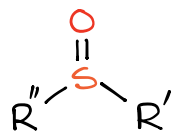
Acetal



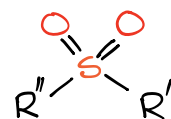
Carbonate



Disulfide



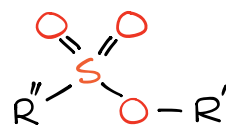
Sulfoxide



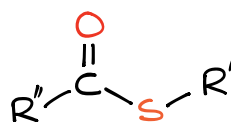
Sulfone



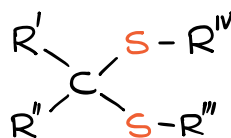
Sulfonic Acid



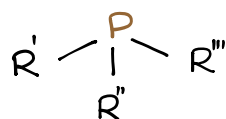
Sulfonate Ester



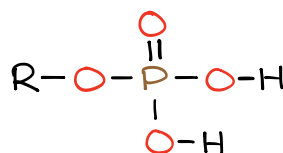
Thioester



Thioacetal



Phosphine



Phosphate Ester

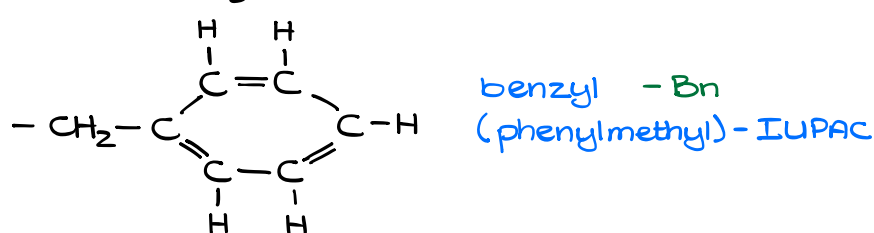
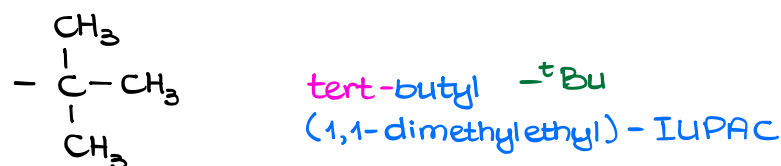
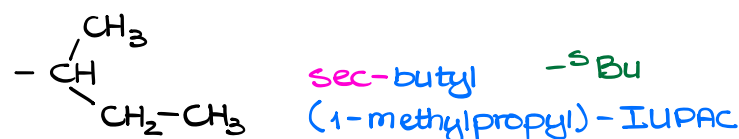
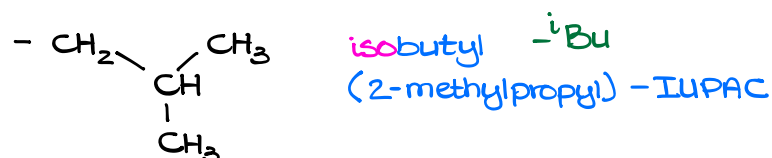
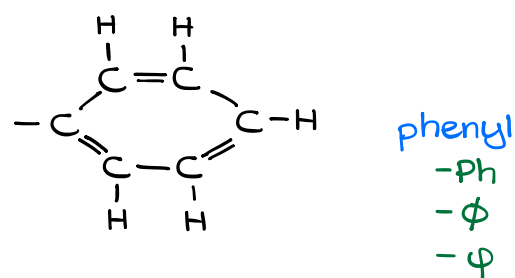
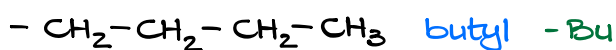
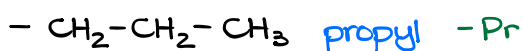
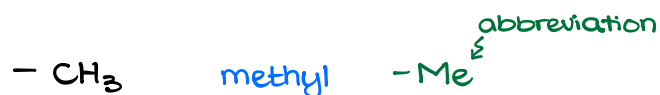
FUNCTIONAL GROUPS SENIORITY RULES

Adapted from IUPAC 2013 Recommendations, Rule P-41

1	Carboxylic Acids Highest seniority	$\text{R}-\overset{\text{O}}{\parallel}{\text{C}}-\text{O}-\text{H}$	alkanoic acid	
2	Acid Anhydrides	$\text{R}-\overset{\text{O}}{\parallel}{\text{C}}-\text{O}-\overset{\text{O}}{\parallel}{\text{C}}-\text{R}$	alkanoic anhydride	
3	Esters	$\text{R}-\overset{\text{O}}{\parallel}{\text{C}}-\text{O}-\text{R}'$	alkyl alkanoate	
4	Acid Halides	$\text{R}-\overset{\text{O}}{\parallel}{\text{C}}-\text{Cl}$	alkanoyl chloride	
5	Amides	$\text{R}-\overset{\text{O}}{\parallel}{\text{C}}-\text{NH}_2$	alkanamide	
6	Nitriles	$\text{R}-\text{C}\equiv\text{N}$	alkanonitrile	
7	Aldehydes	$\text{R}-\overset{\text{O}}{\parallel}{\text{C}}-\text{H}$	alkanal	} oxo- prefix form
8	Ketones	$\text{R}-\overset{\text{O}}{\parallel}{\text{C}}-\text{R}'$	alkanone	
9	Alcohols	$\text{R}-\text{OH}$	alkanol	hydroxy- prefix form
10	Thiols	$\text{R}-\text{SH}$	alkanethiol	mercapto- prefix form
11	Amines	$\text{R}-\text{NH}_2$	alkanamine	amino- prefix form
12	Alkenes & Alkynes	$\text{R}_2\text{C}=\text{C}(\text{R})_2$	alkene	$\text{R}-\text{C}\equiv\text{C}-\text{R}$ alkyne
13	Alkyl chains & halides Lowest seniority, Use alphabetic order	R	alkyl	$-\text{F}$ fluoro- $-\text{Cl}$ chloro- $-\text{Br}$ bromo- $-\text{I}$ iodo-

MUST-KNOW COMMON GROUP NAMES

Hydrocarbon Groups (only contain C & H)



Other Common Abbreviations & Common Groups

