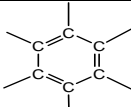
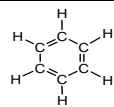

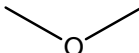

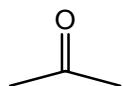
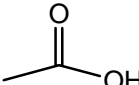
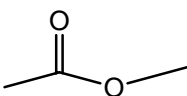
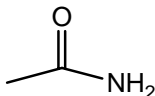


**CHEM 321: Organic Chemistry Functional Groups, Examples, and IUPAC Endings**

Class	Functional Group (lines lacking atoms at one end are assumed to be connected to an unspecified atom)	Example of an expanded structural formula	Example of a line drawing	IUPAC ending
Alkane	$\text{—CH}_3$	$\begin{array}{c} \text{H} \quad \text{H} \\   \quad   \\ \text{H—C—C—H} \\   \quad   \\ \text{H} \quad \text{H} \end{array}$	$\text{—}$	-ane
Alkene	$\text{C}=\text{C}$	$\begin{array}{c} \text{H} \quad \quad \text{H} \\ \diagdown \quad \diagup \\ \text{C}=\text{C} \\ \diagup \quad \diagdown \\ \text{H} \quad \quad \text{H} \end{array}$	$\text{=}$	-ene
Alkyne	$\text{—C}\equiv\text{C—}$	$\text{H—C}\equiv\text{C—H}$	$\text{}\equiv\text{}$	-yne
Aromatic				-benzene
Alcohol	$\text{—C—O—H}$	$\begin{array}{c} \text{H} \\   \\ \text{H—C—O—H} \\   \\ \text{H} \end{array}$	$\text{—OH}$	-ol
Ether	$\text{—C—O—C—}$	$\begin{array}{c} \text{H} \quad \quad \text{H} \\   \quad \quad   \\ \text{H—C—O—C—H} \\   \quad \quad   \\ \text{H} \quad \quad \text{H} \end{array}$		-ether
Amine	$\text{—C—N—}$	$\begin{array}{c} \text{H} \\   \\ \text{H—C—N—H} \\   \\ \text{H} \end{array}$	$\text{—NH}_2$	-amine
Thiol	$\text{—C—S—H}$	$\begin{array}{c} \text{H} \\   \\ \text{H—C—S—H} \\   \\ \text{H} \end{array}$	$\text{—SH}$	-thiol
Aldehyde	$\text{—C(=O)H}$	$\begin{array}{c} \text{O} \\    \\ \text{H—C—C—H} \\   \\ \text{H} \end{array}$		-al
Ketone	$\text{—C(=O)—C—}$	$\begin{array}{c} \text{O} \\    \\ \text{H—C—C—C—H} \\   \quad   \\ \text{H} \quad \text{H} \end{array}$		-one
Carboxylic Acid	$\text{—C(=O)OH}$	$\begin{array}{c} \text{O} \\    \\ \text{H—C—C—O—H} \\   \\ \text{H} \end{array}$		-ic acid
Nitrile	$\text{—C}\equiv\text{N}$	$\begin{array}{c} \text{H} \\   \\ \text{H—C—C}\equiv\text{N} \\   \\ \text{H} \end{array}$	$\text{—}\equiv\text{N}$	-nitrile
Ester	$\text{—C(=O)OC—}$	$\begin{array}{c} \text{O} \\    \\ \text{H—C—C—O—C—H} \\   \quad   \\ \text{H} \quad \text{H} \end{array}$		-ate
Amide	$\text{—C(=O)N—}$	$\begin{array}{c} \text{O} \\    \\ \text{H—C—C—N—H} \\   \\ \text{H} \end{array}$		-amide