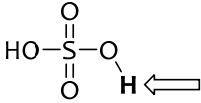
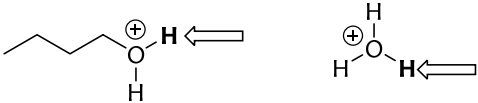
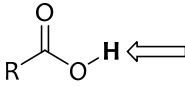
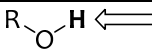
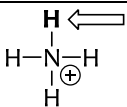
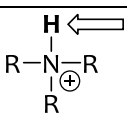
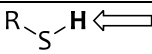
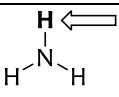
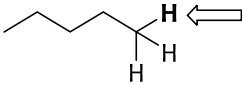
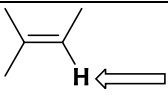
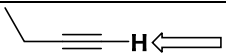
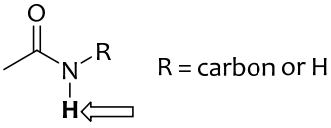
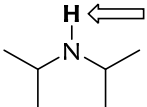
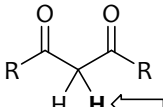
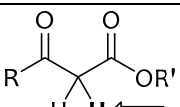
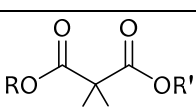
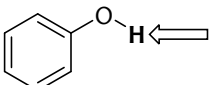
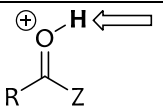
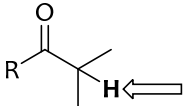
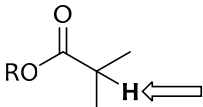


The list below represents the important pKa values for Chem 233. Keep in mind that the **EXACT** number is not important, you should know the **APPROXIMATE** range. **UPDATES MAY OCCUR DURING TERM**

Entry	Functional Group	General Structure (R=alkyl unless indicated otherwise)	Approximate pKa value	Memorize For MT??
1	Sulfuric acid		-9	MT 1
2	Hydrochloric acid	H-Cl	-7	MT 1
3	Hydronium ion & Protonated alcohols		-2	MT 1
4	Carboxylic acids		5	MT 1
5	Alcohol & Water		16	MT 1
6	Ammonium ion		9	MT 1
7	Protonated amines		11	MT 1
8	Thiol		10	MT 1
9	Amine		33	MT 1
10	Alkane		50	MT 1
11	Alkene		44	MT 1
12	Alkyne		25	MT 1
13	Amide		15	To be announced (TBA)

14	Diisopropylamine		37	TBA
15	β -Diketone (R = carbon)		10	TBA
16	β -Ketoester (R = carbon)		12	TBA
17	Malonate Ester (R = carbon)		14	TBA
18	Phenol		9	TBA
19	Protonated Carbonyl Group Z = H, C, OR, NH ₂ , NHR, NR ₂		-5	TBA
20	Ketone		20	TBA
21	Ester		25	TBA