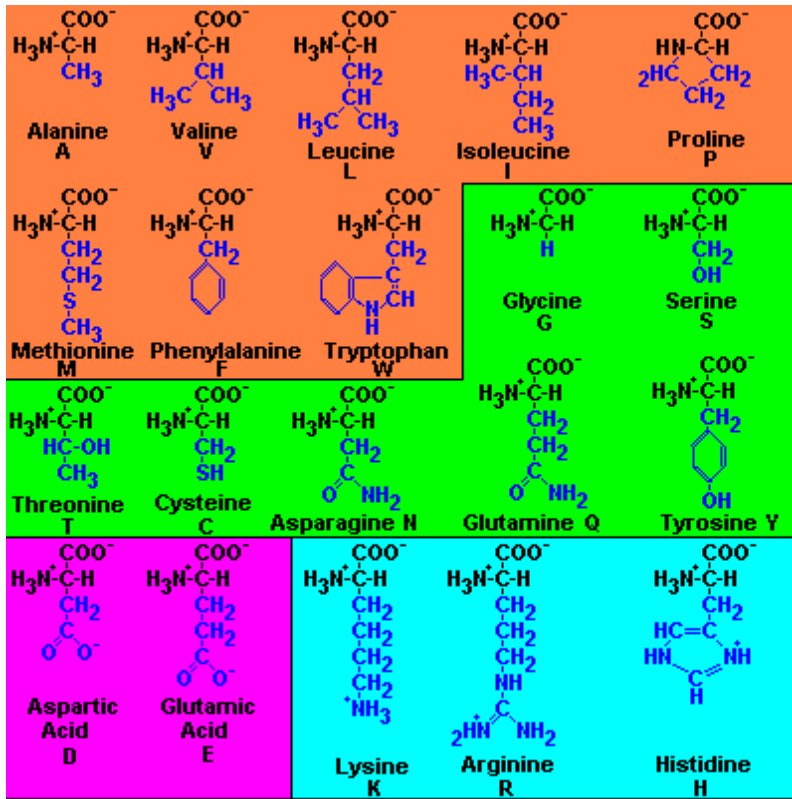


# The Twenty Common Amino Acids



Each amino acid contains an "amine" group ( $\text{NH}_3$ ) and a "carboxy" group ( $\text{COOH}$ ) (shown in black in the diagram).

The amino acids vary in their side chains (indicated in blue in the diagram).

The eight amino acids in the orange area are nonpolar and hydrophobic.

The other amino acids are polar and hydrophilic ("water loving").

The two amino acids in the magenta box are acidic ("carboxy" group in the side chain).

The three amino acids in the light blue box are basic ("amine" group in the side chain).

Codon Table

First	U	C	A	G	Last
U	Phe	Ser	Tyr	Cys	U
	Phe	Ser	Tyr	Cys	C
	Leu	Ser	Stop (Ochre)	Stop (Umber)	A
	Leu	Ser	Stop (Amber)	Trp	G
C	Leu	Pro	His	Arg	U
	Leu	Pro	His	Arg	C
	Leu	Pro	Gln	Arg	A
	Leu	Pro	Gln	Arg	G
A	Ile	Thr	Asn	Ser	U
	Ile	Thr	Asn	Ser	C
	Ile	Thr	Lys	Arg	A
	Met	Thr	Lys	Arg	G
G	Val	Ala	Asp	Gly	U
	Val	Ala	Asp	Gly	C
	Val	Ala	Glu	Gly	A
	Val	Ala	Glu	Gly	G