

## CHM 100: How to determine the name of a binary molecular compound.

### IDENTIFY THE MORE METALLIC AND LESS METALLIC ELEMENT

Binary molecular compounds consist of two elements. The more metallic element is written first. Generally, the more metallic the element is, the further to the left on the periodic table it will appear.

Here are some common elements arranged from more metallic to less metallic (from p135 in your text): Si C P N  
H Se S I Br Cl O F

#### NAME THE FIRST ELEMENT (MORE METALLIC)

Use the name of the first element with a Greek prefix to indicate how many atoms of this element are present.

Don't use the "mono-" prefix for the first element if there is only one atom of this element in the molecule.

#### NAME THE SECOND ELEMENT (LESS METALLIC)

Use the *stem name* of the element plus "-ide", then add a Greek prefix to indicate how many atoms of this element are present.

*Do* use the "mono-" prefix if only one atom of the second element is present.

### NAME THE COMPOUND

The compound is named with the more metallic element first and the less metallic element second.

Examples:

- CO = carbon monoxide; CO<sub>2</sub> = carbon dioxide
- N<sub>2</sub>O<sub>5</sub> = dinitrogen pentoxide; SF<sub>6</sub> = sulfur hexafluoride
- Cl<sub>2</sub>O<sub>7</sub> = dichlorine heptoxide

### GREEK PREFIXES

<i>Prefix</i>	<i>Number</i>
mono-	1
di-	2
tri-	3
tetra-	4
penta-	5
hexa-	6
hepta-	7
octa-	8

