

Chemistry Drawing and Molecular Modeling Software for Organic Chemistry. Here's What's Free (mostly) and Useful.

It's time you have a Chemistry Drawing program for your computer! Below you will find lots of options for downloading and installing software on your computer that will enable you to draw Organic Chemistry structures and reactions – very useful for reports and any chemistry related document. The first one in the list, Chemdoodle, is free. Others options are listed below. To practice, at the end of this document is a diagram to “reproduce” with the program. Turn this in when it is due!

Also, we have started using Spartan Student (v7) in Chem 12A and 12B laboratory. For a substantial discount you can get a copy of the program. See below

ChemDoodle (now free!)

A very robust drawing program that works on every type of computer (Mac, PC, and Linux). Laney Chemistry now has a license to offer to all our students for free. All you need to do is go to the following link and request a code – you must use your Peralta assigned e-mail to do this (the one ending in @peralta.edu or @cc.peralta.edu).

<https://www.chemdoodle.com/request-site-code/>

Other Software – the products below all do the same thing, but have different interfaces and features – some are free, others are not.

Chem Sketch

Although it works only on Windows based machines, the following link is to an excellent software package that comes with ChemSketch, a 3D Viewer, can produce IUPAC names from small structures, and more and it's free:

<http://www.acdlabs.com/resources/freeware/chemsketch/>

Marvin Sketch

Another very powerful program and works on all platforms and it's free. You just have to register and then log in. Get the suite of products called Marvin Beans (Marvin Sketch comes with it) at the following link:

<https://www.chemaxon.com/download/marvin-suite/#mbeans>

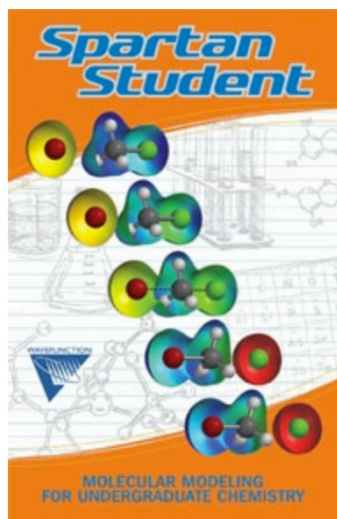
ChemDraw

ChemDraw is the “cream of the crop” when it comes to chemistry drawing programs. It has been the most commonly used program for producing structures since it first appeared in 1987, coincident with the introduction of the Macintosh. Now it comes in all versions. Get the two-week trial version or if money is no option, get your own permanent copy, straight from the source:

<http://www.cambridgesoft.com/software/overview.aspx>

Spartan Student (v7)

Visit the following website and download the student version. Click at [this link](https://store.wavefun.com/product_p/spstudent.htm).
(or copy this address into your browser - https://store.wavefun.com/product_p/spstudent.htm)
Use discount code "LANEY25" to get the \$25 discounted price.



The Assignment – Try to reproduce the following reaction scheme:

(10 points)

Note the special characters (\pm and α) and the formatting of the text (italics, subscripts, etc). Also, try to find the correct arrows, lone pairs of electrons, and the "bracket." Try to find the "box" tool – it doesn't have to be shaded like below. Also, look for the features of the program you are using to make nice graphic images, like TIFF or JPEG files that you can "insert" into a word processing program (like Word).

