It is best if you have 20GB free on your laptop (4.5GB for the `.ova` file and then 12GB for the VM it will be expanded into plus some extra just in case). I am assuming you have basic ability to navigate on a command line. If not, read the first two chapters of this tutorial: `http://www.linuxcommand.org/lc3_learning_the_shell.php`.

1. Install VirtualBox: `https://www.virtualbox.org/`
2. Download `http://129.49.83.188/CompLingLab_Full.ova`
3. Import `ComplingLab_Full` into VirtualBox (double-click icon and accept default settings). The password is "student".
4. Download the following and move them to your desktop

   OpenFst: `http://www.openfst.org/twiki/pub/FST/FstDownload/openfst-1.6.9.tar.gz`

   Pynini: `http://www.openfst.org/twiki/pub/GRM/PyniniDownload/pynini-2.0.0.tar.gz`

   Re2: `https://github.com/google/re2/archive/master.zip`
5. Extract the files (double-click icons). In each folder the README explains how to install the software. The following steps should work.
6. Install `openfst`
   (a) Open a terminal window. Change directories to `Desktop/openfst-1.6.9`.
   (b) `sudo ./configure --enable-grm`
   (c) `sudo make`
   (d) `sudo make install`
   (e) This takes some time!
7. Install `re2`
   (a) Change directories to `Desktop/re2-master`.
   (b) `sudo make`
   (c) `sudo make test`
   (d) `sudo make install`
   (e) `sudo make testinstall`
   (f) `sudo ldconfig` (this helps the OS discover where the new shared libraries are)
8. Install `pynini`
   (a) Install the development files: `sudo apt-get install python-dev`
   (b) Change directories to `Desktop/pynini-2.0.0`.
   (c) `sudo python setup.py install`
   (d) This takes a lot of time. While waiting read this tutorial 2-3 times `http://www.linuxcommand.org/`.
   (e) `sudo python setup.py test`
9. Read `pynini.pdf`, start python by typing `python`, and experiment!
   `>>> import pynini`