

Workshop on Scientific Computing

James D Emery

1/27/2010

Contents

1	The Place	1
2	The Time	1
3	The Activity: Scientific Programming, Calculating, and Writing	2
4	The Book.	2
5	Setting Up the Tools	2

1 The Place

The CCKC Cave in the Kansas City Underground. Entrance 31st and Mercier. Down the elevator 10 stories, turn to the left, walk 30 paces.

2 The Time

7PM every Wednesday.

3 The Activity: Scientific Programming, Calculating, and Writing

Help with the problems and the software. Help with software installation. Brief talks, and How To Do It. Numerical Analysis. Science problems.

4 The Book.

<http://www.stem2.org/je/scprog.pdf>

There is some information on where to locate programs for download if you can't find them with Google.

5 Setting Up the Tools

We are now using the Python language, a set of utility programs for plotting and graphics, and a version of LaTeX for writing.

Computers: PC running Windows or Linux, Mac Running MacOSX.

Current setup:

On windows:

Open a command line window: start, run, type cmd in box, type ok.
create five directories:

`c:\bin`, `c:\txt`, `c:\py`, `c:\latex`, and `c:\tmp`

Download Python 2.6 and install. Download notepad++, download MikTeX 2.7 or 2.8, Download winedt. From the stem2 website:

<http://www.stem2.org>

Go to Documents and software, then go to software. Download the file `txt.zip`, and unzip it into your `txt` directory. Download `py.zip` and unzip it to the `py` directory. Download `win.zip` and unzip it to the `bin` directory. Download `latex.zip` and unzip it to `latex` directory. If you need a zip utility there is an old version of `winzip` at the stem2 website. When you install Python 2.6 it will create a directory `python2.6`, where the executables are placed. So add the following to the front of your path variable.

```
c:/bin;c:/python26
```

If you don't know how to do this look it up in the book

<http://www.stem2.org/je/scprog.pdf>

On Linux or Mac,

Create the same directories as for windows, but off of your home directory rather than off of c: as in windows. Download linux.zip or mac.zip in place of bin.zip and unzip it to the bin directory. On Linux install tex and latex if it is not already installed. Do the same for mac. The files in py.zip and perhaps txt.zip might have the windows end of record crlf combination. If you come down to the workshop we can load these with ftp, which will do the end of record conversion atomatically. Otherwise check this with my utility program recend. Get rid of the cr if necessary using delcr. Now as of this I have compiled now a few programs on the respective unix boxes. Make sure that the bin directory occurs in the path list. If not add it in the local .profile directory.