

Physics 598 CPA

Required Book and Software

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1 Required Book, Software

1.1 Book

Numerical Recipes (NR) is the only required text for this course. The latest edition of NR (3rd edition) is available only in C++. However, if you are more comfortable with C, FORTRAN 90, or FORTRAN 77, previous versions of the text can be obtained in these languages, and should work perfectly well for this course. You have several different options for obtaining the text. Through the Numerical Recipes website (www.nr.com), you may purchase a subscription to “Numerical Recipes Electronic”, an online version of the latest text, or you can access the second edition versions of NR in C, Fortran 77, and Fortran 90 for free. You may also choose to purchase a hardcopy of NR (see Section 1.3 for details).

1.2 Software

Numerical Recipes software and some type of plotting software is required for this course. Any type of plotting software is acceptable, as long as you can use it to print easy-to-read plots. Students in the past have used gnuplot, SuperMango (sm), Microsoft Excel, matplotlib, grace, and others.

1.3 Purchasing Numerical Recipes Software/Book

You will need to purchase access to the Numerical Recipes software. There are many different options for purchasing Numerical Recipes. The best way to explore the different options is to visit the Numerical Recipes website (www.nr.com). You may also purchase the book from the U of I Bookstore or Amazon.

2 Computer Accounts

If you wish, you may use your own software and computer for this course. However, the Engineering College manages workstations and servers for your use.

2.1 Engineering Workstation (EWS) Accounts:

The UIUC College of Engineering provides several UNIX/Linux-based computer clusters for engineering/physics students. For information on setting up an EWS account, EWS computer cluster locations, etc., visit the following URL:

<http://it.engineering.illinois.edu/ews/>

The **gnuplot** software plotting package should be installed on each EWS workstation. However, you will need to use your own copy of the Numerical Recipes software. Contact the TA (rchambe2@illinois.edu) if you run into any trouble.