

Methods of Applied Mathematics Work List

Throughout the program you will be asked to complete a variety of different types of work that will be assessed as part of your evaluation. So that you know what to expect at the outset, these are listed below. You should budget about forty hours a week for program work (including time spent in the classroom).

Homework

Homework is an extremely important part of learning this material. There will be homework assignments each week in differential equations, linear algebra and multivariable calculus. You can expect to spend roughly four hours per assignment. The homework will be assessed for completeness and effort and some questions will be corrected. After homework is returned to you please keep it in a separate section of a three ring binder as part of your portfolio.

Worksheets

In class you will occasionally break up into workshop groups to complete problems and worksheets. The work you do in groups during workshop activities will not be collected weekly for marking. However, this work will be assessed for effort and completeness at the end of each quarter. Therefore, please complete all workshop questions after class and arrange your worksheets in a separate component of a three ring binder as part of your portfolio.

Computer Labs

We will be working frequently in the computer lab using Mathematica® and other software to model mathematical problems. There will be time to spend on the assigned activities in class, but for most lab worksheets you will need to spend additional time outside of class to complete them. Please answer all questions in the lab worksheet and keep this work in your portfolio.

Tests

There will be a total of three tests per quarter for each subject. There will be both in-class and take home tests. Missed in-class tests or late take-home tests will result in loss of credit unless prior arrangements have been made with me to complete the tests at an alternative time.

Presentations

Each student will complete two presentations per quarter; one on applications of linear algebra, and one on a partial differential equations lab. The presentations will be given in pairs and will be assessed by your peers. For each presentation students should individually submit a two page paper about the topic they presented.

Seminars

We will have seminars each Monday on readings from the seminar text. Each student is expected to come class having completed the reading and being prepared to discuss it. For each seminar bring a typed paragraph that addresses a question that arose from the reading that you would like to discuss with the class.

Weekly Journal Entry

At the end of each week we will ask you to reflect on your technical and conceptual learning and your work in progress. These entries should be collected in a separate section of your three ring binder.