PROJECT GUIDELINES

REQUIREMENTS FOR A PROJECT REPORT

A project report should consist of the following components:

   1. Introduction. Include background, description/graphs of available data, problem description, questions to be addressed. Use non-technical terms.
   2. Formulation of the mathematical model. List variables/parameters, assumptions, restrictions, and justify the development of the equations.
   3. **Solution of the problem.** Outline of the mathematical methods used to solve the model. Details such as complicated computations or numerical code should be provided in appendices.
   4. Interpretation of results.   Answer the questions posed in the introduction, summarize major findings. Use non-technical terms.
   5. Critique of the model. Does the model satisfactorily answer the questions posed? Discuss the limitations of the model, possibilities to improve the model, etc. Think ahead, what would you like to do if you had more time.
   6. Appendices with supporting materials. Include a copy of any code used, details of calculations, etc.

The project reports will be evaluated based on the quality of:
   • Background information and problem description
   • Formulation and sophistication of the mathematical model
   • Appropriateness and depth of the methods used to solve it
   • Interpretation of the results in non technical terms
   • Critique of the model and suggestions of further studies

REQUIREMENTS FOR THE PROJECT PRESENTATION

The purpose of the project presentation is to develop skills to communicate modelling results effectively and efficiently in a short amount of time (20 min). Presentations should be prepared for an audience that is not familiar with the project (think about how you would explain your project to your friends or parents).

The project presentation should consist of the following components:

   1. Statement of the problem. What are the questions to be answered? Use plain language, non-technical terms. Give some background.
   2. Description of the model.   What are the major assumptions? How is the problem translated into equations?

3. Outline of the mathematical methods used to solve the model. Give enough details to demonstrate to the audience that you know what you are doing, but not so much to put the audience to sleep!

4. Interpretation of the results. Use plain language, non-technical terms. Make sure that the questions posed at the beginning have been answered. Give some intuition as to why your solution is correct. Discuss the limitations of your solution, possible improvements to the model.

To make effective use of time and your audience's attention, make use of pictures (graphs, schematics, flow diagrams) as much as you can (a picture is worth a thousand words!).

Presentations should be prepared with overhead transparencies, or in electronic format (powerpoint file or pdf file).

Each project presentation will be followed by a brief questions-and-answer period during which members of the audience will ask questions.

Presentations will be evaluated based on the following criteria:

   * Statement of the problem.
   * Description of the model.
   * Appropriateness of the model.
   * Explanation of the mathematical methods used to solve the model.
   * Interpretation of the results.
   * Overall clarity of the presentation.