**CSC 3111 Operations Research**

(a) Description

The course is to introduce students to the broad concepts of operations research. Students will learn how to interpreted and analyze OR problems, formulate them as problems and use existing techniques to solve them.

(b) Aims

The aim of the course is to improve students’ problem solving skills by subjecting them to real life problems and guide them through formulation of their solutions. The choice of the cases chosen depends on their applicability in real life computing environment.

(c) Learning outcomes

By the end of the course, the student should be able to

*•* Correctly formalize real life problems into OR problems

*•* Adequately solve typical OR problems

*•* Make post optimality analysis on OR solutions

(d) Teaching and Learning Pattern Teaching will be in form of lectures and

Tutorials

(e) Indicative Content

*•* Linear programming

*•* Network Analysis

*•* Decision trees

*•* Markov processes

(g) Assessment method Assessment will be by assignments and tests (40%)

and final written exam (60%)

(h) Reading lists

(i) Linear Programming and Network Flows by Mokhtar S. Bazaraa, John J Jarvis and Hanif D Sherali, John Wiley, 2005

(ii) Operations Research: Applications and Algorithms by Wayne L.

Winston. Wadsworth Publishing Company, 1997