This course provides an introduction to computer-based models for decision making. The emphasis is on models that are widely used in diverse industries and functional areas, including finance, accounting, operations, and marketing. Applications will include production planning, supply chain management, portfolio optimization, corporate risk management, and yield management, among others.

The aim of the course is to help students become intelligent consumers of these methods. To this end, the course will cover the basic elements of modeling - how to formulate a model and how to use and interpret the information a model produces. The course will attempt to instill a critical viewpoint towards decision models, recognizing that they are powerful but limited tools.

The applicability and usage of computer-based models have increased dramatically in recent years, due to the extraordinary improvements in computer, information and communication technologies, including not just hardware but also model-solution techniques and user interfaces. Twenty years ago working with a model meant using an expensive mainframe computer, learning a complex programming language and struggling to compile data by hand; the entire process was clearly marked "experts only". The rise of personal computers and, friendly interfaces such as spreadsheets and large data bases has made modeling far more accessible to managers. Information has come to e recognized as critical resource, and models play a key role in deploying this resource, in organizing and structuring information so that it can be used productively.

Texts: Optional readings book

Course Work: Homework assignments will be handed out during the course. Homeworks are individual assignments, and are assigned as practice for the mid-term & final exams. There will also be a case study to be done in groups of five or less. There will be a mid-term and a final as well. Final grades will be computed by weighting the homeworks 40%, the midterm 30% and the final 30%.