

QuantMethods™

Quantitative Methods Software© (QMS)

The interactive way to optimize.

Introducing

For the first time ever . . . the ONLY model-based optimization software with a browser interface that operates on the PC, Macintosh and UNIX environments . . . Quantitative Methods Software© (QMS) from QuantMethods™. QMS was developed specifically to support instruction for introductory college courses in Management Science, Operations Research and Decision Science.

The software has multiple licensing options: it can be licensed to run on a standalone workstation, it can be licensed to run on a departmental server, or it can be licensed on a six-month subscription basis from www.quantmethods.com – no installation necessary. An industry first!

Platforms supported

QMS Version 1.0.0 will run on practically any operating system that supports a Java Virtual Machine (JVM), including Microsoft Windows® and variants, Apple Macintosh®, and a variety of UNIX platforms. The QMS user interface uses your familiar Internet browser application, and should be compatible with both Microsoft Internet Explorer (Version 4.0+) and Netscape Navigator (Version 4.0+).

Features

QMS is intuitive and easy-to-use, since the user interface is a browser application. When used on a subscription basis no installation is required; simply point your browser to the website, provide your authentication credentials (user id and password), and start entering and solving problems. If you purchase a license and install the software you have the advantage of being able to use the software even when not connected to the Internet. Either way the software has all of the features that you would expect in a world class decision science modeling tool.



Contact

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- ✓ Ease of **ENTERING** and **MODIFYING** problems.
- ✓ Completely **MENU DRIVEN** operation.
- ✓ Context-specific **ONLINE MANUAL** with hyperlinked help throughout.
- ✓ **STATUS MESSAGES** to keep you informed of progress.
- ✓ **SOLVE OPTIONS** to direct how much and what kind of solution output is generated.
- ✓ **ALERT MESSAGES** for errors or warnings.
- ✓ Student-friendly **MANUAL**, with explicit numerical **EXAMPLES** for every module, and **INPUT** and **OUTPUT** displayed **ON SCREEN** and in the manual.
- ✓ **GRAPHICAL OUTPUT** for many of the models.
- ✓ Ability to solve a problem using **DIFFERENT MODELS** without the need to re-enter the problem.

Functions

QMS release version 1.0 contains modules for the most frequently taught mathematical models used in Management Science quantitative decision making at an introductory level. The modules include:

Mathematical Programming Models

- Linear Programming
- Integer Linear Programming
- Assignment
- Transportation

Network Models

- CPM/PERT
- Minimal Spanning Tree
- Shortest Path
- Maximum Flow/Minimum Cut
- Traveling Sales Rep

Forecasting Models

- Averaging
- Linear Regression

Inventory and Production Models

- Economic Order Quantity with Discounts
- Economic Order Quantity with Stockouts
- Economic Production Lot Size

Dynamic Programming Models

- Knapsack
- Stagecoach
- Production Planning

Decision Theory Models

- Decision Analysis

Queueing System Models

- Queues

Finite Markov Chain Models

- Markov Chains

Learning Curve Models

- Learning Curves

Simulation Models

- Queueing
- Inventory

Upcoming for release 2.0

Release version 2.0, coming Q4 2004, is focused on Production Operations Management and will include:

- Breakeven Analysis**
- Location Analysis**
- Layout Analysis**
- Materials Requirements Planning**
- Quality Control & Six Sigma**
- Production Scheduling**
- Line Balancing**