OMGT 4853
Introduction to Decision Support Tools in Operations Management
Free Proficiency Exam Preparation

Course description: This course covers introductory and advanced decision support tools used in operations management including fundamentals of computers and data processing; spreadsheets; presentation methods and applications; and introduction to database concepts and applications. The primary decision support tools covered are the Microsoft Office products, specifically Excel, but also touches on using Word and PowerPoint, too. But this isn't your typical course on Microsoft Office products. This course covers primarily how the Excel functions and capabilities are applied in operations management and in the other MSOM courses.

Required Textbook: There are no required textbooks for this course. Students will be directed to various videos and instructional websites.

Students who like textbooks may find any of these optional books useful:

- Excel 2016 (Excel for Dummies). By Greg Harvey (Jun 20, 2016). ISBN-13: 978-1119293439 or ISBN-10: 111929343X.
- Excel 2016 All-in-One for Dummies. By Greg Harvey. ISBN-13: 978-1119077152 or ISBN-10: 111907715X.
- Excel 2016 Bible. By John Walkenbach (Oct 26, 2015). ISBN-13: 978-1119067511 or ISBN-10: 1119067510.
- Excel 2016 in Depth. By Bill Jelen (Nov 1, 2015). ISBN-13: 978-0789755841 or ISBN-10:078975584X.
- Microsoft Excel 2016 Step by Step. By Curtis Frye (Oct 18, 2015). ISBN-13: 978-0735698802 or ISBN-10: 0735698805.

Required Software: Students need a computer with Microsoft Excel (You will need 2016 or later) for this class. Excel 2016 is available free with your University registration; see https://techarticles.uark.edu/microsoft/office/ for details.). Versions from 2013 or earlier will not allow successful completion of this proficiency exam.

Course Goals/Objectives: The course goal is to provide entering MSOM students with the decision support tool (i.e., Microsoft Office) skills they need to succeed in the MSOM degree program.

The course goal is NOT to comprehensively teach the underlying mathematics behind complex formulas; this course will only ensure the student can program them into Excel and then copy into Word and PowerPoint. While some basic math is covered here, it is incidental to the use of Excel. Students will learn the theory and complex mathematics in their other courses.

The Proficiency Exam will be available for free to any student who wants to try to waive out of this course. The student's advisor will enroll the student into this exam. The exam will allow:

- open book
- open notes
- limited Internet sites

There is a 2 hour time limit for taking tests. ProctorU will be used while students take tests. Students must make an appointment with ProctorU prior to taking the test.

Subjects covered
✓ Basic Math (+, -, *, /)   ✓ Basic & Conditional Formatting   ✓ Functions (SUM, PRODUCT, SUMPRODUCT)   ✓ Operator Order   ✓ Relative & Absolute Referencing
✓ Maximum, Minimum & Count   ✓ The Middle: Mean, Median & Model   ✓ Spread: Variance, Standard Deviation & Range   ✓ Forecasting (Moving Averages & Weighted Averages)   ✓ Range Names
✓ Column, bar, line, and pie charts   ✓ Control charts   ✓ XY scatterplots, trend lines   ✓ Pareto charts   ✓ Histograms   ✓ Excel to PowerPoint & Word conversion
✓ Logical functions (IF, AND, OR & NOT)   ✓ Logical math (COUNTIF, SUMIF & AVERAGEIF)   ✓ Lookups (VLOOKUP, HLOOKUP & INDEX   ✓ Pivot Tables
✓ Random Number Generation (RAND & RANDBETWEEN)   ✓ Distributions (Uniform & Normal)   ✓ Monte Carlo Simulations
✓ Goal Seek   ✓ Solver   ✓ Linear Programming with Solver   ✓ Regression and Correlation   ✓ "What if" Analysis (Data Tables)
✓ Time value of money   ✓ Finance Goal Seek & Finance Solver
✓ Sorting & Filtering   ✓ Import to/export from Excel