

JULY 30-AUGUST 1



JOHNSON
Cornell University

CLASS OF 2016

QUANTITATIVE SKILLS FOR THE CORE

Summer 2014

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The Quantitative Skills for the Core (Quant Skills) course combines prerequisite online lessons with a live three-day program designed to provide students with intensive instruction in the quantitative skills they will need to succeed at Johnson. The program covers basic quantitative skills in finance, marketing, economics, statistics, and accounting.

No short course can possibly promise to provide expertise to each participating student in all of the quantitative skills required for the MBA program. Rather, the objective of the course is to improve each student's quantitative skill competence and self-awareness by doing the following:

1. Survey the principal quantitative skills required
2. Provide instruction in basic concepts for core quantitative skills
3. Illustrate concepts with guided sample problems
4. Drill concepts with problems for students to solve individually
5. Identify quantitative skill areas requiring additional self-study and support

Unlike most courses at Johnson, the emphasis in Quant Skills is on individual work rather than group work. Students are encouraged to seek assistance from the instructor and teaching assistants as needed.

Your binder contains a daily diagnostic pre-quiz that you can glance at or, at your discretion for the last two days, complete before each day's session. The pre-quiz assesses familiarity with the material to be addressed that day. Each day's sessions open with student introductions. Following introductions, mornings consist of two or three sessions of one to two hours each. We break for an hour at midday. Check the daily schedule at the end of this document for target timing.

Afternoons typically consist of two further sessions of approximately 90 minutes. We finish the day with a 30-minute diagnostic post-quiz that is virtually identical to that day's pre-quiz, with the only difference being the numerical details of each problem. Your quiz performance and the degree of improvement from the pre-quiz to post-quiz should give you a sense of where you should focus your attention following Quant Skills on further improving your quantitative skills as you begin the first-year core courses.

Each session typically follows a similar pattern. The instructor first provides an overview of the topic and relates it to the first-year core courses. The instructor then focuses attention on the specific quantitative skills for the given topic, walking the class through one or more sample problems. Students then work individually on additional problems. During this time, the instructor and teaching assistants circulate to help students.

There is no explicit homework outside the daily sessions.

In a course of this nature, it is inevitable that each student finds certain topics straightforward and others very difficult. To make the most of the experience, you are encouraged to personalize the course as needed, focusing your attention during the individual problem solving sessions on the material where you believe you most need help.

Prerequisite Work

You are required to complete the following course lessons in the online MBA Math course at www.mbamath.com before the Quant Skills course. The Johnson School purchased an MBA Math subscription for each incoming student.

Excel: Excel Basics

Finance: Time Value of Money (Compound Interest, Present and Future Value) Annual Period

Statistics: Basic Statistics

Accounting: Balance I (Balance Sheet Basics)

Accounting: Balance II (Intermediate Balance Sheet)

Accounting: Income (Income Statement Basics)

Accounting: Cash Flow (Statement of Cash Flows Basics)

Most other Quant Skills lessons are also covered in the MBA Math online course. You may find it helpful to use the online course to reinforce your understanding of material that does not sink in during class.

Microsoft Excel

Finance lessons will use Microsoft Excel. The prerequisite online Excel Basics lesson will be assumed knowledge.

Financial Calculator

We know that students may arrive on campus with a variety of financial calculator models. The important features required for MBA classes are time value of money (present value, rate, number of periods, and future value), logarithms, and exponents. We do not teach solution methods using financial calculators in Quant Skills. Your core finance class will focus on spreadsheets rather than financial calculators. If you wish to use a financial calculator for Quant Skills then you are responsible for bringing one to class and for learning in advance how to use the important features listed above. You can learn these techniques by working through your calculator's user manual. Note that manuals can be downloaded via the internet. Financial calculator solutions for the HP 12c are provided as part of the MBA Math exercise solutions at www.mbamath.com.

Laptops and Electronic Devices

Bring your laptop to class on Wednesday and Thursday. You will not need laptops on Friday. To avoid distracting classmates, do not use laptops or other electronic devices in the classroom except during breaks.

Attendance

Each student is expected to attend all class sessions. If an absence is unavoidable, please notify the MBA Program Office in advance. Please discuss with the instructor if you believe that you should skip a session given previous experience with a topic.

Teaching Assistants

Teaching assistants are introduced on the first day.

Evaluation

There is no formal grading of this course. The diagnostic quizzes provide you with a sense of your quantitative skill base so that you can do targeted individual work using the course materials and seek support from the MBA Program Office as appropriate. Quizzes are not collected. Solutions are distributed at the end of each day so that students can evaluate their own work.

Course Materials

The course materials consist of the pre-quizzes and problem session documents in your binder and daily handouts for post-quizzes and quiz solutions.

For each session, your binder contains two documents: the session problems alone and the session problems with solutions. **You are strongly discouraged from referring to the solution documents before you have first worked the problems on your own.**

QUANTITATIVE SKILLS FOR THE CORE
2014 DAILY PLAN SUMMARY
(DRAFT AS OF JULY 23, SUBJECT TO MODEST CHANGE)

Wednesday, July 30

8:15 – 8:45	Check in/pick up materials
8:45 – 9:10	Course Introduction
9:10 – 9:30	Student Introductions
9:30 – 11:00	Compound Interest, Present and Future Value (Sub-Annual Period)
11:00 – 12:30	Annuities and Perpetuities (Constant)
12:30 – 1:30	<i>Lunch</i>
1:30 – 3:15	Bonds
3:15 – 4:30	Net Present Value
4:30 – 5:00	Diagnostic Post-Quiz

Thursday, July 31

8:30 – 8:50	Student Introductions
8:50 – 10:15	Basic Marketing Math
10:15 – 11:30	Marginal Analysis
11:30 – 12:30	Estimation
12:30 – 1:30	<i>Lunch</i>
1:30 – 3:00	Covariance and Linear Combinations
3:00 – 4:30	Linear Regression
4:30 – 5:00	Diagnostic Post-Quiz

Friday, August 1

8:30 – 8:50	Student Introductions
8:50 – 10:15	T-Accounts and Journals
10:15 – 12:00	Revenue Recognition and Expense Matching
12:00 – 1:00	<i>Lunch</i>
1:00 – 1:30	Teaching Assistant Q&A
1:30 – 2:45	Financial Ratio Analysis
2:45 – 4:00	Wrap Up Session: Credit Crisis
4:00 – 4:15	Course Evaluations
4:15 – 4:30	Closing Comments
4:30 – 5:00	Diagnostic Post-Quiz
5:00 – 6:30	Reception (location to be announced)