Introduction

K516 is a course in using data to make better decisions. Employing some fairly advanced computer analysis techniques, we will explore ways to use Monte Carlo simulation models to quantify important aspects of business decisions.

The analysis and models will use Microsoft Excel as the basic vehicle. “Add-in” applications are available which extend the spreadsheet’s capabilities. However, since these add-ins are expensive to purchase outside the classroom, you may not have access to them after you leave the Kelley School. Therefore, we will concentrate on tricks within Excel to produce substantially the same results.

The course is conducted entirely over the internet (more details below). There are no class meetings. There are no required video conference calls or Adobe Connect sessions. From time to time I will post video tips and how-to screen captures which I narrate. But these will be posted on Canvas, so you can view them at anytime.

This is not merely a traditional “correspondence course,” though. As your instructor, I consider myself an active participant in your daily work with the K516 material. As we go along, I will offer tips and answer questions on a daily basis. And you should email me whenever you have questions.

My personal academic background includes post-graduate work in financial economics and statistics. I spent a number of years in senior management in the private sector, and I used many of the K516 techniques in my work with acquisitions valuation, business forecasting, and new product planning.

I have been on the Kelley School of Business faculty in Finance for 15 years. I look forward to working with you.
Required: The Following Four Items

Canvas: The web page in Canvas for K516 this summer is: 
https://iu.instructure.com/courses/1456876

On that K516 Canvas site, I will post the assigned readings in the Leach book, some Study Guides I have written to supplement the readings, and the assignments. I also will post occasional tips, answers to frequently asked questions, and solutions to the assignments.

To save you the trouble of checking the site repeatedly to see if anything new has been posted, I will send you an email whenever important new material has been posted to the site.

Textbook: Why Can't You Just Give Me the Number? by Patrick Leach
First edition copyright 2006

Second edition copyright 2014

Either the first edition or the second edition is acceptable.

This is an inexpensive paperback book. It's available at the campus bookstore (Barnes & Noble) on the Indianapolis campus. It's also available from Amazon.com as both a paperback and a Kindle edition. And it's in the iBooks store, if you want to put it on an iPad in that format. Of course, with the free Kindle app, you also can purchase the Kindle version from Amazon and read it on an iPad. Any of those formats will work fine for this course.

As an optional source of background, you may use the textbook from K510: Hillier and Hillier, Introduction to Management Science, McGraw-Hill Irwin, 2014. The two chapters which deal with simulation are Chapters 12 and 13. However, that book is not required for K516. It’s mostly devoted to optimization, not simulation, so it only has those two short chapters relevant to K516.

This course does not use the extra software on the CD in the Hillier book.

Excel: K516 will use Microsoft Excel for all work. Please make sure you have a recent version of Excel. You may use Excel on either a Windows machine or a Mac (personally, I use both).

The Microsoft Office software suite, including Excel, Word, PowerPoint and more is available for download at no charge at the University’s iuware website: http://iuware.iu.edu. Both the Windows version and the Mac version are available at iuware.

If you prefer to have MS Office on CD, it is available in the IU and IUPUI bookstores at the university’s Microsoft contract price, which is approximately $50 for the entire package.

K516 will not use any special additional software. Everything we do is possible with the tools and functions available in today’s Excel application.
E-mail: I will use the email address shown for you in Canvas to send messages to you.

NOTE: The email address shown for you in Canvas may not be what you expect. It usually is NOT a umail address. Check the Canvas roster to see the address I’ll be using for you.

NOTE: Important course information may be provided to you via email. It is your responsibility to check that email address regularly.

Some people prefer to forward their email from the address shown in Canvas to another email account (such as Gmail, Yahoo!, or a work email address) which they check more frequently. That is easy to do. See the instructions at http://kb.iu.edu/data/beoj.html and http://kb.iu.edu/data/berh.html.

You are encouraged to email me as much as you want with questions (or comments, too, for that matter). My email address is: jamcsmit@indiana.edu. It looks like there should be an “h” at the end of the username, but there isn’t. It’s just the eight characters.

I make an effort to respond to all email in less than 24 hours, usually in the evenings. Like most Kelley faculty, though, I teach a pretty heavy course load, even in summer. So please do not wait until the last minute before a due date to send me a question – I may not always be able to get back to you before your deadline.

NOTE: All correspondence for this course should take place via email – NOT via the “Conversation” function in Canvas.

I do NOT check Canvas for messages. If you leave me a message in Canvas, you will not get a very prompt response — probably not until the end of the semester, when I clean out that Inbox.

Homework Assignments and Teams

Homework assignments will be posted on the K516 Canvas website.

For each assignment, I will provide Excel files to get you started. You will download the files for each assignment and complete the assignment using Excel. Then submit your spreadsheets by uploading them to the page in Canvas for that assignment. For some assignments you will have two or three spreadsheet files to upload.

A total of five homework assignments will be due during the semester. Homework assignments are open book and open notes. The first assignment will be posted on Canvas on Thursday, July 2. Homework assignments are to be completed and uploaded back to Canvas on or before these due dates:

<table>
<thead>
<tr>
<th>Assignment</th>
<th>Due Date</th>
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<tbody>
<tr>
<td>Assignment 1</td>
<td>Monday, July 13</td>
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<tr>
<td>Assignment 2</td>
<td>Monday, July 20</td>
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<tr>
<td>Assignment 3</td>
<td>Monday, July 27</td>
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<td>Assignment 4</td>
<td>Monday, August 3</td>
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<tr>
<td>Assignment 5</td>
<td>Monday, August 10</td>
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</table>
Each assignment must be turned in by 11:59 p.m. on the due date, i.e., Monday night before midnight. If you will be unavoidably late with an assignment due to illness or business travel, let me know in advance of the due date and time. We’ll try to work something out. But in general, late assignments are subject to score reductions of ten percentage points per day.

Teams: You are encouraged to form teams of two or three to do the K516 homework assignments. Working in teams is not mandatory, but it seems to help. You are free to form your own teams – I will not assign teams. Also, you are free to work as an individual if you prefer. It’s entirely your choice.

Teams of four require special permission. If you think you might like to form a team of four, write me and we’ll go over a couple of considerations which apply to teams of four.

If one team member is not contributing, or if schedules are not coinciding, or for any other reason, you are free to dissolve the team, or to reform into different teams, at any time.

If you work in a team, only one submission per team needs to uploaded to Canvas. All members of the team will receive the same grade on the assignment.

Make sure you show the names of all team members on your homework assignments. If you forget to put all the names on the assignment, I take points off.

Grading

Your grade on each assignment will be based on:

- How well you applied the concepts in this course to construct the spreadsheet models for the assignment.
- How accurate are your answers.
- How professionally presented is your spreadsheet: no misspelled words, readable font, spreadsheet submitted at 100% zoom, and spreadsheet opens at the top of the first worksheet.

Your grade for the course will be the result of a mathematical calculation. Each of the five assignments will be given a score as a percent (partial credit is generally available for a good effort). Your final course grade will be an equally weighted arithmetic average of your percent scores on the four problem sets. Course letter grades are assigned based on the 90-80-70-60 breakdown.

There are no exams in K516. There is no opportunity for extra credit work in K516.

Social networking sites

Social networking websites will not be used in K516. I do not have a Facebook page, and I do not use Twitter. If you see a site that purports to be mine, you can be sure it is a fake.
Honor Code

We take our honor code seriously at the Kelley School of Business. Honesty and trust are crucial parts of a successful business relationship. **We expect graduates of IU to be known for their integrity.**

Each team or individual must prepare and submit a unique spreadsheet for the homework assignments. All students are expected to contribute to the team homework assignments. If I receive two identical spreadsheets, in whole or in part, or a copy with only cosmetic or formatting changes, that will be considered cheating and will result (at a minimum) in a **failing grade for this course.**

Because of the importance of honesty in business, leniency is not available in cases of cheating. KSBI faculty members work closely with student academic misconduct committees to prosecute any instance of cheating.

Drop Policy

We will adhere to the campus drop policy. The last day to withdraw from this course with an automatic “W” is **July 19.** (I’m not sure why they put this on a Sunday, but there you have it.)

Check with the Registrar regarding the tuition refund schedule for withdrawals in this second summer term.

Learning Outcomes

Upon successful completion of K516, students should be able to:

1. Identify the relevant uncertainties or risks in a business situation.
2. Take appropriate steps to quantify those uncertainties and risks.
3. Correctly set up an Excel spreadsheet to model the uncertainties in the decision with Monte Carlo simulations.
4. Conduct the appropriate analysis of the results of the spreadsheet model.
5. Interpret and explain the results of this analysis, so the model can be used to help inform a business decision.