

**UNIVERSITY OF CONNECTICUT**  
**SCHOOL OF BUSINESS ADMINISTRATION**  
**OPIM 5641- SecB14: "*BUSINESS DECISION MODELING*"**  
**FALL 2019**

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Classroom: Graduate Business Learning Center, Hartford campus (GBLC)

Class Times: Tuesdays (6:00PM-9:00PM) - Saturdays (9:00AM-5:00PM),  
September 3 – October 15

Office Hours: By appointment

Course Materials: Available on [HuskyCT.uconn.edu](http://HuskyCT.uconn.edu)

**COURSE DESCRIPTION**

Spreadsheets are increasingly used by managers. At the same time, the functionality and capabilities of today's spreadsheet software has increased dramatically. Whereas in the past specialized was needed, models to support managerial decision making can now be constructed with widely available spreadsheet packages.

This course is **not** designed to teach all different functionalities and bells and whistles in Excel. Rather, emphasis will be placed on how to model managerial problems and how to design "efficient" spreadsheets. Therefore, students will learn:

1. How to effectively design a spreadsheet easy to debug and with an intuitive interface ("Spreadsheet engineering");
2. How to formulate what-if and optimization models in spreadsheets that will support managerial decision problems ("Spreadsheet modeling").

Applications of spreadsheet modeling will span all functional areas in an organization: from Finance to Marketing to Operations.

**COURSE OBJECTIVES**

Upon completing this course, students should

1. Be able to construct well-designed spreadsheets
2. Be able to perform Business Analytics with spreadsheets
3. Be familiar with Excel optimization and what-if techniques

## **COURSE MATERIALS**

- ✓ Textbook: Stephen G. Powell and Kenneth Baker, "*Management Science: The Art of Modeling with Spreadsheets*," **3<sup>rd</sup> or 4<sup>th</sup> edition**, John Wiley & Sons.  
*Chapter references in the schedule below are for the 3<sup>rd</sup> edition; subtract two from the chapter number to get the appropriate chapter for the 4<sup>th</sup> edition.*
- ✓ Excel software: Microsoft Excel 2010, 2013 or 2016. **Excel for Mac is not suitable.**
- ✓ Excel add-in: AnalyticSolver Platform for Education (\$25 student version, see separate instructions).

## **DELIVERABLES**

- ✓ Homeworks (individual work without assistance from others)
- ✓ Cases (team work).
- ✓ In-class Quiz

## **GRADING**

The grade distribution is as follows:

- |                        |     |
|------------------------|-----|
| ✓ HOMEWORKS            | 40% |
| ✓ CASE:                | 20% |
| ✓ CLASS PARTICIPATION: | 10% |
| ✓ FINAL QUIZ:          | 30% |

## **INSTALLING THE ANALYTIC SOLVER PLATFORM FOR EDUCATION**

The use of the AnalyticSolver Platform is an Excel add-in required in this course. The student version of the Add-On is available for \$25 and expires 140 days after activation. Instructions to install the software, as well as a course and license code will be made available on the first day of class.

## **ACADEMIC DISHONESTY STATEMENT**

The School of Business faculty strongly believe that academic integrity is a corner stone in the educational process. All students should familiarize themselves with the rules and regulations found in the student code ([http://www.dos.uconn.edu/student\\_code.html](http://www.dos.uconn.edu/student_code.html) ). Among other things, the code states that:

*"A fundamental tenet of all educational institutions is academic honesty; academic work depends upon respect for and acknowledgement of the research and ideas of others. Misrepresenting someone else's work as one's own is a serious offense in any academic setting and it will not be condoned.*

*Academic misconduct includes, but is not limited to, providing or receiving assistance in a manner not authorized by the instructor in the creation of work to be submitted for academic evaluation (e.g., papers, projects, and examinations); any attempt to influence improperly (e.g., bribery, threats) any member of the faculty, staff, or administration of the University in any matter pertaining to academics or research; presenting, as one's own, the ideas or words of another for academic evaluation; doing unauthorized academic work for which another person will receive credit or be evaluated; and presenting the same or substantially the same papers or projects in two or more courses without the explicit permission of the instructors involved.*

*A student who knowingly assists another student in committing an act of academic misconduct shall be equally accountable for the violation, and shall be subject to the sanctions and other remedies described in The Student Code."*

Student code Appendix A section B.- Conduct Rules and Regulation item 1 - Violation of the Academic Integrity in Undergraduate Education and Research.

## Class Schedule for Fall 2019

Date	TOPICS
<b>Tue 9/3</b>	<b>CLASS ONE</b>
	<p><i>Topics:</i></p> <ul style="list-style-type: none"> <li>• Load and parse real-time data from Web</li> <li>• Conditional formatting</li> </ul> <p>Reading: Skim chapter 2 Excel refresher: Ch. 3 and 4</p>
<b>Tue 9/10</b>	<b>CLASS TWO</b>
	<p><i>Topics:</i></p> <ul style="list-style-type: none"> <li>• Ch. 4: Record macros</li> <li>• Ch. 5: Spreadsheet Engineering</li> </ul> <p>Reading: Ch. 4 section 4.7 Ch. 5 sections 5.1 – 5.5</p>
<b>Tue 9/17</b>	<b>CLASS THREE</b>
	<p><i>Topics:</i></p> <ul style="list-style-type: none"> <li>• Ch. 5: Spreadsheet Engineering</li> <li>• Ch. 6: Sensitivity Analysis Using Spreadsheets</li> </ul> <p><i>Due:</i> Homework I</p> <p>Reading: Ch. 6 sections 6.1 – 6.5</p>
<b>Sat 9/21</b>	<b>CLASS FOUR</b>
	<p><i>Topics:</i></p> <ul style="list-style-type: none"> <li>• Ch. 6: Sensitivity Analysis Using Spreadsheets</li> <li>• Break-out on doing sensitivity analysis exercise</li> </ul> <p>Reading: Ch. 6 sections 6.1 – 6.5</p>

<b>Tue 9/24</b>	<b>CLASS FIVE</b>
	<p><i>Topics:</i></p> <ul style="list-style-type: none"> <li>• Intro to Linear Programming</li> </ul> <p>Reading: Ch. 10 sections 10.1 – 10.4 Ch. 11 sections 11.1-11.6</p> <p><i>Due:</i> Homework II</p> <p>Case study: Retirement Planning, (see HuskyCT)</p>
<b>Tue 10/1</b>	<b>CLASS SIX</b>
	<p><i>Topics:</i></p> <ul style="list-style-type: none"> <li>• Intro to Integer Programming</li> </ul> <p>Reading: Ch. 12 sections 12.1-12.3</p> <p><i>Due:</i> Case study: Retirement Planning</p>
<b>Sat 10/5</b>	<b>CLASS SEVEN</b>
	<p><i>Topics:</i></p> <ul style="list-style-type: none"> <li>• Break-out on doing LP models</li> <li>• Integer and Binary Programming</li> </ul> <p>Reading: Ch. 13 sections 13.1 – 13.5</p>
<b>Tue 10/8</b>	<b>CLASS EIGHT</b>
	<p><i>Topics:</i></p> <ul style="list-style-type: none"> <li>• Break-out on doing optimization exercises</li> <li>• The Excel standard solver</li> </ul> <p><i>Due:</i> Homework III</p>
<b>Tue 10/15</b>	<b>CLASS NINE</b>
	<ul style="list-style-type: none"> <li>• Quiz (in-class)</li> <li>• Class Wrap-Up</li> </ul> <p><i>Due:</i> Homework IV</p>

