Washington State University
MAJOR CURRICULAR CHANGE FORM - - COURSE
(Submit original signed form and ten copies to the Registrar's Office, zip 1035.)

Future Effective Date: 08/19/2013 ☑ New course ☐ Temporary course ☐ Drop service course
(effective date cannot be retroactive) ☐ There is a course fee associated with this course (see instructions)

☐ Variable credit _____ ☐ Repeat credit (cumulative maximum _____ hours)

☐ Increase credit (former credit _____) ☐ Lecture-lab ratio (former ratio _____)

☐ Number (former number _____) ☐ Prefix (former prefix _____)

☐ Crosslisting (between WSU departments) **(Must have both departmental signatures)** ☐ Cooperative listing (UI prefix and number _____)
taught by: WSU ☐ UI ☐ jointly taught ☐

☐ Conjoint listing (400/500) ☐ S, F grading

☐ Request to meet Writing in the Major [M] requirement **(Must have All-University Writing Committee Approval)**

☐ Request to meet GER in _____ **(Must have GenEd Committee Approval)** ☐ Fulfills GER lab (L) requirement

☐ Professional course **(Pharmacy & Vet Med only)** ☑ Graduate credit **(professional programs only)**

☐ Other (please list request) _____

MGTOP	556	Advanced Business Modeling
course prefix	course no.	title

03	3	0	0	Admission to the MBA, Master of Accounting, or Business PhD programs.
credit	lecture hrs per week	lab hrs per week	studio hrs per week	prerequisite

Description (**20 words or less**) Spreadsheet modeling and solution of business problems using mathematical programming, Monte Carlo simulation, queuing theory, and decision analysis.

Instructor: Chuck Munson Phone number: 335-3076 Email: munson@wsu.edu
Contact: Cheryl Oliver Phone number: 335-2363 Email: oliverc@wsu.edu
Campus Zip Code: 4710

- Please attach rationale for your request, a current and complete syllabus, and explain how this impacts other units in Pullman and other branches (if applicable).
- Secure all required signatures and provide 10 copies to the Registrar's Office.

1/8/13	12-27-12	
Chair/date	**Dean/date**	**General Education Com/date**
Chair (if crosslisted/interdisciplinary)*	**Dean (if crosslisted/interdisciplinary) ***	**Graduate Studies Com/date**
All-University Writing Com/date	**Academic Affairs Com/date**	**Senate/date**

***If the proposed change impacts or involves collaboration with other units, use the additional signature lines provided for each impacted unit and college.**

MgtOp 556—Advanced Business Modeling

Washington State University
Spring 2014
Course Syllabus

Instructor Information

Professor: Dr. Chuck Munson
Office: Todd Hall Room 471
Phone: 335-3076
E-Mail: munson@wsu.edu
Office Hours: TBD

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At the end of this course, students will be able to:

1. Engineer user-friendly spreadsheets.
2. Apply Visual Basic concepts to create front-end and back-end spreadsheet applications that result in more professionally developed software.
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A subscription to the journal *Interfaces*.

Final Thoughts

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--Mark Twain

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"I hold up a calculator in class and say, 'If all you can do is these computations, you can be replaced. I want you to think more deeply.' "

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Description
Students will be introduced to some simple decision-making tools and to decision trees. The book provides Precision Tree software to automate decision tree development and calculations in spreadsheets.
Readings
Mellichamp, Joseph M., David M. Miller, and O-Joung Kwon, "The Southern Company Uses a Probability Model for Cost Justification of Oil Sample Analysis," *Interfaces*, vol. 23, no. 3 (May-June 1993), pp. 118-124. **(Available at Cougar Copies)**

9. **VBA Applications of Simulation (Week 14)**

Description

The textbook provides several VBA applications in the second part of the book. Here we will study simulation applications of stock trading and queuing.

Readings

Albright, Chapters 25 and 29.

10. **VBA Applications of Mathematical Programming (Weeks 14-15)**

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Readings

Albright, Chapters 20, 21, 22, and 24

11. **Sports Applications of Management Science (Week 15)**

Description

We conclude the course with a collection of *Interfaces* articles that cover topics in sports.

Articles **(all available in Cougar Copies)**

Adler, Ilan; Alan L. Erera; Dorit S. Hochbaum; and Eli V. Olinick, "Baseball, Optimization, and the World Wide Web," *Interfaces*, 32(2) (Mar.-Apr. 2002), pp. 12-22.

Durán, Guillermo; Mario Guajardo; Jaime Miranda; Denis Sauré; Sebastián Souyris; Andres Weintraub; and Rodrigo Wolf, "Scheduling the Chilean Soccer League by Integer Programming," *Interfaces*, 37(6) (Nov.-Dec. 2007), pp. 539-552.

Ellis, Peter M. and Raymond W. Corn, "Using Bivalent Integer Programming to Select Teams for Intercollegiate Women's Gymnastics Competition," *Interfaces*, 14(3) (May-June 1984), pp. 41-46.

Grandine, Thomas A., "Assigning Season Tickets Fairly," *Interfaces*, 28(4) (Jul.-Aug. 1998), pp. 15-20.

Revised

MgtOp 556—Advanced Business Modeling

Washington State University
Spring 2014
Course Syllabus

Instructor Information

Professor: Dr. Chuck Munson
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Letter grade equivalencies and Distribution:

Letter Grade	Final Total %
A	93% - 100%
A-	90% - 92.9%
B+	87% - 89.9%
B	83% - 86.9%
B-	80% - 82.9%
C+	77% - 79.9%
C	73% - 76.9%

C-	70% - 72.9%
D+	65% - 69.9%

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Students will be introduced to some simple decision-making tools and to decision trees. The book provides Precision Tree software to automate decision tree development and calculations in spreadsheets.

Readings

Mellichamp, Joseph M., David M. Miller, and O-Joung Kwon, "The Southern Company Uses a Probability Model for Cost Justification of Oil Sample Analysis," *Interfaces*, vol. 23, no. 3 (May-June 1993), pp. 118-124. **(Available at Cougar Copies)**

9. **VBA Applications of Simulation (Week 14)**

Description

The textbook provides several VBA applications in the second part of the book. Here we will study simulation applications of stock trading and queuing.

Readings

Albright, Chapters 25 and 29.

10. **VBA Applications of Mathematical Programming (Weeks 14-15)**

Description

The textbook provides several VBA applications in the second part of the book. Here we will study math programming applications of the Blending, Product Mix, Worker Scheduling, and Transportation problems.

Readings

Albright, Chapters 20, 21, 22, and 24

11. **Sports Applications of Management Science (Week 15)**

Description

We conclude the course with a collection of *Interfaces* articles that cover topics in sports.

Articles **(all available in Cougar Copies)**

Adler, Ilan; Alan L. Erera; Dorit S. Hochbaum; and Eli V. Olinick, "Baseball, Optimization, and the World Wide Web," *Interfaces*, 32(2) (Mar.-Apr. 2002), pp. 12-22.

Durán, Guillermo; Mario Guajardo; Jaime Miranda; Denis Sauré; Sebastián Souyris; Andres Weintraub; and Rodrigo Wolf, "Scheduling the Chilean Soccer League by Integer Programming," *Interfaces*, 37(6) (Nov.-Dec. 2007), pp. 539-552.

Ellis, Peter M. and Raymond W. Corn, "Using Bivalent Integer Programming to Select Teams for Intercollegiate Women's Gymnastics Competition," *Interfaces*, 14(3) (May-June 1984), pp. 41-46.

Grandine, Thomas A., "Assigning Season Tickets Fairly," *Interfaces*, 28(4) (Jul.-Aug. 1998), pp. 15-20.