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| Instructor: | Geza Bottlik, E-mail: bottlik@usc.edu |
| Office Hours: | Tuesday/ Thursday 1:00 P.M. – 1:45 P.M. GER202 or by appointment or zoom |
| TA: | Ying Peng - yingpeng@usc.edu |
| TA Office Hours: | TBD |
| Class time/place: | Tuesdays/Thursdays 11:00 A.M. – 12:20 P.M. OHE 100B |

**Test Schedule**:

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| Midterm 1: | Thursday, February 10, 2022 | 11:00 A.M. – 12:20 P.M. |
| Midterm 2: | Thursday, March 24, 2022 | 11:00 A.M. – 12:20 P.M. |
| Final: | Tuesday, May 10, 2022 | 11:00 A.M. – 1:00 P.M. |

Web Pages: [**www.**gezabottlik**.com**](http://www.gezabottlik.com)**, courses.uscden.net**

At these sites you will find:

1. The syllabus, grades, résumes, Lecture Notes
2. Assignments and due dates, solutions

Your responsibility:

1. Register on [**www.**gezabottlik**.com**](http://www.gezabottlik.com) and learn how to use it
2. Download the lecture notes and assignments for each class
3. Review and verify your grades to track your progress and standing in the class.

The DEN website (courses.uscden.net) is only used for e-mail, the discussion board and assignment upload and return. Check your email on a regular basis

Required Text:

[Edward A. Silver](https://www.amazon.com/s/ref=dp_byline_sr_book_1?ie=UTF8&text=Edward+A.+Silver&search-alias=books&field-author=Edward+A.+Silver&sort=relevancerank), [David F. Pyke](https://www.amazon.com/s/ref=dp_byline_sr_book_2?ie=UTF8&text=David+F.+Pyke&search-alias=books&field-author=David+F.+Pyke&sort=relevancerank), [Douglas J. Thomas](https://www.amazon.com/s/ref=dp_byline_sr_book_3?ie=UTF8&text=Douglas+J.+Thomas&search-alias=books&field-author=Douglas+J.+Thomas&sort=relevancerank) “[Inventory and Production Management in Supply Chains](https://www.amazon.com/Inventory-Production-Management-Supply-Chains/dp/146655861X/ref=sr_1_2?s=books&ie=UTF8&qid=1543104101&sr=1-2&keywords=inventory+control++by+silver) “, 4th Edition, CRC Press, 2016, ISBN-978-1466558618

References:

Sheldon M. Ross “Probability and Statistics for Engineers and Scientists”, 4th Editions, Academic Press, 2009, ISBN 13:978-0-12-370483-2

Sven Axsater, “Inventory Control”, 3rd edition, Springer 2015, ISBN 978-3-319-15728-3

Andrie de Vries and Joris Meys, “R for Dummies”, 2nd Ed. John Wiley and Sons, 2015

**Assignments:**

Readings and Problems will be included in each week’s assignments. Problems are assigned on Tuesday and are due on the following Wednesday at midnight, submitted through the assignment manager on D2L and will be returned electronically before the next week if points are deducted. Solutions will be posted after the assignment is due. Reading assignments are due when the material will be covered in class. It is imperative that you **prepare for class** -- you will find it extremely difficult to follow the discussion if you have not read the material.

I will **not accept** late homework. Homework is to be done in the Excel file provided on D2L. Do not type results into the spreadsheet – use formulas. Follow all instructions – the homework is autograded for correct answers and then graded for partial credit, if necessary. You must name your file as follows: The part of your email before the @ sign\_HW (or Quiz)\_the number of the item. Example: bottlik\_HW01. Essays written in word must be copied into the excel file as a bitmap or similar object.

Homework is to be done individually unless it is a team assignment. It is OK to work on homework together. If you discuss or collaborate on a homework, you must indicate that in your file. Each person must turn in a separate homework. Do not give your file to anyone, or use someone else’s file. Generated data and essay questions must be unique to each person. **If the answer is given in a book or previous homework, don’t just copy it, explain how you got it.**

**Objectives of the course**

The major objective of this course is to have you understand and use the full range of analyses available to manage inventory. Also, for you to be familiar with requirements planning

The specific course objectives include enabling the student to:

Understand the importance of inventory management in operations.

Understand the connection of managing inventory to planning and scheduling

Use Excel and VBA and statistical tools in solving inventory problems.

Understand the basics of forecasting

Become familiar with and use the tools of inventory management

**Grading:**

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| Homework, 1 point each | ~12% |
| Midterm 1 | ~15% |
| Midterm 2 | ~20% |
| Final exam | ~30% |
| Participation (attendance, asking questions, making contributions, postings on the discussion board, emails), 0.2 points each | ~6% |
| Quizzes, (online), 1.4 each | ~17% |

The grade for the course will only be based on the required work listed above and **cannot** be improved with additional work.

Grades are based upon your personal comprehension of the material and your performance on the exams and assignments relative to the other students. The quality of your fellow classmates as students is expected to be quite high and the expectations of the instructor are established accordingly.

**Quizzes:**

There will be a quiz most weeks, online, available after class on Tuesday or Thursday and due at midnight on Wednesday or Friday. The format is mostly True/False. The purpose of these quizzes is to encourage you to keep up with the class material. I anticipate that you will have little difficulty in answering the questions if you are up to date on the class materials, including those for the next class. There is normally no make-up of a missed quiz. The quiz each week will be based primarily upon two subjects: the material from the previous week and the reading assignment for that week. You are expected to have read the weekly assignment prior to the start of class. The quizzes are open notes, book and laptop.

**Examinations:**

The midterms and final exams are open book and open notes and downloaded from D2L. Calculators are OK. A laptop or desktop is required. Exam problems will be both numerical and essay, with occasional true/false, fill in the blank, or multiple choice.

**Course Outline**

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| (1) Introduction, Overview, Chapter 1 (3 - 20) |
| (2) Inventory Management Chapter 2 (23 - 70) |
| (3) Chapter 3 - Forecasting (72 - 127) |
| (4) Material Requirements Planning Chapter and its extensions 15 (621 - 656) |
| (5) Midterm 1, Order quantities with constant demand Chapter 4 (145 - 193) |
| (6) Order quantities with constant demand Chapter 4 (145 - 193) |
| (7) Chapter 5 and Probabilistic Demand Chapter 6 (237 -312) |
| (8) Chapter 5 and Probabilistic Demand Chapter 6 (237 -312) |
| (9) Important items Chapters 7 (319 - 346) |
| (10) Review and Midterm 2 |
| (11) Chapter 8 C items (351 – 384) |
| (12) Style goods and perishable items Chapter 9 (387 - 427) |
| (13) Single point replenishment systems Chapter 10 (437 - 477) |
| (14) Multiechelon Systems Chapter 11 (487 – 531) |
| (15) Review |
| Final 5/10/2022 11:00 A.M. – 1:00 P.M. |

**Expectations:**

Students are expected to attend every session, be on time, to have read the preparation material and participate actively in the discussions in the class. Students are also expected to post comments and questions on the discussion board (or send emails or contributions to be used in class). You should be prepared to devote the time necessary to take the course. The course material is cumulative and you need to keep up as we go along.

**ALWAYS BE SURE TO GIVE THE SOURCE OF ALL YOUR INFORMATION. ANYTHING TAKEN VERBATIM FROM SOMEONE ELSE MUST BE IN QUOTATION MARKS AND REFERENCED. THIS INCLUDES PARTIAL SENTENCES.**

This is intended to be an interactive class and your participation should increase as the semester progresses. Attendance at all classes is expected of everyone. Frequent absences will result in a reduction in grade. Punctuality is expected. If you are late, be sure not to disturb the class as you enter.

The midterms and final will be based on problems similar to the ones assigned in the homework and the discussions in class. **All tests are open book and open notes. Laptops are also allowed**. Students are expected to **apply** what they should have learned up to that point to analyzing situations, identifying the problems and applying the appropriate techniques to solve them.

**NEATNESS, SPELLING, AND GRAMMAR COUNT. THEY ARE AN EXPRESSION OF YOUR COMMITMENT TO DO A GOOD JOB.**

**Last, but most important:**

**Academic Conduct:**

Plagiarism – presenting someone else’s ideas as your own, either verbatim or recast in your own words – is a serious academic offense with serious consequences. Please familiarize yourself with the discussion of plagiarism in SCampus in Part B, Section 11, “Behavior Violating University Standards” policy.usc.edu/scampus-part-b. Other forms of academic dishonesty are equally unacceptable. See additional information in SCampus and university policies on scientific misconduct, http://policy.usc.edu/scientific-misconduct.

**Support Systems:**

Student Counseling Services (SCS) – (213) 740-7711 – 24/7 on call

Free and confidential mental health treatment for students, including short-term psychotherapy, group counseling, stress fitness workshops, and crisis intervention. engemannshc.usc.edu/counseling

National Suicide Prevention Lifeline – 1 (800) 273-8255

Provides free and confidential emotional support to people in suicidal crisis or emotional distress 24 hours a day, 7 days a week. www.suicidepreventionlifeline.org

Relationship and Sexual Violence Prevention Services (RSVP) – (213) 740-4900 – 24/7 on call

Free and confidential therapy services, workshops, and training for situations related to gender-based harm. engemannshc.usc.edu/rsvp

Sexual Assault Resource Center

For more information about how to get help or help a survivor, rights, reporting options, and additional resources, visit the website: sarc.usc.edu

Office of Equity and Diversity (OED)/Title IX Compliance – (213) 740-5086 Works with faculty, staff, visitors, applicants, and students around issues of protected class. equity.usc.edu

Bias Assessment Response and Support

Incidents of bias, hate crimes and microaggressions need to be reported allowing for appropriate investigation and response. studentaffairs.usc.edu/bias-assessment-response-support

The Office of Disability Services and Programs Provides certification for students with disabilities and helps arrange relevant accommodations. dsp.usc.edu

Student Support and Advocacy – (213) 821-4710

Assists students and families in resolving complex issues adversely affecting their success as a student EX: personal, financial, and academic. studentaffairs.usc.edu/ssa

Diversity at USC

Information on events, programs and training, the Diversity Task Force (including representatives for each school), chronology, participation, and various resources for students. diversity.usc.edu

USC Emergency Information

Provides safety and other updates, including ways in which instruction will be continued if an officially declared emergency makes travel to campus infeasible. emergency.usc.edu

USC Department of Public Safety – UPC: (213) 740-4321 – HSC: (323) 442-1000 – 24-hour emergency or to report a crime. Provides overall safety to USC community. dps.usc.edu