



School of Engineering and Applied Sciences  
Master of Science in Engineering Management  
EGMT 590 Operations Leadership

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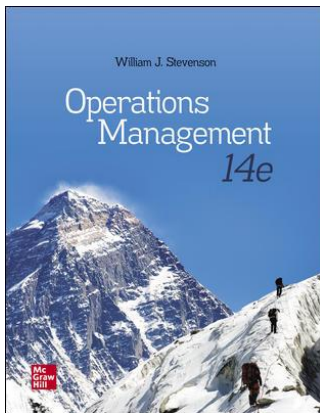
## Course Syllabus

**Office Hours:** By Appointment

## Catalog Description

Provides technical professionals with leadership and management skills needed to be effective throughout their career.

## Textbook



Stevenson, W. J. (2021). *Operations management (14 edition)*. New York: McGraw-Hill/Irwin. ISBN 978-1-260-23889-1

## Course Objectives

Upon successful completion of the course, students will be able to:

- Make forecasts and plan for productivity, capacity, and a balanced system in relation to facilities, equipment, and long-term planning.
- Set up production rates based upon product demand and standard data systems.
- Use the center of gravity method to optimize the location of a facility.
- Identify the benefits and practice of JIT and lean and their fit with systems design and operations.

- Compute EOQs, EPQs, quantity discounts, FOIs, SPMs, and ROPs for a variety of operation scenarios.
- Compute a trial and error overview of an aggregate plan and disaggregate the plan into a master schedule.
- Compute an MRP plan for a given production scenario.
- Compute operations scheduling requirements regarding both loading and sequencing for a low volume system.
- Use the Excel to set up and solve a problem using linear programming.

## Course Topics

This course is graduate-level course of the theories, principles, and practices of leadership applied in a technological and operational context. This is an introductory course to systems design and operation. The course will increase knowledge of business strategy, competitiveness, productivity, forecasting methods, design of products and services, capacity planning, selection of processes, process layouts, and work design. Topics include the Kano model, market feasibility studies, cost-volume analysis, break-even analysis, product line balancing, and job analysis. Also included are location planning and analysis, just-in-time production, lean operations, and inventory management. Other topics include aggregate planning and disaggregation, material requirements planning, scheduling, and linear programming.

## Course Structure and Design

The course will consist of readings from the assigned text and other supplemental materials, chapter quizzes, assignments, and assessments.

Homework and Reports. Various activity assignments and reports are assigned over the duration of the course. These assignments are designed to help with the readings and provide material that is helpful for the quizzes and the exam.

Discussions. Class participation is conducted using Blackboard discussions. It is important to prepare for the discussions using peer-reviewed scholarly sources or the assigned text.

Quizzes. Quizzes will be given on the content of the assigned readings and provided material. Quizzes cover the assigned content for the units.

Examinations. There is one comprehensive exam that assesses learning for Units 1-13 of the course.

## Grading

The grading for the course follows:

Homework and Reports	30%
Discussions	25%
Quizzes	25%
Final Exam	20%
<b>Total</b>	<b>100%</b>

Grading Criteria. There are four possible grade levels:

Mastery, A, 100% –  $\geq 90\%$

- Superior work performance and mastery of the subject content. The work/performance is commendable and demonstrates exceptional thinking and/or performance. The work or research exceeds expected requirements with substantial depth and efficiency. The work is highly organized, formatted correctly, and communicates effectively.

Competency, B, 89% –  $\geq 80\%$

- Clear understanding of the subject content with no flaws. The work or research accomplishes the purpose of the task and identifies the most important ideas. The work is over and beyond the minimum requirements with depth. The work is organized, formatted correctly, and communicates effectively.

Minimal, C, 79% –  $\geq 70\%$

- Performance at minimum standard. Work displays some understanding of major concepts. Main points of content are covered and required elements included, but the work lacks competent professionalism.

Deficient or Unacceptable; Standard not met, F,  $< 70\%$  – 0%

- Incomplete or deficient understanding of the task/project. The purpose of the task or research was not accomplished. The work/performance is ineffectual or inappropriate. The work is vague and incorrectly formatted. Significant parts omitted or plagiarized. Work shows no understanding of the subject content. Important purpose of the task or research was not achieved. Work did not meet the minimum requirements. Work suggests incompetence.

*For this course, achievement at the minimal level must be obtained to pass the course. Deficient performance ( $< 70\%$ ) is not acceptable. Students must achieve minimal competency ( $\geq 70\%$ ) or higher.*

You will know in advance the standards for each assignment. You are responsible for:

- Asking for help or clarification when needed
- Completing all course deliverables by the due date or as negotiated with the instructor
- Committing to a high level of professional development and cooperative learning

The grade for this course is based upon performance to a standard. Students are expected to put forth effort congruent with the highest standard. The earned final grade is based on Grading Criteria. The final grade is per my discretion.

You are ultimately responsible for your learning. Those who take responsibility for their learning are generally more successful in the course. Successful students are active learners who read the text, complete the assigned work, ask questions as needed, and participate fully in the course.

You are expected to locate and use scholarly resources as needed. Research and references should be from peer-reviewed sources, professional organizations, or recognized experts in the discipline. All deliverables and concepts must adhere to principles grounded in the scientific method with supporting evidence. The instructor may recommend appropriate reference materials, documents, and sources. Any scholarly resources used should be referenced in assignments, papers, or used as supporting evidence in posted discussions.

## **Course Policies General**

**General communication and expectations.** Students should work independently on assignments unless the instructor gives prior permission for collaboration. Students will communicate with the instructor using the learning management system Blackboard or other communication media such as e-mail, voicemail, or videoconferencing. Access to a late-model computer with standard business software such as Microsoft Office Suite and an Internet connection is required.

This is a paperless course. This course and all associated communication within or as part of should adhere to the [WKU Technology Ethics Policy](#). All assignments and related documents will be submitted on-line via Blackboard or email. Students must make prior arrangements before submitting hard copy reports or papers. If you have problems transmitting information, telephone, or e-mail immediately.

### **Ground rules for communication**

1. Use e-mail for private or personal messages to the instructor and questions regarding grades. The discussion board is for general questions, public messages, or discussion board postings.
2. Please submit papers as text/word files (e.g., DOC, DOCX, RTF, TXT, HTM, HTML, or PDF), PowerPoint files (e.g., PPT, PPTX), or spreadsheet files (e.g., XLS, XLSX, WKS) uploaded to Blackboard. Use other file formats at your own risk. If I can't read them, I can't grade them!
3. For **all** assignments that are uploaded to Blackboard, include your name at the top of the document AND as part of the **file name** (e.g., Doggett\_Homework.doc).

Important: Blackboard has difficulty processing file sizes over 10 MB. If your file does not upload correctly, you may need to change to a different file format that uses less memory!

**Expectations.** *All assignments should be completed to pass the course. All assignments must be submitted on time. Any assignments submitted after scheduled due dates will not be accepted unless prior arrangements have been made with the instructor. Do not email me after the course is completed concerning your grade. This will likely have the opposite effect of the one you intended.*

**Instructor Availability.** During the week from 8:00 AM to 5:00 PM CST M-F with limited availability on the weekends. Students may reasonably expect a response within 24 hours on workdays, but not necessarily on the weekends.

**Late Submissions or Resubmissions.** I do NOT accept late work unless prior arrangements have been made with me. If you think you need an extension, you must contact me *before* the assignment is due. In some cases, I may grant a resubmission of work that does not meet the minimum standard. However, students should expect a reduction in the grade for late or resubmitted work. I realize that some life circumstances may be unavoidable but recognize that you can always drop a course for extenuating circumstances such as the death of a family member. All other circumstances are per my discretion. Family or work commitments and schedule conflicts are generally not good reason for extensions.

**Extra Credit.** There is no extra credit work available. Additional work beyond what is assigned will not be considered.

**Academic Honesty.** All Western Kentucky University policies are in effect. All work must reflect APA citation standards. All your work must be your own unless I authorize collaboration. Presenting the words, ideas, or expressions of another person in any form and claiming them as one's own is plagiarism and will not be tolerated. The claim of ignorance is no excuse. (See [academic offenses](#) in the WKU student handbook.) The University Catalog states, “Students who commit any act of academic dishonesty may receive from the instructor a failing grade in that portion of the coursework in which the act is detected or a failing grade in the course without possibility of withdrawal.”

**Student Accessibility Resource Center.** In compliance with university policy, students with disabilities who require academic and/or auxiliary accommodations for this course must contact the [Student Accessibility Resource Center](#) at Downing Student Union, 1074. The phone number is 270.745.5004. Please do not request accommodations directly from the instructor without a letter of accommodation. This course is compliant with the WKU standards for [web accessibility](#).

**Title IX statement.** Western Kentucky University (WKU) is committed to supporting faculty, staff, and students by upholding WKU’s Title IX Sexual Misconduct/Assault Policy or discriminate against any student or exclude any student from its educational programs or activities, including classes or extracurricular activities, on the basis of pregnancy and/or pregnancy-related conditions.

**Add/Drop Policy:** Students who have trouble working independently are encouraged to drop the course. For online courses, students will be dropped after a week of Blackboard inactivity. Incomplete grades are given only by mutual agreement between the instructor and the student and must be in writing.

### **Course Calendar/Breakdown of Assignments**

See the separate schedule document.