

**STATE UNIVERSITY OF NEW YORK
COLLEGE OF TECHNOLOGY
CANTON, NEW YORK**



MASTER SYLLABUS

**COURSE NUMBER – COURSE NAME
CMGT 403 – Operations Management**

Created by: Joe Reilly

Updated by:

Canino School of Engineering Technology

Department: Civil and Construction Technology

Semester/Year: Fall 2020

- A. **TITLE:** Operations Management
- B. **COURSE NUMBER:** CMGT 403
- C. **CREDIT HOURS:** (Hours of Lecture, Laboratory, Recitation, Tutorial, Activity)

Credit Hours: 3
Lecture Hours: 3 per week
Lab Hours: per week
 Other: per week

Course Length: 15 Weeks

- D. **WRITING INTENSIVE COURSE:** Yes No
- E. **GER CATEGORY:** None: Yes: GER
If course satisfies more than one: GER
- F. **SEMESTER(S) OFFERED:** Fall Spring Fall & Spring

G. **COURSE DESCRIPTION:**

This course provides an introduction to operations management (OM) specific to a construction organization. This course aims to familiarize students with the major operational issues that confront construction managers including efficient planning of the work, productivity, materials management and quality issues. Case studies provide examples of successful OM practices and pitfalls of poor OM.

- H. **PRE-REQUISITES:** None Yes If yes, list below:

CMGT 300 Construction Management or CONS 274 Construction Management; and CMGT 301 Scheduling and Planning, or permission of the instructor

CO-REQUISITES: None Yes If yes, list below:

I. STUDENT LEARNING OUTCOMES: (see key below)

By the end of this course, the student will be able to:

<u>Course Student Learning Outcome</u> <u>[SLO]</u>	<u>Program Student Learning Outcome</u> <u>[PSLO]</u>	<u>GER</u> <u>[If Applicable]</u>	<u>ISLO & SUBSETS</u>	
1. Identify key issues of management operations presented by a site plan	SO 5		5-Ind, Prof, Disc, Know Skills ISLO ISLO	Subsets Subsets Subsets Subsets
2. Manipulate a construction project schedule to optimize productivity in the face of proposed interruptions	SO 5		5-Ind, Prof, Disc, Know Skills ISLO ISLO	Subsets Subsets Subsets Subsets
3. List and discuss methods used to manage material streams on a construction project	SO 5		5-Ind, Prof, Disc, Know Skills ISLO ISLO	Subsets Subsets Subsets Subsets
4. Cite and discuss the typical sources of waste in a construction project and sustainable options for dealing with these	SO 5		5-Ind, Prof, Disc, Know Skills ISLO ISLO	Subsets Subsets Subsets Subsets
5. Compute the cost of an accident and recognize the value of safety	SO 5		5-Ind, Prof, Disc, Know Skills ISLO ISLO	Subsets Subsets Subsets Subsets
6. Explain how quality is maintained in construction operations	SO 5		5-Ind, Prof, Disc, Know Skills ISLO ISLO	Subsets Subsets Subsets Subsets
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KEY	<u>Institutional Student Learning Outcomes [ISLO 1 – 5]</u>
ISLO #	ISLO & Subsets
1	Communication Skills Oral [O], Written [W]
2	Critical Thinking <i>Critical Analysis [CA], Inquiry & Analysis [IA], Problem Solving [PS]</i>
3	Foundational Skills <i>Information Management [IM], Quantitative Lit./Reasoning [QTR]</i>
4	Social Responsibility <i>Ethical Reasoning [ER], Global Learning [GL], Intercultural Knowledge [IK], Teamwork [T]</i>
5	Industry, Professional, Discipline Specific Knowledge and Skills

*Include program objectives if applicable. Please consult with Program Coordinator

J. **APPLIED LEARNING COMPONENT:** Yes No

If YES, select one or more of the following categories:

- Classroom/Lab
- Internship
- Clinical Placement
- Practicum
- Service Learning
- Community Service

- Civic Engagement
- Creative Works/Senior Project
- Research
- Entrepreneurship
(program, class, project)

K. TEXTS:

Operations Management for Construction 1st Edition
by Chris March (Author) ISBN-13: 978-0415371131 ISBN-10: 0415371139

L. REFERENCES:

Jacobs, F.R. & R.B. Chase. (2010). Operations and Supply Chain Management (13th edition). Boston: McGraw-Hill Irwin.

G. Cachon and C. Terwiesch. Matching Supply with Demand: An Introduction to Operations Management (3rd Ed). McGraw-Hill. 2013

Y.A. Ozcan. Quantitative Methods in Health Care Management: Techniques and Applications (2nd Ed). Jossey-Bass. 2009

M. EQUIPMENT: None Needed:

N. GRADING METHOD: A-F

O. SUGGESTED MEASUREMENT CRITERIA/METHODS:

Exams

Homework

Quizzes

Papers

P. DETAILED COURSE OUTLINE:

I. Intro to Construction Operations and Management

Evaluating the Site

Access

Utilities

Material Processing

Security

II. Planning Execution of the Contract

Bar Charts

Precedence Diagrams

Network Diagrams

Resource Allocation

Work Measurement and planning

Health and Safety on the job site

Cost impact of accidents

Health and Safety training

Risk Assessment

III. Waste Management

The cost of waste
Recycling
Disposal

IV. Material Management
Materials
Delivery and Timing
Planning Storage

V. Supply Chain Management
Definition
Decision to subcontract

VI. Quality Management
QC/QA
TQM
ISO 9000

VII. Case Studies

Q. LABORATORY OUTLINE: None Yes