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:

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

L. **REFERENCES:**


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 ☐