



## MASTER COURSE OUTLINE

Prepared By: Tom Willingham

Date: January 2020

## COURSE TITLE

Mission Critical Operations Management II

## GENERAL COURSE INFORMATION

Dept.: WKED

Course Num: 111

(Formerly:)

CIP Code: 52.0205

Intent Code: 21

Program Code: 622

Credits: 4

Total Contact Hrs Per Qtr.: 55

Lecture Hrs:33

Lab Hrs:22

Other Hrs:

Distribution Designation: General Elective (GE)

## COURSE DESCRIPTION (as it will appear in the catalog)

Exploration and practical application of technical systems management and the related data required to maintain operationally sound facilities, equipment, and processes critical to the production of goods and services. Students may explore this topic within a related industry of their choice.

## PREREQUISITES

Computer Science students are strongly encouraged to complete WKED 110 prior to taking this course.

## TEXTBOOK GUIDELINES

Text and materials as decided by faculty. (Example: Instructors should use free or online resources as much as possible. There are numerous resources available to support this work in You Tube, EdPuzzle, Alison, Saylor.org, etc.

OR *Certified Mission Critical Operator*, by Tony Rossi and Paul Tankel, Creative Commons Attribution 3.0 Unported License)

## COURSE LEARNING OUTCOMES

*Upon successful completion of the course, students should be able to demonstrate the following knowledge or skills.*

1. Identify and apply industry best practices, strategies, and techniques for the proper operation of critical production spaces
2. Identify basic networking fundamentals as they apply to a mission critical facility
3. Describe wired and wireless communication systems and their components and how they are used for data transmission
4. Explain environmental parameters and apply industry best practices and standards for environmental and system monitoring
5. Identify and apply best practices for managing change within a mission critical facility
6. Practice writing operating procedures and change management procedures
7. List the regulatory bodies and standards related to the operation of a critical facility
8. Describe the need for protocols for standard, maintenance, and emergency operating procedures
9. Identify industry standards regarding facility and system documentation
10. Compare the types and purposes of documentation used in facilities management
11. Identify industry best practices, strategies, and techniques for the proper design and configuration of critical production spaces.

12. Identify and apply communication systems as they apply to a mission critical facility
13. Categorize industry best practices and standards for environmental and system monitoring within a mission critical facility
14. Identify and simulate industry standards regarding operations and procedures within a mission critical facility

### **INSTITUTIONAL OUTCOMES**

IO1 **Communication:** Communicate effectively and respectfully using verbal, written, and computer skills

IO3 **Human Relations/Workplace Skills:** Students will be able to demonstrate teamwork, ethics, appropriate safety awareness and/or workplace specific skills

### **COURSE CONTENT OUTLINE**

1. Exploring critical production spaces and redundancy
2. Monitoring environmental and system and platform
3. Creating, implementing and monitoring simple building management systems
4. Creating and managing work orders, inventory, labeling, and related processes
5. Writing operations and procedure management documentation
6. Scheduling work and projects for management of equipment and systems
7. Determining alternative energy sources
8. Managing water and wastewater
9. Handling power and sequence of operations
10. Creating, implementing and monitoring simple building management systems

### **DEPARTMENTAL GUIDELINES** *(optional)*

The cost of books and materials should be held to the minimum cost for the maximum student benefit.

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**DIVISION CHAIR APPROVAL**

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**DATE**