

**ENGINEER SENIOR LEADER COURSE  
SYLLABUS FOR 12H40  
CONSTRUCTION ENGINEER SUPERVISOR**

**INSTRUCTOR: SFC MCGUIRE**

**I. INTRODUCTION**

The 12H SLC course is a 6 week USAES course taught at the Maneuver Support Center of Excellence NCO Academy. It employs classroom instruction using the Small Group process technique and Small Group Instruction (SGI) with practical applications, performance evaluations, and testing.

**II. LEARNING OUTCOMES**

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

- A. Extract the critical information from the bridge reconnaissance reports. Determine (if applicable) the moment, shear, width, deck, and final bridge classification to within plus or minus 3 tons for the following bridges: timber or steel stringer with a timber deck, steel stringer bridge with a concrete deck, concrete T-beam with asphalt wearing surface, reinforced concrete-slab with asphalt wearing surface and the masonry arch.
- B. Develop an activities list, a logic diagram, and an early start schedule in accordance with (IAW) FM 5-412. Calculate interfering float, total float, and free float (IAW) FM 5-412. Determine the project critical path (IAW) FM 5-412.
- C. Resource constrain the early start schedule in accordance with (IAW) FM 5-412.
- D. Determined the capabilities and limitations of Microsoft Project software.
- E. Plan a construction project using TCMS.
- F. Design and draw a Electrical and Plumbing job plan(IAW) FM 5-424 and FM 3-34.471

**III. INSTRUCTIONAL MATERIALS**

The instructional materials identified for this course will be viewable through <https://www.blackboard.wood.army.mil/>, once access has been granted.

**IV. COURSE REQUIREMENTS**

- A. Reading Assignments:  
Reading assignments will be given frequently. The material is to be carefully studied in preparation for class discussion.

B. Papers:

Several essays will be written during the course using The American Psychological Association (APA) format. Subjects will be assigned by the instructor.

**V. EXAMINATIONS**

An examination will be given upon completion of following Terminal Learning Objectives:

- A. Calculate the Rapid Field Classification of a Fixed Bridge
- B. Manage a Construction Project
- C. Design Utilities

**VI. PERFORMANCE ORIENTED ASSESSMENTS (POAs)**

All POAs identified for this course will be viewable through <https://www.blackboard.wood.army.mil/>, once access has been granted. Students will be evaluated on the following POAs:

- A. Leadership In A Garrison Environment
- B. In-Ranks Inspection
- C. American Psychological Association (APA) Written Communication
- D. Student Led Discussion
- E. Formal Memorandum
- F. Contribution To Group Work
- G. Army Physical Readiness Training

**VII. NOTES AND ADDITIONAL INSTRUCTIONS FROM COURSE INSTRUCTOR**

- A. Students will be participating in a Warfighting Exercise. This exercise will require students to understand and apply the Military Decision Making Process (MDMP). It is also recommended to students know how to operate Command Post of the Future (CPOF).
- B. Cellular phones and other Electronic Devices will be turned off while the student is in the classroom.

## VIII. COURSE OUTLINE

# 12H40 – Senior Construction Engineer Supervisor (SLC 6 weeks)

1

2

3

4

5

6

### **Mandatory Training**

(21.0 hours)

- Military History
- Ethical Reasoning
- COE Lessons Learned
- AR 350-1 Training
  - SHARP
  - MRT
  - ASAP

### **Common Engineer Training (CET)**

(33.5 hours)

- Determine Logistical Requirements for Bunkers and Shelters
- Engineering Exam
- Supervise Engineer Demolition Mission Planning
- Determine Logistical Requirements for Non-Explosive Anti-Vehicular Obstacles
- Calculate the Rapid Classification of a Fixed Bridge
- Military Load Classification Examination

### **Vertical Construction Operations**

(61 hours)

- Manage a Construction Project
- Design a Utilities Job Plan
- Manage a Construction Project Examination
- Design a Utilities Job Plan Examination

### **Situational Training**

Exercise

(72 hours)

- Situational Training Exercise

U.S. ARMY