



FORT LEONARD WOOD, MO
NONCOMMISSIONED OFFICERS ACADEMY
SYLLABUS FOR 12B30
ADVANCED LEADER COURSE



COMBAT ENGINEER ALC

Purpose:

The 12B30 Combat Engineer Advanced Leaders Course provides 12B Noncommissioned Officers with the technical and tactical skills required to successfully serve as Combat Engineer Squad Leaders. The course also enhances the student's ability to lead, train, and direct subordinates in all aspects of combat engineering.

Course Scope:

Students will demonstrate proficiency in Demolitions, Urban Breaching Techniques, Reconnaissance, Counter Explosive Hazards, Combat Construction, Bailey Bridge Employment, Call for and Adjust Indirect Fire, and Call for Close Air Support.

Course Prerequisites:

Active Army or Reserve Component enlisted personnel selected by DA (Active Army) or recommended by unit Commander (Reserve Component). Qualified in MOS 12B. Meets requirements outlined in AR 350-1 (para 3-8) and DA Pam 611-21. All Soldiers must have successfully completed the Warrior Leader Course (WLC) at least six months before attending this course.



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Security Clearance: Unclassified

Course Length–Weeks: 6 **Days:** 4 **Hours:** 290

Class Sizes – Optimum: 64 **Min:** 32 **Max:** 64

Administrative Time:

Module: A / 001 1.0
Title: **Mandatory Training**

Academic Time:

Module: B / 001 56.0
Title: **Demolitions**

Module: C / 001 36.5
Title: **Reconnaissance**

Module: D / 001 34.0
Title: **Explosive Hazards**



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Module: E / 001 22.0
Title: **Combat Construction**

Module: F / 001 12.0
Title: **Combat Tactics**
To Include: Call for Fire

Module: G / 001 87.8
Title: **Combined Arms/Tactical Training**

Module: H / 001 28
Title: **Administrative Annex**
Total: 277.3



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Module: A / 1

Title: Mandatory Training

Purpose: The purpose of this module is to get Soldiers inprocessed, settled in and making sure all required administrative documents are completed and all necessary references, training aids are issued to each student.

Remarks: None

Technique(s) of Delivery:

Small Group Instruction (SGI) (SG)

Hours

1.0

Security Clearance: Unclassified

Module: B / 1

Title: Demolitions

Purpose: This module provides instruction on how to calculate timber-cutting charges, steel-cutting charges, breaching charges, and explosive requirements for road craters. It also discusses how to employ bridge demolitions and preparation of a demolitions reconnaissance report. The Module concludes with an examination on demolitions.

Remarks: None

Technique(s) of Delivery:

Small Group Instruction (SGI) (SG)

Hours

56.0

Security Clearance: Unclassified

Lesson Title: Calculate Timber-Cutting Charges

References: FM 3-34.214 Explosives and Demolitions (Pg. 3-1 thru 3-10)

Lesson Title: Calculate Steel-Cutting Charges

References: FM 3-34.214 Explosives and Demolitions (Pg. 3-9 thru 3-17)

Lesson Title: Calculate Breaching Charges

References: FM 3-34.214 Explosives and Demolitions (Ch. 3, Section IV)

Lesson Title: Calculate Explosive Requirement For Road Crater

References: FM 3-34.214 Explosives and Demolitions (Pg. 3-23 thru 3-29)



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- Lesson Title:** Employ Bridge Demolitions
References: FM 3-34.214 Explosives and Demolitions (Ch. 4, Appendix F & H), FM 5-34 Pg. 9-25 thru 9-40
- Lesson Title:** Conduct a Demolitions Reconnaissance
References: FM 3-34.214 Explosives and Demolitions (pg. 5-5,5-6, Annex I)
- Lesson Title:** Demolitions Examination
References: FM 3-34.214 Explosives and Demolitions (Ch. 3 thru 5, Appendix G thru J and student handout)
- Lesson Title:** Direct Urban Breaching Operations
References: FM 3-34.214 Explosives and Demolitions (pg. 2-8, Ch. 3 & 7)
- Lesson Title:** Urban Breaching Operations Examination
References: FM 3-34.214 Explosives and Demolitions (pg. 2-8, Ch. 3 & 7)

Module: C / 1

Title: Reconnaissance

Purpose: This module provides instruction on reconnaissance reporting. It provides information on extracting information from mission directives, gathering critical information, and completing reconnaissance reports on roads, tunnels, bridges, and fords. It also provides information on completing the Engineer Reconnaissance Report and reconnaissance overlays. The Module concludes with an examination on Reconnaissance.

Remarks: None

Technique(s) of Delivery:

Small Group Instruction (SGI) (SG)

Hours

36.5

Security Clearance: Unclassified

Lesson Title: Conduct a Road Reconnaissance

References: FM 3-34.170 Reconnaissance (Ch. 3 & 5)

Lesson Title: Conduct a Tunnel Reconnaissance

References: FM 3-34.170 Reconnaissance (Ch. 5 & Appendix B)

Lesson Title: Conduct a Ford Reconnaissance

References: FM 3-34.170 Reconnaissance (Ch. 6 & Appendix B)

Lesson Title: Conduct a Bridge Reconnaissance

References: FM 3-34.170 Reconnaissance (Ch. 5)



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Lesson Title: Conduct a River Reconnaissance

References: FM 3-34.170 Reconnaissance (Ch. 5)

Lesson Title: Conduct an Obstacle Reconnaissance

References: FM 3-34.170 Reconnaissance (Ch. 1,4 & Appendix C)

Lesson Title: Conduct an Engineer Reconnaissance

References: FM 3-34.170 Reconnaissance (Ch. 3)

Lesson Title: Conduct a Route Reconnaissance

References: FM 3-34.170 Reconnaissance (Ch. 3,4 & 5)

Lesson Title: Reconnaissance Examination

References: FM 3-34.170 Reconnaissance

Module: D / 1

Title: Explosive Hazards

Purpose: This module provides instruction on; Explosive Hazards, Installation of minefields, and breaching tenants. The Module concludes with an examination on Explosive hazards.

Remarks: None

Technique(s) of Delivery:

Small Group Instruction (SGI) (SG)

Hours

34.0

Security Clearance: Unclassified

Lesson Title: Supervise Mine Clearing Line Charge (MICLIC) Operations

References: FM 3-34.210 Explosive Hazards Operations (Appendix K)
TM 9-1375-215-13&P

Lesson Title: Conduct Counter Explosive Hazards Clearance Operations

References: FM 3-34.170 Reconnaissance

Lesson Title: Prepare for Improvised Explosive Device Threats Prior to Movement

References: FM 3-34.170 Reconnaissance

Lesson Title: React to an Improvised Explosive Device (IED) Attack

References: FM 3-34.170 Reconnaissance

Lesson Title: Direct The Installation of a Volcano Minefield

References: FM 3-34.170 Reconnaissance



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Lesson Title: Organize Military Search Teams

References: FM 3-34.170 Reconnaissance

Lesson Title: Supervise the Installation of a Spider Munitions Field

References: FM 3-34.170 Reconnaissance

Lesson Title: Explosive Hazard Examination / After Action Review

References: FM 3-34.170 Reconnaissance

Module: E / 1

Title: Combat Construction

Purpose: This module provides instruction for directing the construction of obstacles and survivability positions. It also addresses procedures for estimating requirements for vehicular fighting positions. The module provides direction on the assembly of a Bailey Bridge and the installation of a traffic control point. The Module concludes with an examination on Combat Construction.

Remarks: None

Technique(s) of Delivery:

Small Group Instruction (SGI) (SG)

Hours

22.0

Security Clearance: Unclassified

Lesson Title: Direct Construction of Non-Explosive Obstacles

References: TM 3-34.85 Ch. 7 (Table 7-2) FM 5-102

Lesson Title: Estimate Requirements for Vehicular Fighting Positions

References: FM 5-103 Ch. 4

Lesson Title: Determine Construction Requirements for Bunkers and Shelters

References: FM 5-103 Ch. 3

Lesson Title: Supervise the Installation of a Traffic Control Point

References: FM 3-20.98 & FM 3-34.210

Lesson Title: Combat Construction Examination and After Action Review

References: FM 5-102 & FM 5-103

Lesson Title: Direct Assembly of a Bailey Bridge

References: FM 5-277 Ch. 3, 5, 6, & 7

Lesson Title: Direct Assembly of a Bailey Bridge Examination

References: FM 5-277 Ch. 3, 5, 6, & 7



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Module: F / 1

Title: Combat Tactics

Purpose: This module rounds out the warrior training for the combat engineer Soldier. The module provides instruction on calling for and directing fire and addresses the Battle Command Systems (FBCB2).

Remarks: None

Technique(s) of Delivery:

Simulator (SO)

Hours

17.0

Security Clearance: Unclassified

Lesson Title: Call For and Adjust Indirect Fires Applications

References: FM 6-30 & TM 3-34.85

Module: G / 1

Title: Combined Arms/Tactical Training

Purpose: This module provides Soldiers the opportunity to practice combat engineer skills, and leadership skills taught during the course in a tactical field environment. Rotating students in position of leadership responsibility within each group to enhance leadership abilities.

Remarks: None

Technique(s) of Delivery:

Small Group Instruction (SGI) (SG)

Training Aid (TA)

Hours

87.8

Security Clearance: Unclassified

Lesson Title: Prepare an Oral Operations Order (OPORD)

References: ADP 5-0, ADRP 5-0, ATTP 5-0.1



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Module: H / 1

Title: Administrative Annex

Purpose: To provide time to conduct administrative activities. To include in-processing, out-processing, one record Army Physical Fitness Test, book issue/turn in, CIF issue/turn in, graduation and student counseling.

Remarks: None

Technique(s) of Delivery:

Small Group Instruction (SGI) (SG)

Hours

28.0

Security Clearance: Unclassified

Total Hours: 277.3



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Written Examinations

**Demolitions Exam
Urban Breaching Exam
Explosive Hazards Exam
Combat Construction Exam
Bailey Bridge Exam**

Hands-on Examinations

Recon Exam

Evaluations

**APFT
PRT Instruction
Operational Environment Brief
Student Led Discussion
Oral Engineer History Brief
In Ranks Inspection
Tactical Leadership
APA Essay
Formal Memorandum (2)
Garrison Leadership**