

ENGINEER OFFICER EDUCATION TRANSFORMATION

By Command Sergeant Major Thomas H. Chambers (Retired)

The Engineer Basic Officer Leader Course (BOLC) III has recently undergone several changes, so many officers in the field may be unaware of the specific types of skills and the actual depth of knowledge that graduates of the BOLC III program of instruction possess. This article outlines these changes as well as other proposed changes to the courses.

Why Change?

A number of factors have led to a change of the Engineer BOLC III program of instruction, to include the rewrite of Field Manual (FM) 3.0, *Operations*; the emergence of the *Building Great Engineers* Campaign Plan; lessons learned from Iraq and Afghanistan; and the need to remain relevant. In particular, the increase in technical skills required and the difficulties faced in the contemporary operating environment (COE) need to be incorporated into the course.

During a course review, the BOLC III team recommended changes that field commanders have requested, such as the following:

- Contracting
- DARWARS*
- Supply Management
- Unit Maintenance Management
- Environmental Integration
- Project Management
- Theater Construction Management System (TCMS)

*DARWARS Ambush! is a personal computer-based simulation that provides a flexible training environment for Soldiers to learn important lessons regarding both mounted and dismounted operations in conflict zones such as Iraq and Afghanistan.

Important Changes

Changes in the course's subject material include greater emphasis on project management, contracting, TCMS, urban operations, counterinsurgency, information operations, and cultural awareness. General engineering instruction focuses on base camp design, project management, contracting, force protection, infrastructure reconnaissance, and field force engineering. The use of war games and simulation

has increased, and students fight a battle on a combat simulation program and conduct simulated reconnaissance using the RG-31, Husky, and Buffalo simulators.

The recent changes in the course address the gaps in technical skills proficiency. Each leader will receive training on unit supply and unit maintenance operations required of platoon leaders. We have also incorporated aspects of the COE into every scenario, and students encounter a few of the most difficult realities faced daily in operations. Lessons learned from combat are rapidly included in training to ensure the relevance and currency of the subject matter.

In addition, the United States Army Engineer School has implemented a program to require BOLC III leaders to complete a 24-hour block of prerequisite training in response to comments and suggestions from units deployed to theater. The training program will require students to register and complete the following Defense Acquisition University (DAU) online training:

- CLC 106 – Contracting Officer Representative With a Mission Focus
- CLC 011 – Contracting for the Rest of Us
- CLM 024 – Contracting Overview
- CLM 003 – Ethics Training for Acquisition, Technology, and Logistics (AT&L) Workforce

Each module is assigned an outcome that emphasizes the desired end state and provides instructional intent such as the following:

Leadership Fundamentals. Desired outcome: Students will demonstrate a comprehensive understanding of critical engineer training, leader functions, and administrative requirements of a successful platoon leader at the company level.

Doctrine Foundations. Desired outcome: Students will demonstrate a thorough knowledge of engineer doctrine at the company level, including intellectual tools that Army leaders use to solve military problems. Students will also demonstrate a comprehensive understanding of tactics and procedures of the various primary tasks associated with the elements of FM 3-0 full spectrum operations.

Defensive Operations. Desired outcome: Students will demonstrate the ability to employ defensive operations at the company level according to FM 3-0 by integrating a thorough understanding of direct-fire planning, landmine warfare,

Engineer BOLC III Schedule (In Weeks)

1	2	3	4	5	6	7	8	9	10	11	12	13	14
Leadership		Doctrine		Defensive		Offensive		General Engineering			Stability Operations		FTX
<p>Leadership Fundamentals</p> <ul style="list-style-type: none"> • Supply Management • Unit Maintenance Operations • Platoon Leader Seminar • Apply Ethical Decisionmaking Process at a Small-Unit Level • Engineer Branch History • Environmental Protection • Substance Abuse • Wellness Seminars • Noncommissioned Officer Development System • Leadership Challenges • Center for Army Lessons Learned Training • Force XXI Battlefield Command Brigade and Below (FBCB2) • Contracting Officer's Representative (COR) Course • Engineer History 		<p>Defensive Operations</p> <ul style="list-style-type: none"> • Combined Arms Defense • Obstacle Tactics and Norms • Other Obstacles • Introduction to Landmine Warfare • Conventional and Standard Minefields • Scatterable Mines and Future Systems • Mission Analysis Defensive Planning • Direct-Fire Planning • Engagement Area Development • Situational Obstacle Planning • Engineer Support to Defensive Operations • Defensive Planning OPORD • Defensive Planning I & II • Defensive Planning Tactical Exercise Without Troops (TEWT) • Urban Operations (Task Force) • Defensive JANUS 		<p>General Engineering Operations</p> <ul style="list-style-type: none"> • Engineer Technical Reconnaissance • River-Crossing Operations • Nonstandard Fixed-Bridge Classification • Standard Military Bridging • Site Investigations • Earthwork Computations • Equipment Production Rates • Drainage Structures • Road and Airfield Structures • Horizontal Construction TEWT • Critical Path Methodology • Force Protection Construction • Sewer, Water, Electric, Academics, and Trash (SWEAT) Assessment • Concrete • TCMS • Vertical Structures • Utilities • Construction Site Tour (United States Army Corps of Engineers [USACE]) • Vertical Construction TEWT • Construction Capstone 			<p>Stability Operations</p> <ul style="list-style-type: none"> • Cultural Awareness • Introduction to Search • COE Threats—IED/Suicide Attacks • IEDs and Booby Trap Tactics • Counter-RCIED (remote-controlled improvised explosive device) electronic warfare (CREW)/Intelligence, Surveillance, and Reconnaissance (ISR) • Explosive Hazard Recognition/Management • React to IED Contact/Extraction • Clearance Operations • Assured Mobility Practical Exercise • Task Force Engineer in Stability Operations • Route Clearance Planning • OPFOR Engineer Capabilities-Paramilitary • Counterinsurgency (COIN) • Task Force Engineer in COIN Operations • Mission Analysis Stability Operations • Assured Mobility Simulation • Stability Operations OPORD • COIN Enablers • Stability Operations I & II • Stability TEWT • Stability JANUS 						
<p>Doctrine Foundations</p> <ul style="list-style-type: none"> • Army Organization • Maneuver Warfare • Engineer Tactical Actions • Engineer Operation Order (OPORD) • Assured Mobility Seminar • Opposing Force (OPFOR) Engineer Capabilities • U.S. Engineer Capabilities • Geospatial Data Fundamentals • Terrain Fundamentals • FalconView™ • Military Planning Overview • Intelligence Preparation of the Battlefield/Engineer Battlefield Assessment • Scheme of Engineer Operations and Essential Mobility/Survivability Task • Tactical Operations Center Operations • Principles of Army Operations 		<p>Offensive Operations</p> <ul style="list-style-type: none"> • Combined Arms Offense • Basic Demolitions • Charge Calculations and Placement • Urban Breaching • Demolition Range • Platoon Breach Planning and Equipment • Detection Equipment • Explosive Hazard Detection Equipment • Engineer Support to Offensive Operations • Mission Analysis Offensive Planning • Offensive Planning OPORD • Offensive Planning • Task Force Level Breach Planning • Offensive Planning TEWT • Offensive JANUS 		<p>Field Training Exercise</p> <ul style="list-style-type: none"> • Situational Training Exercise (STX) Bridge Build [General Engineering Module] • STX Field Craft [Leader Module] • Precombat Checks (STX) • STX Clearance [Stability Module] • STX Cordon and Search [Stability Module] • Redeploy/Refit to Fight (STX) • STX Line of Communication Disruption [Offensive Module] • STX Sapper Stakes [General Engineering Module] • Precombat Checks (FTX) • Sapper FTX • Redeploy/Refit to Fight (FTX) 									

engagement area development, obstacle planning, and defensive planning to defeat an enemy attack, gain time, economize forces, and develop conditions favorable for offensive or stability operations.

Offensive Operations. Desired outcome: Students will demonstrate the ability to employ offensive operations at the company level by integrating a thorough understanding of demolitions, breaching, and offensive planning in order to capture the essence of the offensive in engineering operations.

General Engineering Operations. Desired outcome: Students will demonstrate the ability to conduct general engineering operations at the company level according to FM 3-0 by demonstrating a thorough understanding of civil support, restoring essential services, and protecting infrastructure and property according to FM 3-0 by identifying critical aspects of horizontal construction, vertical construction, and bridging operations.

Stability Operations. Desired outcome: Students will demonstrate the ability to employ engineer stability operations at the company level according to FM 3-0 by demonstrating a thorough understanding of counterinsurgency fundamentals and principles, stability operations, COE threats, explosive hazard recognition and management, improvised

explosive device (IED) fundamentals, clearance operations, route clearance planning, civil-military operations, negotiations, and search operations.

Field Training Exercise (FTX). Desired outcome: Students will demonstrate the ability to successfully conduct real-time engineer missions at the company level according to FM 3-0 as platoon leaders in a field environment by integrating and reinforcing instruction with tactical mission sets.

Conclusion

The purpose of this article is to keep field commanders informed of the depth and breadth of knowledge that BOLC III graduates possess upon completion of the course. The BOLC III team is working to incorporate many of the suggestions received from the field into the BOLC III program of instruction. Suggestions, lessons learned, and feedback from the field are welcome to ensure that we are providing the Engineer Regiment with the best possible young leaders. Contact the course manager at DSN 581-1310 or by e-mail at <thomas.chambers1@us.army.mil>.



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