

# ***BUILDING GREAT ENGINEERS AT ILE: FORGING FIELD GRADE SUCCESS***

*By Mr. Jonathan M. Williams*

*Educates and trains field grade officers to be adaptive leaders, capable of critical thinking and prepared to operate in full spectrum Army, joint, interagency, intergovernmental, and multinational environments.*

*—Command and General Staff College Mission Statement*

## **Engineer Skills in an Era of Change**

**I**n an era of seemingly constant change, engineer leaders at all levels are challenged to quickly adapt to their operational environment. Nowhere is this challenge more pronounced than at the field grade level, where the modular headquarters of brigades, divisions, and corps operate much differently than in the past. Commanders and staffs who conduct operations from these headquarters rely heavily on the digital command and control systems to fully understand, visualize, describe, and direct activities across the full spectrum of operations. However, more important to the success of these units is the intellectual power of the field grade officers—including engineers—who are

responsible for the bulk of the situational analysis in these headquarters. Hence, the professional training and education of engineer majors serve a crucial role in the success of the United States Army.

Each year the Army sends approximately 50 to 60 engineer officers to Fort Leavenworth, Kansas, for Intermediate Level Education (ILE) at the Command and General Staff College (CGSC). As part of the CGSC program of instruction, engineer officers are challenged to complete the six-month Advanced Operations Course in addition to the four-month core course. Throughout the yearlong resident study, engineer officers spend significant time honing their particular expertise as field grade officers.



**A faculty member at CGSC briefs ILE engineers at a recent Engineer Branch officer professional development session.**



**Engineer officers at CGSC participate in a division planning exercise.**

Even while embracing the constant changes throughout the Army and in the operational environment, the ultimate goal of the Engineer Branch training at ILE has remained the same—to produce the finest field grade engineer officers in the world and prepare them for continued service in the Engineer Regiment.

To this end, the CGSC faculty has worked hand in hand with the United States Army Engineer School and the United States Army Maneuver Support Center of Excellence at Fort Leonard Wood, Missouri, and the officers themselves to create broad opportunities for engineer majors to enhance their individual skill set while at CGSC. The current Engineer Branch training program has evolved over the past five years, reflecting the operational environment and the changing engineer force structure. The engineer officers share curricular and extracurricular sessions with fellow engineers from many of the installation's diverse communities, to include the—

- Precommand Course.
- School for Advanced Military Studies.
- Battle Command Training Program.
- United States Army Corps of Engineers, Kansas City District.
- CGSC faculty.

## **Engineer Branch Training Program**

**W**hile there are important points in the ILE curriculum where Engineer Branch experience is essential to the learning experience, much of the branch-specific training takes place outside the formal curriculum in informal settings such as brown-bag lunches and officer professional development (OPD) breakfasts. Given the impressive operational experiences and diverse backgrounds of the engineer officers at ILE, the Engineer Branch training program easily accommodates a wide variety of topics, in many cases using the students as discussion leaders in a learning model similar to graduate school. This approach has allowed great flexibility in scheduling and fostered a strong bond among engineer officers who otherwise would have limited opportunity to spend time together due to differences in seminar group schedules.

There are also opportunities for specific engineer training at ILE in the form of the Advanced Application Program (AAP), which offers student-chosen electives that include several topics with a strong engineer emphasis, such as the maneuver enhancement brigade, geospatial intelligence, and independent study of tactics. The courses allow officers to focus on an area of particular interest to themselves, such as preparing to take the professional engineer exam or attending the Joint Engineer Officer Course at Fort Leonard Wood. These AAP courses, coupled with the robust extracurricular program, offer engineers unique options to prepare themselves for immediate assignments as well as

long-term leadership of engineer formations throughout the rest of their careers.

Key to the success of building great engineers at ILE has been the role of the student-led Engineer Steering Committee for each year's class. The engineer officers who volunteer to be on the steering committee work with the CGSC engineer faculty to design a dynamic professional development program that is uniquely suited for the affected engineer officer population. The steering committee plans, coordinates, and executes each of the engineer activities based on the college schedule and works to offer topics and activities of interest to the entire engineer CGSC population.

## Not Your Daddy's CGSC

**A**nother important factor in the Engineer Branch training is the significant amount of combat experience the CGSC engineer officers possess. More than 75 percent of them have served in combat in Iraq or Afghanistan and almost two-thirds of the officers have multiple combat deployments. Given this impressive experience, one key feature of the Engineer Branch training program emphasizes having the engineers share their unique perspectives in a casual yet structured setting. The many lessons learned and tactics, techniques, and procedures developed become powerful points of discussion inside and outside the classrooms and serve to unite the officers in a special way. Engineer officers routinely serve as OPD discussion leaders on such topics as counter improvised explosive device and route clearance operations, base construction and repair, field force engineering, and terrain visualization/geospatial intelligence.

## Collaboration Among Engineers

**T**he ongoing Engineer Branch training program at CGSC has also benefitted extensively from support from other organizations and other parts of the Engineer Regiment. For example, for the past seven years, the National Geospatial-Intelligence Agency (NGA) has sent support teams to CGSC during the ILE exercises to simulate the role of the operational support teams that are part of the corps and division headquarters during deployments. Besides producing a variety of high-quality terrain and imagery products, these teams serve as a conduit through which national-level resources trickle down to the tactical units on the ground. These NGA specialists have proven invaluable to the quality of the CGSC exercises and have contributed greatly to the education of the officers at ILE, especially the engineer officers who are usually viewed as the terrain experts within their staff groups.

Another effective initiative is a collaborative website for engineers within the CGSC local area network's student SharePoint site. The engineer officers and faculty all contribute to the site and can share engineer-specific information across the college quickly and easily. This repository serves as a one-stop ready reference for the engineer students and contains extensive files on engineer force structure, doctrine, operations, and materiel. Perhaps even more

important is that it allows the engineer officers to remain current with the latest available information so they can provide individual expertise to their assigned staff groups and can truly be the branch experts they are required to be.

There is also frequent interaction between the engineers at CGSC and the civil side of the United States Army Corps of Engineers, promoted largely by the Kansas City District office. The district commander has conducted OPD sessions each year with ILE students and has also facilitated briefings by the district's higher headquarters—the Northwest Division—for the most recent class. Coupled with the Kansas City, Missouri, chapter of the Society of American Military Engineers, the district headquarters has sponsored several programs specially tailored to the engineer majors at CGSC.

## Sustaining the Momentum

**L**ieutenant Colonel John E. Byrn, a CGSC faculty member in the Center for Army Tactics (CTAC) and the current Engineer Branch subject matter expert for the college, has overseen the evolution of the program and says it has contributed to the quality of the education for the engineer officers. He believes that the value of these opportunities is complemented by support from engineer organizations and leaders.

Brigadier General Ed Cardon, the deputy commandant of CGSC, understands the crucial role the Engineer Branch program plays in the education of the CGSC officers. He believes that the opportunity for engineer officers to both learn and connect at CGSC has lifelong value. The education will enable their thinking and approach to solving complex problems in the future, and the connections will help sustain them—both professionally and personally—for the remainder of their careers.

The engineer officers who attend ILE at Fort Leavenworth each year constitute a significant portion of the Regiment's field grade officers. The skills and leadership they bring to the fight are invaluable. Making sure that they have the optimal opportunity to prepare themselves for their return to the formations remains the driving force behind the CGSC's Engineer Branch training program. At Fort Leavenworth, building great engineers is not just a slogan; it's an everyday commitment. 

*Mr. Williams is an assistant professor with the CTAC at CGSC, where he has taught for nine years. He retired after 22 years of active duty service as an engineer officer, including assignments with the 197th Infantry Brigade; the 132d Engineer Brigade; the 36th Engineer Group; the 1st Cavalry Division; III Corps; the United States Army Engineer Center, Fort Leonard Wood; and the Multinational Force and Observers, Sinai, Egypt. He also served as an instructor at the United States Military Academy at West Point, New York. A distinguished military graduate of the University of Mississippi, Mr. Williams holds master's from the University of Alabama and Webster University.*