



Joint Engineer Operations Course

By Mr. Robert B. McFarland, Jr.

The joint engineer community continues to move forward in the process of educating and preparing its officers and noncommissioned officers for operations in the joint environment. The Doctrine Training Working Group (DTWG) of the Joint Operational Engineer Board (JOEB) overwatches the combined efforts of its engineer centers of excellence to fully develop the Joint Engineer Operations Course (JEOC), formerly known as the Joint Engineer Officer Course. The new course title provides a more accurate description of the intent and content of the course. The JEOC is a two-phase course designed to better prepare officers and selected senior noncommissioned officers for duty on the joint engineer staff of a joint task force (JTF). The distributed learning (dL) phase is designed to be 40 to 48 hours and a prerequisite for attendance of the resident phase, designed to be 32 to 40 hours.

Prompted by its own introspection (see *Engineer*, January-March 2006, "Joint Engineer Officer Course," page 17) and guidance derived from the *National Military Strategy*, *Quadrennial Defense Review*, and the Chairman of the Joint Chiefs of Staff's *CJCS Vision for Joint Officer Development*, as well as from other sources, the joint engineer community has firmly set its sights on developing engineers who are better prepared and who can quickly immerse themselves into the JTF and its ongoing campaign.

To date, there have been two JEOC pilots. The popularity of the course has resulted in a continuing dialogue among the joint engineer community on the course itself, as well as on joint operations and its impact on the education of the engineer force for the future. Enrollment queries occur regularly, in particular from junior leaders wanting to enhance their knowledge of joint engineer operations.

Course Concept

In October 2004, members of the JOEB-DTWG training subworking group met at Fort Leonard Wood, Missouri, to discuss JEOC development. Officers at the senior company grade and junior field grade levels were the target audience, but it was expanded to include senior noncommissioned officers and government civilians who could

also serve in a JTF engineer billet. The concept of the course was defined as follows: *Understand and be able to integrate engineer capabilities across the spectrum of operations to ensure support of joint force commanders' engineer requirements and accomplishment of the joint mission.* The end state competencies that the student would possess upon completion of the course were to—

- Describe joint operations, joint warfare, and the joint planning system.
- Describe, comprehend, and apply joint engineer doctrine.
- Describe, comprehend, and apply joint engineer planning using scenarios, historical examples, and case studies.
- Describe and comprehend service engineer capabilities and unique requirements.
- Describe, comprehend, and apply the strengths, effects, and basic doctrinal employment concepts of service engineers.
- Describe, comprehend, and apply employment principles for using service engineer capabilities to support joint and service engineer requirements.

DTWG Determinations

The United States Army Engineer School's Directorate of Training and Leader Development (DOTLD) tasked its Training Integration Office to write the JEOC white paper that was distributed in March 2005 for comments from the field. Based on feedback, a formal JEOC presentation was given to the JOEB-DTWG on 7 April 2005. The presentation included a draft 160-hour course with an 80-hour dL phase and an 80-hour resident phase. The resident phase focused on the operational side of staff work and concentrated on a capstone engineer exercise centered on crisis action planning.

The DTWG determined that although the students needed to understand the operational environment where they worked, they needed to focus more on execution and less on planning. The resident phase length was relooked, with a target of 40 hours being the goal. All agreed that a resident phase was crucial to enhance the educational opportunity of the junior

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members of the joint engineer community. The ability to interact in a classroom environment, while focusing on issues and exercises specific to the joint engineer community, would provide an excellent opportunity to better understand each other's capabilities.

Training Developer's Conference

From 31 August to 1 September 2005, DOTLD hosted a training developer's conference (TDC) with 27 representatives from the Army, Navy, Marine Corps, Air Force, and other associated organizations. The attendees were formed into three working groups to address issues specific to their group:

- dL working group
- Resident phase working group
- Administrative working group

Each working group was assigned a senior advisor (a senior lieutenant colonel or a colonel), and these senior advisors were also the JEOC Executive Steering Committee.

On the second day, the Engineer School hosted a video-conference, with several of the combatant command engineers (United States Central Command, United States Southern Command, United States European Command, and United States Pacific Command) attending and incorporating their input into the course design. The end result of the TDC was a proposed two-phase 80-hour course with a 48-hour dL phase and a 32-hour resident phase. The decision was made that Fort Leonard Wood would host the first pilot course in June 2006.

Upon completion of the TDC, members of the working groups—consisting of key personnel from the Joint Forces Command, the Joint Staff J-4, the Air Force Institute of Technology, the Civil Engineer Corps Officer School, and the Marine Corps Headquarters—held monthly teleconference in-progress reviews (IPRs), providing lesson material and pursuing funding. The results of the TDC were consolidated, and the course concept was designed to meet the identified requirements. The proposed concept was presented to the JOEB at the next quarterly videoteleconference in November 2005. Coordination among the joint engineer community resulted in the United States Army Corps of Engineers® committing to provide funds for hiring two temporary employees to develop the JEOC program of instruction and

associated lesson plans. The Joint Staff J-4 agreed to provide funds to develop the dL phase courseware.

In December 2005, the JEOC web portal was developed by the Directorate of Common Leader Training (DCLT) and a beta test was conducted to determine accessibility throughout the continental United States. A resident phase coordination IPR was held at Fort Leonard Wood in January 2006, where the TDC resident phase developer's intent was further clarified. This intent was then applied to the dL phase development to create the module linkage between the two phases. Further coordination with the Joint Forces Staff College, National Defense University, resulted in the *Purple Sunset* concept plan exercise becoming the primary source for driving the resident phase practical exercises.

A key result of the TDC was the determination of seat quotas. Upon returning from the conference, the Joint Staff J-4 engineer representative queried the combatant commands for their estimates of officers, senior noncommissioned officers, and selected civilians within their commands and component commands who would benefit from attending the JEOC. These personnel were divided into three bands, depending on their status and probability of participation with a JTF engineer staff.

- Band 1 personnel were those assigned to a JTF, combatant command, or component command.
- Band 2 personnel have a high probability of being tasked to help stand up a JTF.
- Band 3 personnel are junior officers preparing to join a prospective JTF headquarters and all others who would benefit from the JEOC.

The decision was made to use Band 1 numbers to determine seat quotas and keep with the original intent of having three small groups of 15 students for a total class size of 45. The total rollup for Band 1 was 174 personnel. This number provided the developers with a base figure to determine that an annual throughput of up to 174 personnel in 45-person groups would equate to conducting three to four classes per year. The personnel numbers were submitted by Service, and these figures were used to determine seat percentages. The Army received 21 seats (46 percent), the Air Force 16 seats (36 percent), the Navy 7 seats (16 percent), and the Marine Corps 1 seat (2 percent). The Army gave two of its seats to the Marine Corps to ensure that each small group had representation in it.

Course Development

In January 2006, a JEOC Tiger Team consisting of DOTLD and DCLT members was organized at Fort Leonard Wood to kick off the development of the dL phase. The team coordinated with the Joint Forces Staff College to use approximately 10 hours of existing Joint Knowledge Development Distribution Capability courseware in the first and second modules of the dL phase. A weekly IPR was established to coordinate the team effort. A *SharePoint* site was established to exchange materials and discussion among the team members, and DCLT assumed responsibility for developing the Learning Management System (LMS) portal for the JEOC dL phase. The decision was made to use *Blackboard* as the LMS to host the dL phase and to open it to the students in April.

Small-group facilitators for the resident phase were provided by each of the Services. The goal was to provide a facilitator (a senior major or a lieutenant colonel) who had served as a key member of a JTF engineer staff. Ideally, the facilitator would have served as a deputy JTF engineer or as a plans or operations chief. Each Service identified one facilitator, and they began to participate in the IPRs where they were assisted in navigating the dL phase lessons in *Blackboard* and shown some of the features that could assist them in corresponding with their students. Additionally, the facilitators arrived four days before the students and participated in a resident phase train-up session with the Fort Leonard Wood development team. The students were divided into three small groups. Each facilitator was assigned a group and began the collaborative process of assisting them as they progressed through the dL phase and prepared for the resident phase.

Pilot Course 1

There were 53 students enrolled in the first JEOC pilot course, conducted from April to June 2006, and 37 attended the resident phase. All four Services were represented. The student population also included four senior noncommissioned officers and two government civilians. The students were surveyed on each lesson during the dL phase and resident phase. A final course after-action review was held upon completion of the resident phase with the students, facilitators, and course developers. Recommendations from the students and facilitators were staffed and used to make updates and changes to the lessons. The students felt the course was important for their development, as well as that of their peers and subordinates, and many commented that they wished they had attended a course like this earlier in their careers.

Pilot Course 2

There were 83 students enrolled in the second JEOC pilot course, conducted from October to December 2006, and 48 students attended the resident phase. The dL phase was opened to the students in October, and the resident phase

was conducted at Fort Leonard Wood in December. Facilitator selection and student notification were similar to the first pilot. However, for the second pilot, five facilitators participated. Additionally, the Joint Forces Command engineer representative attended and, in essence, provided a sixth facilitator. This tag team approach appeared to work well, and the facilitators recommended that it be used in future courses. As with the first pilot, student feedback was positive and enthusiastic.

The high level of interest within the joint engineer community resulted in the dL phase lessons from the second pilot being placed on the Fort Leonard Wood engineer portal—the JEOC Open Enrollment Course is open to anyone with an Army Knowledge Online (AKO) account. Students without an account are sponsored by others in the engineer community who have one, but the new Defense Knowledge Online (DKO) system is expected to help resolve this issue. This course currently has 38 students.

Pilot Course 3

JEOC development continues through fiscal year 2007. Through the cooperative efforts of the Joint Forces Command, Engineer School, Air Force Institute of Technology, Civil Engineer Corps Officer School, and Marine Corps Headquarters, the third JEOC pilot is scheduled for April to July 2007. The dL phase opens in April, and the resident phase will occur at Fort Leonard Wood in July. Both the facilitator and the student will be key players in ensuring the success of the course, not only for their Service but for the entire joint engineer community.

JEOC Graduates

Graduates of the JEOC pilot courses are followed for one year after their attendance—through surveys sent at 90, 180, and 365 days—to ensure that the course content continues to be relevant in their environment while serving in a JTF assignment. Although not all JEOC graduates are assigned to a JTF, many are assigned to combatant command staffs or serve with a service component staff in support of a joint force commander, and they also provide the JEOC development team with valuable feedback.



Mr. Robert McFarland is a contractor with C2 Technologies, Inc. and works in the Training Integration Office, Directorate of Training and Leader Development, United States Army Engineer School. A retired Army lieutenant colonel and a former battalion commander, he is a graduate of the Command and General Staff College and the School of Advanced Military Studies (SAMS). He is the project manager for developing the Joint Engineer Operations Course, along with other ongoing initiatives at the Engineer School.