

NEW COURSE ANNOUNCEMENT: IEDs

OA 4910 Improvised Explosive Devices (IEDs) – Defeat the System (4-0)

Winter 2006

Background

At a recent NPS Board of Advisors meeting RADM Jay Cohen, the Chief of Naval Research, requested that NPS offer a course on IEDs. At the same meeting, General Michael W. Hagee, Commandant of the Marine Corps, stated that defeating IEDs was among the highest priorities of the Marines.

Introduction

Recently, half of Coalition combat deaths in Iraq have been caused by improvised explosive devices. Efforts to up-armor vehicles, to develop technology to detect and disarm the devices, and to modify tactics, techniques, and procedures (TTPs) have not kept pace with the methods used by the insurgency. The insurgents have responded to our efforts by evolving their tactics, using more sophisticated devices and trigger mechanisms, and using larger and more lethal explosives.

Faculty and staff at NPS have been working on this problem in cooperation with several DoD organizations. See the NPS Research web site <http://www.nps.edu/Research> for the research update titled “Improvised Explosive Devices (IEDs)”. Some work is directed to defeat the IED devices with improved surveillance, jamming, and better armor. Other work uses modeling, analysis, systems technology, and information technology to defeat the total IED attack chain. This first course at NPS devoted to IEDs will focus on the later approach which has come to be referred to in DoD as “defeat the system” (in contrast to “defeat the device”). The modeling, analysis, systems analysis, and systems engineering tools that will be applied to the IED problem in this course are taught in several curricula at NPS.

An IED campaign is just one possible component of an insurgency. It is necessary to identify the goals and strategies of an insurgency in order to understand why IEDs are used and how the insurgency measures their success. It is only from this larger perspective that an effective counter-IED campaign can be planned, executed, and evaluated.

The course will be limited to US officers with a SECRET clearance to allow ready access to current data and other resources from Iraq

and to allow faculty, students, and course visitors to discuss current operations and capabilities in Iraq.

Course description

The course studies the improvised explosive device (IED) problem with special emphasis on its use by insurgents in Iraq. The course will discuss the use of IEDs as one tactic in an insurgency and the goals and strategy with respect to the use of IEDs. The focus of the course will be the use of models, analysis, and systems technology to defeat the IED system. The topics will include as (and only if) appropriate: dynamic display, statistical analysis, requirements analysis, war gaming, decision analysis, influence diagrams, social networks, game theory, and warfare modeling.

PREREQUISITES: probability (OS2103 or equivalent); U.S. citizenship and SECRET clearance

Class organization

The course will be conducted as a seminar with participation by faculty from several NPS academic departments. Students should be prepared to take an active role in defining the problems, gathering data and other resources, posing questions, as well as constructing, analyzing, and evaluating models of proposed actions. There will be several short papers required; there will not be a final exam.

An organizational meeting will be held Friday 6 January at noon in Glasgow Hall room 286. The coordinating instructor will be Gordon Bradley, Glasgow Hall 201, ext 2359, gbradley@nps.edu. The course unclassified web site is <https://diana.cs.nps.navy.mil/IED/> (contact Gordon Bradley for user name and password). In a few weeks a reading list will be started at the web site (there will **not** be a book order at the bookstore).

