SUBMARINE COMBAT SYSTEMS
JULY 11- JULY 15, 2011

LECTURER-IN-CHARGE: Mr. Gary Streimer, Mission Capability Manager, Naval Undersea Warfare Center (NUWC)

TUITION: $1800.00

DAILY CLASS ROUTINE:

Monday: Classroom facility opens at 0730 and will be secured at 1700. Class begins at 0800 and ends at 1700 with a 1 hour break for lunch.

Tuesday: Classroom facility opens at 0730 and will be secured at 1700. Class begins at 0800 and ends at 1700 with a 1 hour break for lunch. Class Dinner, hosted by MIT, begins at 1700 and ends at 1900.

Wednesday: Classroom facility opens at 0730 and will be secured at 1700. Class begins at 0800 and ends at 1700 with a 1 hour break for lunch.

Thursday: Classroom facility opens at 0730 and will be secured at 1700. Class begins at 0800 and ends at 1700 with a 1 hour break for lunch.

Friday: Classroom facility opens at 0730 and will be secured at 1600. Class begins at 0800 and ends at 1600 with a 1 hour break for lunch.

COURSE DESCRIPTION AND OBJECTIVE: The objective of this course is to provide the student with overall knowledge of submarine combat systems and the major factors that impact their development and their impact on the submarine platform design(s).

The course will cover the impact of submarine missions, operating environments and threats as they relate to platform design considerations. Performance and design characteristics of individual submarine combat subsystems such as sonar, combat control, communication, Electronic Surveillance Measures (ESM), electro-optical imaging, weapons, payloads, and launcher systems are addressed. Aspects regarding combat system technology insertion and payload selection for follow-on Virginia SSN Block upgrades, Trident SSGN conversions, Ohio Replacement Program and potential follow-on platforms will be emphasized. The following topics will be covered:

- Introduction and Overview of Submarine Missions and Roles
- DoD Submarine Acquisition Environment
- A Perspective on US Submarine Force; Past, Present, Future
- Submarine Combat Control Systems Architecture Evolution
- Communications/Electro-Magnetic/Electro-Optical Systems
- Sonar Arrays (Hull/Towed Arrays) and In-Board Processing
- Combat Control Systems
- USW Weapon and Off-Board Vehicle Systems
- Undersea Strike – A Current Perspective
- Advanced Payloads for Future USW and Littoral Operations
- Payload Storage and Launcher Systems
- Submarine-Based Special Warfare
- Perspectives on Strategic Systems, Future Systems and Current Submarine Operations
LECTURERS:
Mr. Gary Streimer Mission Capability Manager, Naval Undersea Warfare Center, NUWC
Mr. John Babb Director CONFORM Office, Warfare Center Executive - Undersea, NUWC
Mr. Wayne Banks Special Warfare Mission Capability Manager, NUWC
Mr. Daniel Britton Submarine Electromagnetic Systems Engineering Agent, NUWC
Mr. Tom Conrad Senior Systems Engineer, Rite-Solutions, Inc.
Mr. Charles Elste Senior Systems Engineer, Rite-Solutions, Inc.
Dr. Gerard Exley Head, Submarine Electromagnetic Systems Department, NUWC
Dr. Evangelos Giannopoulos Chief Engineer of Development Systems, NUWC
Mr. James Gutkowski Head, Launcher Systems and Payload Integration Division, NUWC
Mr. Michael Kalisz System Validation and Acceptance Branch Head, NUWC
Mr. Juergen Keil Vice President, Strategic Development, Rite-Solutions, Inc.
Mr. Tim Levandowski Mission Capability Manager for the Anti-Surface Warfare, NUWC
Mr. David Medeiros Head of the Undersea Warfare Analysis, NUWC
Mr. Martin Moebus Head, Development Systems Division, NUWC
Mr. Charles Radl Strategic Planner for the National Workload Manager, NUWC
Mr. Ed Rishmany USW Strike Mission Capability Mgr, USW Combat Systems Deputy Dept Head, NUWC
Dr. Tom Stottlemyer Program Manager, Surface Ship USW Systems, NUWC
Mr. Timothy Straw Chief Engineer, Transducers, Arrays & Deployed Systems, NUWC
Mr. Alan Tyler Technical Program Manager, Torpedo Development, NUWC
Guest Lecturers Senior Officer(s)/Civilian(s) from the Operational & Acquisition Community

Special Note: This course contains material governed by Distribution Statement D. Distribution authorized to the Department of Defense and U.S. DoD contractors only. Other requests shall be referred to Naval Undersea Warfare Center, 1176 Howell St., Newport, RI 02841-1708 via the Lecturer-in-Charge, Mr. Gary Streimer.

GENERAL INFORMATION

LOCATION: Classes will be held in the Hill Building, Building NE-80, Room 1409 at One Hampshire, Cambridge, MA. The classroom is adjacent to MIT’s main campus at The Charles Stark Draper Laboratory. An interactive MIT campus map is available on-line at http://whereis.mit.edu/.

COURSE ELIGIBILITY AND CLASSIFICATION: Applicants are expected to have mature technical backgrounds which, either through experience or education is at least equivalent to graduate education. This course is classified SECRET/NOFORN. A final SECRET security clearance is required. The course is open to U.S. active-duty military, U.S. Department of Defense employees, and U.S. civilian contractor personnel with U.S. Department of Defense sponsorship. It is not open to foreign nationals. A U.S. Government ID or Passport will be required each day to obtain a badge for classroom access.

APPLICATION AND TUITION PAYMENT: Course enrollment is limited. Applications AND tuition payment are due THREE (3) weeks prior to the first day of the course. Applications may be submitted electronically (e-mail to profsum@mit.edu), by fax ((617) 753-4962), or by mail to the following address:

Massachusetts Institute of Technology
Department of Mechanical Engineering
77 Massachusetts Avenue, Room 5-317
Cambridge, MA 02139-4307
Attn: Mary Mullowney

Course tuition is $1800.00 and payment must be made in full with the application. You will not be enrolled in the course until payment is received. Payment can be made by check, payable to MIT Account #1541101, and mailed to the address above or on-line by credit card at http://web.mit.edu/2n/profsum/Pro_Summer_Payment.html.

Students will receive confirmation of course enrollment AFTER receipt of their application and tuition payment. Those applicants who will not be enrolled will receive a refund of their tuition payment.

CANCELLATION: Cancellations within ONE (1) week of the first day of the course will be subject to a $100.00 charge. Substitution by another applicant will be allowed provided an application is received and their security clearance is processed by Draper Laboratory.

ACCOMMODATIONS: Course tuition DOES NOT include accommodations. Each student must arrange their own transportation and hotel accommodations. Hotel space in Cambridge is very limited during the summer, so early advance reservations are strongly recommended. A block of hotel rooms at the government per diem rate has been reserved at the Cambridge Marriott. Reservations can be using the following link: http://www.marriott.com/hotels/travel/boscb?groupCode=gdogdoa&app=resvlink&fromDate=7/10/11&toDate=7/15/11. The block of rooms will only be held up to FOUR (4) weeks prior to the first day of the course. The hotel is within walking distance of The Charles Stark Draper Laboratory, and provides convenient access to the MBTA Red Line at the Kendall/MIT station. Car rental is neither necessary nor recommended.

STUDENT ATTIRE: Casual (Business attire is neither required nor desired).

REFRESHMENTS: Continental breakfast will be provided in the morning and a light snack each afternoon. Lunch will be provided on those days when working lunches/guest speakers are scheduled.

EMERGENCY CONTACT INFORMATION: During class, students can be contacted by leaving a message with Lisa Kelleher at (617) 258-4928 or by e-mail to lkelleher@draper.com.

PORTABLE ELECTRONIC DEVICES: This course is CLASSIFIED and as such the classroom will be a managed as a CLOSED AREA. Among other restrictions, this means that no recording devices or electronic devices will be allowed into the room. Arrangements for students requiring a medical assist electronic device must be made THREE (3) weeks prior to the first day of the course by contacting Lisa Kelleher at Draper Laboratory at lkelleher@draper.com.

Examples of portable electronic devices include: laptops, PDAs, iPods, calculators, cell phones, cameras, remote car keys, and flash drive memory sticks. NOTE: this is not an all-inclusive list.

A guarded storage area outside the classroom will be provided for any personal electronic devices brought to the facility.

VISIT REQUESTS: Visit requests should be sent to the attention of Lucy Rodrigues THREE (3) weeks prior to the first day of the course. Visit requests MUST include the following or the request will not be processed: valid dates (length of the course only NOT the entire year); name of the course; and indicate you are attending as a student. JPAS is the preferred method for visit requests. Draper’s JPAS number is 51993-4. Visit requests may also be faxed or mailed to the following:

The Charles Stark Draper Laboratory, Inc.
555 Technology Square
Cambridge, MA 02139-3563
Attn: Lucy Rodrigues, Room 2194D

Fax number: (617) 258-2000

The security protocols in place at the Draper facility may be slightly different than those at your place of employment, so if you would like a detailed Security briefing prior to your arrival, please contact Lucy Rodrigues at (617) 258-2413 for arrangements.

Professional Summer Internet Web Site: http://web.mit.edu/2n/profsum