

Training Insights



by Larry Mize

Larry Mize graduated from Xavier University with a Bachelors of Science in Mathematics in 1973. He entered active service in the United States Navy serving a career specializing in Naval Intelligence, Aircraft Carrier Operations, Naval Special Warfare (SEALs), and Space Operations. Mize attended French language training at the Defense Language Institute and subsequently served as U.S. Navy Liaison Officer to the Commander French Forces Indian Ocean/French Foreign Legion/Commandos Marine in Djibouti. He attended the Naval Postgraduate School and was awarded a MS in Space Systems in 1986, subsequently serving at U.S. Space Command and U.S. Strategic Command. Mize is currently Chief of Space and Global Missile Defense Education and Training.

Army Element NSSI contact info: Chief, Army Element: LTC Jorge Rangel: jorge.rangel@afspc.af.mil (719) 593-8794 Ext 300
Army LNO: LTC Richard Wolfe: richard.wolfe@afspc.af.mil (719) 593-8794 Ext 369
Instructors: clifton.pingrey@afspc.af.mil (719) 593-8794 Ext 125 / patrick.obrien@afspc.af.mil (719) 593-8794 Ext 369
FWC DCD Training Branch and NSSI Web sites: For more information or to answer your training questions go to:
-FWC DCD: <http://www.smdc.army.mil/FWC/Training/Training.html>
-NSSI: [https://halfway.peterson.af.mil/nssi/\(Zbpgiuljfl0ytk3v5w5y2\)/index.aspx](https://halfway.peterson.af.mil/nssi/(Zbpgiuljfl0ytk3v5w5y2)/index.aspx)

2006 FA40 Space Operations Officer Qualification Courses (SOOQC)

SOOQC 06-01 graduated Aug. 17 with 25 students.

SOOQC 06-02 runs Sept. 07 Nov. 17, 2006 with a POI that includes:

- incorporation of National Security Space Institute (NSSI) four-week Space 200 course as the space fundamentals phase
- five-days of SAP-level Space Control training to include incorporation of the formal Counterspace Planning and Integration Course
- emphasized space planning process with integrated end-of-course Command Post Exercise during last two weeks
- enhanced field experience trips to complement in class instruction (Buckley AFB, Digital Globe Inc., White Sands and HELSTF, VAFB/14 AF/JSPoC, Boeing/Northrop Los Angeles, D.C.: SMDC/ARSTRAT HQs and CG social, NSSO, NRO, NGIC, NSA, DEFSMAC, ASPO, TEC, INSCOM/1st IOC.

For more information contact: Larry Mize, chief of training, FWC DCD: larry.mize@smdc-cs.army.mil (719) 554-4545

National Security Space Institute (NSSI) Courses

Following is a synopsis of Space courses available at National Security Space Institute. For more detailed info visit the NSSI Web site: <https://halfway.peterson.af.mil/nssi/>

Advanced Course Missile Warning: 13 weeks of in-depth education on missile warning and defense with a focus on Space-based warning assets. Topics include sensor physics, enemy threat systems, warning architectures; air/land/sea/Space-based sensors, missile warning, and missile defense operations centers, warning processes and tactics.

Advanced Course NAVOPS: A three-month course preparing students to employ Space-based navigation systems across the full spectrum of warfare. Students graduate with the expertise to lead unit training functions, develop tactics, techniques and procedures (TTP), and influence future systems acquisition. Requirements include written exams, class presentation evaluations, scenario exercises and a research paper.

Counterspace Planning and Integration Course: A three-day advanced education course, which provides a comprehensive look into the Space control mission area.

Director of Space Forces Course: A five-day course designed to provide selected senior leaders education and training in preparation to serve as the senior Space advisors in theater.

Space 200 Course: A four-week course with an emphasis on warfighter integration of Space power, and significant technical, nuclear and acquisition content. The target audience is Department of Defense civilians and military at the mid-career eight to 10 year point. *NOTE: All Army Quotas Managed by Future Warfare Center Directorate of Combat Development. Contact: larry.mize@smdc-cs.army.mil*

Space 300 Course: Designed for Space professionals at the 13-15 year point, Space 300 is a "thinker's course," primarily using guided discussion techniques to teach tomorrow's senior Space leaders to solve problems of Space bearing on national security. Space 300 expands the purview established within Space 200 to encompass a truly National perspective, to include considerations of Joint, National, Civil, Commercial and even Foreign Space. *NOTE: All Army Quotas Managed by Space and Missile Defense Command Proponency Officer. Contact: Clay.Scherer@smdc.army.mil*

Space Fundamentals Course: A two-week familiarization course for all branches of service designed for all military and civilian personnel (O-6 and below and civilian equivalents) that provides an educational and training bridge for new Space support personnel or those within operations with little space exposure. It is designed to introduce the student in the areas of doctrine, orbital dynamics, environment, Space law, physical science aspects of space systems and force applications.

NSSI COURSES (continued)

Space in the Air and Space Operations Center Course: A 10-day course designed to prepare Space professionals to effectively augment theater Air Operations Centers during exercise and real-world contingencies. This course provides both academic instruction and hands-on equipment training needed to prepare graduates to integrate air and Space power in support of theater commanders globally. Graduation from Space Operations Course, Space 200 or FA40 is a prerequisite requirement to attend Space in the Air and Space Operations Center Course.

Space Operations Course: A two-week course providing a common picture of Space operations to Department of Defense personnel from diverse backgrounds, services and agencies. This course highlights capabilities, limitations, vulnerabilities, applications and employment considerations of the numerous Space systems integrating Space power into military operations. Space Operations Course replaces the Advanced Space Operations Course (ASOC) and the Interservice Space Intelligence Operations Course (ISIOC).

Space Operations Executive Level Course: Designed for senior staff personnel, commanders, senior-ranking individuals new to the Space operations career field, or those requiring a refresher course in the capabilities, limitations, vulnerabilities of critical Department of Defense, National, civil and commercial Space systems.

Increased Army Presence Enhances Courses at The National Security Space Institute

LTC Richard Wolfe, USA, Army Liaison, National Security Space Institute

In 2001, the Space Commission published their report assessing U.S. National Security Space management and organization. The report contained five directives necessary to ensure the nation has the means necessary to advance its interests in Space. One of these directives put in motion the task to create and sustain a cadre of Space professionals. Military Space professionals look to the National Security Space Institute (NSSI) in Colorado Springs, Colo., to build upon their Space warfighting knowledge and skills. Officially activated in October 2004, by Air Force Space Command (AFSPC), the NSSI is an outgrowth of the Space Warfare Center's former Space Operation School (SOPSC) and serves as the National Security Space Community's main hub for space education and training. Commonly referred to as the "Space school house," the NSSI predominately fills its classrooms with Air Force Space Command personnel, but includes members from throughout Department of Defense and National Agencies that make up National Security Space. As a result, the Army, Navy, Marines, National Reconnaissance Office and even NASA send its Space Cadre to the NSSI.

The NSSI was recently re-organized under a new rank structure featuring a two-star "Chancellor" billet and three O-6 positions (Air Force, Army, Navy). The new structure will match the expected growth and "Jointness" of the NSSI. The Chancellor, U.S. Air Force MG Erika Steuterman is a reservist, dual-hatted as the Individual Mobilization Augmentee (IMA) to the AFSPC Vice-Commander. The Air Force and the Navy and Army have already arranged for officers to fill the O-6 Liaison positions added to the NSSI leadership structure.

The Army has assigned LTC Richard Wolfe to the Army Liaison position to provide direct Army representation to the command in addition to instructional duties. LTC Jorge Rangel continues as Chief of the Army Detachment and instructor in Joint Space Operations Center, Joint Functional Land Component Command, and Information Operations. Rounding out the team are MAJ Tod Pingrey (recently returned from Baghdad as Army Space Support Team Chief) and MAJ Patrick O'Brien (bringing West Point instructional and Missile Defense Association experience). This increased Army presence further solidified the partnership that has always been at the heart of the NSSI's approach to Space education. In addition, the Army instructors provide valuable theater perspectives across the full spectrum of NSSI courses.

One of the major educational resources available to the NSSI is the Space Power Lab. It is a \$1.4M state-of-the-art modeling and simulation facility. This 2,000 square foot facility features the full set of computer applications used in Air and Space Operations Centers (AOCs) worldwide. The exercises conducted in the Space Power Lab give students an appreciation for the complexity of war planning, the situational dynamics involved with executing these plans, and the importance of integrating Space capabilities. The Lab accommodates 30 students at a time and provides an interactive training environment via a classified internal network. Students receive

high-fidelity, hands-on training covering every aspect of their duties as Air and Space Operations Center augmentees during exercise and real-world contingencies. There is a plan to add Space Power Lab-based exercises to numerous Space professional development courses.

Distance Learning — For Space professional courses, class size has been limited to 30 students due in part to facility limitations, but mainly because it is necessary to ensure the courses remain interactive with labs, war games and guided discussions. As a result, not all Air Force Space operators and acquirers are afforded the opportunity to attend SP200. The same can be expected for SP300 — especially as more students from sister services and government agencies are brought in to enhance the overall education experience.

Given this limitation, there are a few options. One solution might be to buy more classroom space, hire more instructors and offer SP200 and SP300 more often. The other option is to develop Distance Learning versions of the courses much like there are for traditional Professional Military Education (PME). As the program moves down the road to a day when Space roles are filled only by those with proper credentials, it is necessary to ensure all Space professionals have an opportunity to attain those credentials. AFSPC will need to conduct a study to determine whether upfront Distance Learning development costs will outweigh the long term costs of additional instructors and leased floor space.

Advanced Space Training — Thus far, NSSI course development has emphasized the Space Commission's directive covering education breadth: Tomorrow's Space professionals need a broader understanding of operations across the range of Space mission areas and the size of the Space cadre will need to grow, as Space becomes increasingly important to military operations. Perhaps more than other areas, Space benefits from a unique and close relationship among research, development, acquisition and operations ...

The NSSI is focused on a path for developing credentialed Department of Defense Space professionals who will lead the design, acquisition, operation, integration and sustainment of current, emerging and future Space systems. The NSSI has a strong and improving curriculum that addresses the needs not only of those Space operators who will deploy in support of Operations Enduring Freedom & Iraqi Freedom, but also the directives of the Space Commission, which stated, "... in-depth Space-related science, engineering, application, theory and doctrine curricula should be developed and its study required for all military and government civilian Space personnel..." The men and women of the NSSI have made tremendous progress in our short history, but we have only just begun to develop the advanced academics future Space leaders will require. Through investment across the Department of Defense, the NSSI will continue on a growth path that will make us a household word inextricably connected to the development of Space professionals.