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The big ask: upgrade graduate education for acquisition professionals

By John T. Dillard, Col., USA (Ret.), Naval Postgraduate School December 20, 2019



As the Army gets a much-needed technological upgrade, the Naval Postgraduate School does its own technological upgrade of graduate education for acquisition professionals.

On Dec. 20, 2019, the first cohort of 30 Army Acquisition Corps officers graduated from the new degree curriculum, called 522, at the Naval Postgraduate School (NPS) with a master of science degree in systems engineering management. In addition, most of those graduates have completed their joint professional military education and Army intermediate-level education at the Naval War College, which has a satellite campus on the same Monterey, California, naval base. Over the course of their graduate studies at NPS, students receive 34 different Defense Acquisition University course equivalencies as a concurrent benefit that saves them valuable time away from the acquisition work that needs to be done.

Those 30 officers can credit their new systems engineering management degrees to Lt. Gen. Paul A. Ostrowski, principal military deputy to the assistant secretary of the Army for acquisition, logistics and technology (ASA(ALT)), and NPS President Ann Rondeau (Vice Adm., USN, Ret.), who steered the changes to the NPS curriculum in Army acquisition.

It was a big ask. And Ostrowski wasn't the first principal military deputy to request a technological upgrade to the program. Indeed, his two predecessors also wanted to see change.

Starting in 2011, three successive principal military deputies to the ASA(ALT) had asked for more science, technology, engineering and mathematics in the systems acquisition curricula at NPS, which has been sponsored by the Army since 1991. But it was Ostrowski who really pushed for it to come about in 2017, collaborating closely with Rondeau for implementation.

Despite pushing for the technological upgrade to the NPS graduate education, Ostrowski said it was Rondeau and her systems engineering faculty who were the real change agents. It also took some heavy lifting by the U.S. Army Director, Acquisition Career Management (DACM) and the U.S. Army Acquisition Support Center. Several iterations of combined courses were staffed and modified for optimal composition and sequencing. We had never seen that kind of supporting-supported relationship to bring about educational advancements at NPS. The two flag officers met face to face at NPS and immediately struck a partnership for the restructuring. We transformed the curricula from purely organizational dynamics to engineering reasoning applied in science and technology pursuits, while keeping the needed methodologies in contract and program management. Our end goals haven't changed for the broader objectives of improved critical thinking, enhanced decision-making and a larger professional network among the workforce.

Ostrowski is a 1996 alumnus of NPS, and a former student of mine. As we discussed proposed changes, he told me, "We have to recalibrate our graduate education at NPS." He wanted NPS to focus more on product than process, emphasizing new capabilities over policies. "We need more technical, less managerial. Our folks already know how to lead people. What they really have to manage in acquisition is complexity," he said. Recent studies of military capacity to execute national security and defense strategies showed a shrinking technological edge over our near-peer threats.

Realizing there weren't many officers in the ranks with highly technical or engineering undergraduate degrees, the Army's academic advisers at NPS observed that specialized degrees like engineering management were the fastest-growing graduate education segments in the Army, while nonspecialized management programs were precipitously declining. Also, the Government Accountability Office specifically cited a lack of systems engineering in many high-profile weapon system program failures; large program cancellations of the past 10 years included Future Combat System, Comanche and Crusader. Everything pointed to a need for more skills in the areas of systems engineering as well as the acquisition essentials of contracting, program management, and test and evaluation. A long-standing degree at NPS was the systems engineering management degree for folks without an engineering undergraduate degree. With that as our foundation, we could easily integrate courses from across the campus.

MORE THAN BUSINESS AS USUAL

Over the next year, the NPS Department of Systems Engineering had the needed courses and faculty members to modernize and satisfy our sponsor's shifting educational needs. With a palpable sense of urgency coming from the Pentagon and global challenges on the horizon, the Army's 18-month master's degree program at NPS reorganized to provide Level III Defense Acquisition Workforce Improvement Act (DAWIA) training equivalencies in three different disciplines: systems engineering, program management and contract management; with Level II in test and evaluation.

Ostrowski often says of the new programs, "This is what right looks like!" and added, "President Rondeau understands our current national security environment and helped us forge the path to meeting our new educational requirements." Since the first cohort, he has sent three additional groups of Army Acquisition Corps officers, arriving twice per year. There'll be two more groups coming in January and June 2020, so even with the departure of this first large cohort, there'll be around 80 officers on the ground in Monterey. That's the biggest Army acquisition footprint ever seen at NPS.

BIGGER AND BETTER

NPS leadership not only welcomed the changes Ostrowski requested, but also helped build a correlated distance learning program, called 722, awarding the same degree, for the Army's multifunctional career field civilians in acquisition. As a part-time, 24-month degree program, it delivers DAWIA Level III certified training equivalencies in program management and systems engineering along with Level II in test and evaluation and contracting fundamentals. More than 40 acquisition civilians have already enrolled in that program, being centrally selected by the DACM Office within the U.S. Army Acquisition Support Center.

One of the striking aspects of both the military resident 522 and civilian distance 722 programs is another technological upgrade-the Capstone Study Project-and how it differs from a traditional master's thesis paper. Projects are selected by the Army and other services, which "sponsor" (as the client) five-person student teams as they solve real-world problems with a time-phased systems engineering approach. A pair of faculty project advisers is assigned to each team to coach them through the six-month process of architecting solutions. In the end, the clients, the Systems Engineering Department faculty and all of the other Army Acquisition Corps students are briefed by each team on their project results.

Another NPS graduate, Lt. Gen. L. Neil Thurgood, director for hypersonics, directed energy, space and rapid acquisition and director of the Rapid Capabilities and Critical Technologies Office, visited NPS last June, and gave one of our six student teams its capstone thesis project: to find an affordable radar that can be mounted on a ground combat vehicle and track targets on the move. His message to our 62 assembled Army Acquisition Corps officers was that the new 522 program was going to be extremely advantageous for them, because of their resulting qualifications to serve in either 51A or 51C assignments. He advised them that diversity of knowledge is often more important in acquisition than depth in any single field.

The other five teams conducted their capstone projects in such topics as: Multiple concepts of operations for swarms of unmanned aerial systems.

- An acquisition value model for Special Operations Forces materiel.
- An analysis of contracting transactions in deployed versus garrison environments.
- Prioritizing Army Community Services funds allocation.
- Field experimentation of the Soldier-Borne Sensor for optimal display size.

The last team just won the competition for Systems Engineering Management Outstanding Capstone Project.

CONCLUSION

The latest investment by the Army at NPS is the establishment of a new military position on the faculty, the Systems Engineering and Army Acquisition Chair, to help administer the Army's programs and oversee them for the military deputy and DACM. Col. Joyce B. Stewart will be the first in the position. Stewart, a seasoned program manager, arrives in April 2020 from the Army's Office of the Chief Systems Engineer. She will bring Army relevance and current perspectives from her recent experience. She is welcomed by President Rondeau as an NPS asset and will help us move into the next decade, in support of all Army acquisition students at the school.

Overall, the new 522 and 722 degree programs deliver what Army leadership asked for: more technological relevance in an era of increasing threats, with students actually using the tools they've acquired before they leave for their follow-on

acquisition assignments. Qualified to serve in a larger variety of assignments than ever before, our graduates are going to be able to contribute to warfighting readiness in the newest technological fields. They'll be well-equipped to equip the warfighters.

For more information on either the military or civilian program, go to <https://asc.army.mil/web/career-development/programs/> and <https://asc.army.mil/web/news-alt-jas18-mastering-acquisition/>.

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