



JOINT EXECUTIVE
SEM-PD21 2021-2023 CLASS (COHORT 721-2210)



Naval Postgraduate School

ANNOUNCEMENT FOR APPLICATIONS
FOR SEPTEMBER 2021-2023 CLASS (COHORT 721-2210)

Joint Executive Systems Engineering Management (SEM)

An Executive Graduate Education Program for Defense
Offered in partnership with MIT's "Educational Consortium for
Product Development Leadership in the 21st Century" (PD21)

A Distance Learning Program with Unique Joint Focus
Joint Services, Joint Engineering & Management, Joint Government & Industry

A LIMITED NUMBER OF OPEN SEATS AVAILABLE

OPEN TO QUALIFIED UNIFORMED OFFICERS, SENIOR ENLISTED,
FEDERAL CIVILIANS AND DEFENSE CONTRACTOR CIVILIANS.

PROGRAM HIGHLIGHTS AND TESTIMONIALS

The Joint Executive SEM-PD21 program certified by Secretary of the Navy to Congress allowing contractor civilian participation:

"Our progress in privatizing acquisition has resulted in the migration of many activities once performed by Navy uniformed or civilian personnel to the private sector. It makes sense for Navy personnel and defense industry civilians to participate shoulder to shoulder in graduate studies focusing on improving Navy research, development, and acquisition cost, schedule, and performance. Such a program will greatly enhance the educational experience of both sets of students and will strengthen partnerships between the private and public sectors which is a critical element in our efforts to transform the Navy and Marine Corps acquisition and procurement process." (Letter to Chairman, Committee on Armed Services, March 9, 2001)

Recognized in Business 2.0, (December, 2001) as one of the top, "Straight-to-the-Point Executive Education Courses."

Letter to the President of MIT by the Honorable Mr. Hultin, Undersecretary of the Navy, (May 17, 2000):

"SEM-PD21 is aligned with our efforts to transform the Navy and Marine Corps acquisition and procurement process. This initiative fits nicely with our broader campaign entitled Revolution in Business Affairs (RBA), a strategic change initiative aimed at dramatically improving the way we acquire, deliver, maintain, deploy and operate the business side of our national defense institution. We fully expect that the graduates of SEM-PD21 will soon become significant leaders and change agents in our Revolution in Business Affairs and help reduce the acquisition life cycles and development times for new defense systems by a factor of two or more."

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Alumni Testimonials

"The PD21 Program is laser focused on the practical aspects of Systems Engineering and Product Development. I have been able to apply so much of what I learned in PD21 directly to my project, and hand down the lessons learned to the rest of our engineering team." – John Gwin, NAVSEA

"PD21 is much more than curriculum. To this day, I continue to apply the technical and managerial skills acquired through the program. The blending of project management and systems engineering disciplines, delivered through PD21, was both a personal and professional game-changing experience. During these times of unprecedented complexity, I believe the program is foundational for developing leaders who can deliver 21st century warfighting capability." – Tom Irwin, Ph.D., Joint Staff J7

"The PD21 program provided me with an amazing executive-level education focused on the systems engineering skills and acumen needed to support both business and technical work. The courses are challenging but relevant and greatly expanded my portfolio of experience. There is no question that I am able to perform at a significantly higher level thanks to the PD21 program's focus on academic excellence." – Bill Carlson, NUWC Keyport

"The PD21 program was the perfect way to refresh my engineering undergrad as I transitioned to the private sector. It was a well-rounded and applicable program that balanced both government and private industry processes." – Spencer Hunt

"The PD21 program gave me the educational credentials I needed to advance my career as a Navy Flag Officer's Science Advisor. More importantly, the program challenged me to apply critical thinking in terms of systems engineering management and apply that thinking holistically towards successful and timely implementation of Science and Technology efforts that provide direct impact to the operational warfighter." – Joanne Pilcher, Naval Information Forces

"The PD21 program is extraordinary. Not only did it enhance my technical competency in systems engineering, but it also enhanced my management and leadership competencies, facilitated Navy-wide connections and relationships, and changed the way I think about problems in general. Given the choice, I would jump at the opportunity to do it again." – Cody Reese, NAVFAC



John Gwin's (pictured third from right) PD21 thesis inspired a technical risk analysis that ultimately earned PMS-340 the 2019 USSOCOM "MAVERICK" award, which recognizes "those who challenge existing ways of doing business to help foster improvements."



Cody Reese (pictured second from right) was selected by his fellow classmates to receive the Wayne E. Meyer Award for Excellence in Systems Engineering in September 2018, and has recently been admitted to NPS's Systems Engineering PhD distance learning program.

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SEM-PD21 2021-2023 CLASS (Cohort 721-2210): September 13, 2021-September 24, 2022

ENTRY REQUIREMENTS: The program is open to uniformed officers (O3 and above), federal civilians (GS11 and above) and equivalent defense contractor civilians. Senior enlisted (E-7 and above) are eligible on a space available basis. To participate in the Joint Executive SEM-PD21 program, candidates must have the following credentials:

- An undergraduate degree in engineering or a related scientific or technical field with high academic achievement (2.6 GPA or higher); non-technical degrees considered with attainment of college level calculus and/or on a case-by-case basis. Probability & statistics desired but not required.
- At least five years of experience directly related to product/systems development, systems engineering or systems acquisition. This experience must reflect continued growth and professional development. For candidates that hold a Master's degree, the experience requirement can be reduced to three years;
- Sponsored by your service, command or company with senior leadership endorsement.

PROGRAM INFORMATION

NPS and the PD21 consortium believe that this joint engineering & management degree is the best, unified curriculum available in systems engineering and end-to-end product development leadership education. It also ideally aligns with DoD leadership vision for defense transformation and acquisition excellence. All students who successfully complete the two-year distance-learning course of study receive:

- ✓ **Degree:** Master of Science in Systems Engineering Management or Master of Science in Product Development.
- ✓ **MIT Certificate:** Certificate of Recognition from MIT.
- ✓ **Additional NPS Certificate:** Varies by elective track.
- ✓ **DAU Equivalencies:** Defense Acquisition University (DAU) ACQ101, ACQ160, ACQ202, ACQ203, PMT252, PMT257, PMT355, PMT360, ENG101, ENG201, ENG202, ENG302 and 10 CLPs per credit hour.

ELECTIVE TRACKS: Sponsors and students have great flexibility in designing their elective structure. There are over 12 SE/SEM domain specialty tracks (4 courses each) that are available to each student as an elective track which, when taken with the SEM-PD21 core/fundamental courses, earn participating students an additional certificate:

- ✓ **Advanced Systems Architecting**
- ✓ **Aviation Systems**
- ✓ **Digital Engineering**
- ✓ **Human Systems Integration**
- ✓ **Model-Based Systems Engineering**
- ✓ **Space Systems**
- ✓ **Systems Analysis**
- ✓ **Systems Capability & Design**

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- ✓ **Systems Integrated Development**
- ✓ **Systems Program Management**
- ✓ **Systems Safety Engineering**
- ✓ **Systems Technology & Advancement**
- ✓ **Systems Test & Evaluation**
- ✓ **Others- as available**

SCHEDULE

- September 13 through 24, 2021: Program kick-off and orientation at Naval Postgraduate School, Monterey, California. Orientation includes program indoctrination, Silicon Valley Industry trip, start of first two core courses and participation in graduation events.
- After the kickoff, students return to their organization locations and take courses over the Internet synchronously using Zoom for Government (ZfG) and/or MS Teams both web-conferencing academic tools and/or asynchronously using SAKAI, the NPS ONLINE course management system. Students take two core courses per quarter offered in two 3.0 hour synchronous sessions per week on **Fridays (0730-1030 and 1100-1400) Pacific Time** for the first year then take two remaining core courses (0730-1030) Pacific Time in each of Fall and Winter quarters of year two. Additionally, students pick a four course elective track and conduct independent thesis research in year two. The days/times for elective track courses vary and some of the tracks are delivered asynchronously affording students another delivery method if chosen.
- Students are expected to attend the two-week program kickoff on campus, participate in two (2) one-week industry trips during the two-year course of study (typically in June during the break between Spring and Summer quarters) and a (1) one-week on campus graduation week in September at the completion of the program. Students are also required to participate in a quarterly Systems Engineering (SE) seminar (SE3810) that hosts a thesis writing workshop and provides guest speaker lectures either live by web-conferencing or recorded by video streaming. The lectures are also open to all participating student commands and companies. The SE seminar is graded on a Pass/Fail basis.

TUITION

For the 2021-2023 class there are 30 total seats available. Each service (Army, Air Force, Navy) and Defense contractors are allocated a minimum of 5 seats. Additional seats are available to service sponsors or the best qualified candidates from any DoD or federal government agency. Tuition must be collected before commencement of each quarter (see tuition letter for due dates and additional details). *(Note: Qualified active duty Navy and Marine Corps officers are eligible for NPS mission funding (tuition free) but the student or their command are responsible to purchase books and pay for all travel related expenses).*

Note: The total ownership price per seat is \$54,000 for military, federal government civilian employees and Defense contractor civilian employees, payable according to the payment schedule provided in the SEM-PD21 tuition letter (or as negotiated with the SEM-PD21 program office). Tiered pricing is offered to an organization or company sponsoring 5 or more students

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(call Dr. Wally Owen, SEM-PD21 Program Director for more details). This total ownership price includes all tuition, textbooks, course support materials and equipment (software, handouts, case studies, etc.), travel, transportation and per diem for all campus/training with industry visits including graduation and a PC camera and microphone headset. Students must have high-speed Internet to participate in sessions and to access SAKAI course management system.

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APPLICATION DEADLINES

July 6, 2021: Candidates must complete the NPS admissions online application by this deadline date (contact your local representative for any additional internal deadlines).

Apply at http://my.nps.edu/web/dl/degProgs_PD21 by selecting “**Apply Now**” under the Quick Links section of the program website. Once at the NPS online application, candidates should fill out all requested information, select **New Applicant** for distance learning, **721 Curriculum-Joint Executive SEM-PD21** program commencing **Academic Year 2022, Quarter 1**.

Applicants must ensure all official transcripts are ordered and sent directly to the NPS admissions office (either by mail or e-transfer) and submit a participation agreement (PA) signed by an appropriate organization representative.

Sponsoring commands/organizations/companies must also have a support agreement in place with NPS (MOA for Navy commands and DD1144 for non-Navy organizations). Check with program director if unsure of existing agreements or to initiate an agreement.

Late applications will be reviewed on a case-by-case basis dependent upon seat availability but no later than August 15, 2021.

Maximum enrollment per cohort is 30 students. *(Note: Qualified active duty Navy and Marine Corps officers may be eligible for NPS mission funding but the student or their command are responsible to purchase books and pay for all travel related expenses).*

FOR MORE INFORMATION AND APPLICATION PROCEDURES

Visit http://my.nps.edu/web/dl/degProgs_PD21 and/or contact either of us below:

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