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Courses available under Foreign Military Sales (FMS) or International Military Education and Training (IMET)

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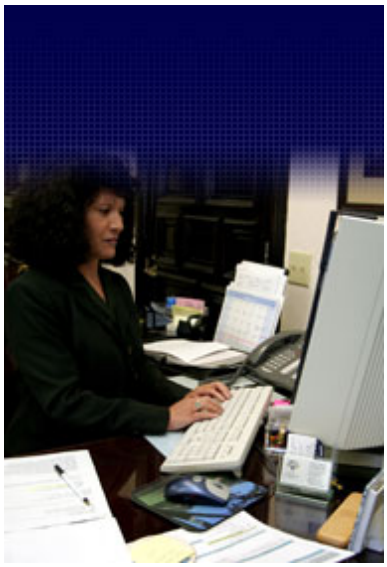

Courses available under Foreign Military Sales (FMS) or International Military Education and Training (IMET)*

(Full curriculum/course descriptions can be found at http://www.nps.edu/admissions/catalog)

* IMET funds may only be used to fund Master level programs; not PhD's

COMBAT SYSTEMS

CURRICULUM 533 - (MS)
MASL #: P179906
Course Start Date: January/July Course
Length: 104 weeks

This program is designed to meet the needs of the military services for an officer having a broad-based advanced technical education applicable to combat systems design, development, test and evaluation, acquisition, operation, and support. The student does not earn a degree in Combat Systems. The majority of students earn a degree in Physics or Applied Physics. Degree specializations in Software Engineering, Mechanical Engineering, or Electrical Engineering are also available. Included in the core of the program are courses on electromagnetic radiation, signal processing, optoelectronics, servo and computer control systems, explosives and warheads, fluid dynamics of weapons, combat simulation, quantum devices, detection and engagement elements, combat systems integration, and computing resources for advanced combat systems. Additionally, the officer will take a sequence of four or more courses in one of the following concentration areas: electromagnetic sensors systems, weapons and effects, underwater acoustic systems, tactical missile systems, total ships systems engineering, or an engineering area related to combat systems. The officer will also conduct thesis research on a military relevant technical problem. Specific areas of specialization include:

- MS Applied Physics
  - Military Sensors
  - Acoustics
  - Weapons and Effects
- MS Engineering
  - Acoustics
  - Signal Processing
  - Propagation
- MS AE - Missile Design
- MS Computer Science
  - Artificial Intelligence - Robotics
- MSEE
  - Electronic Warfare
  - Communications Systems
  - Computer Systems
  - Software Engineering (MASL P179130)

Computer Science

CURRICULUM 368 - (MS/PhD)
MASL#:P177713 MS / P179173 PhD
Course Start Date: March/September
Course Length 104 weeks MS / 156/208 weeks PhD

The Computer Science curriculum is designed to provide the officer with the technical knowledge and skills necessary to specify, evaluate and manage computer system design; to provide technical guidance in applications ranging from data processing to tactical embedded systems; to educate the officer in the analysis and design methodologies appropriate for hardware, software and firmware; and to provide the officer with practical experience in applying modern computer equipment and research techniques to solve military problems.

COUNTERTERRORISM POLICY AND STRATEGY

CURRICULUM 693
MASL#: P173201
Course Start Date: January (only)
Course Length: 65 weeks

In January 2007, the National Security Affairs Department launched a new track on Counterterrorism Policy and Strategy (693). This five-quarter curriculum provides an understanding of the nature and dynamics of terrorist organizations, and the domestic and international variables involved in the formulation of counterterrorist policy. The curriculum allows the students to combine a regional focus with comparative courses that discuss terrorist organizations and operations, the financing of terror, legal and policing developments in counterterrorism, intelligence, and the military role in homeland defense.

The NSA department is a unique environment in which to pursue this course of studies since its student body is inherently joint and combined, providing students with both a stimulating intellectual environment and an opportunity to establish networks and life-long working relationships with fellow officers from other services and countries.

ELECTRONIC SYSTEMS ENGINEERING

CURRICULUM 590- (MS/PhD)
MASL#: P177712 MS / P179109 PhD
Course Start date: any qtr
Course Length: 104 weeks MS / 156/208 weeks PhD

This curriculum is designed to educate officers in current electronics technology and its application to modern naval warfare. It establishes a broad background of basic engineering knowledge, leading to selected advanced studies in electronic systems, ship/weapon control systems, and communication/information processing applicability. It will enhance individual performance in all duties through a naval career, including operational billets, technical management assignments and policy making positions, thereby preparing the officer for progressively increased responsibility including command, both ashore and afloat. There are several tracks or areas of concentration within the curriculum that are available. They include: (1) The Communications Systems option is designed to provide an advanced education in modern communication engineering topics such as digital communications, spread spectrum communication including anti-jam and low probability of intercept applications, forward error correction coding, and satellite communications. (2)The Computer Systems area of concentration is designed to provide an advanced education in the design, implementation, and application of military computer systems, including such topics as logic circuits, logic design and synthesis, microprocessors, computer and digital systems architecture, military computer architectures, fault tolerant computing, high speed networking, silicon VLSI and gallium arsenide digital IC design, parallel processing, and the hardware/software interface. (3)The Electromagnetic Systems option provides an advanced education in the application of electromagnetic phenomenology to the design and analysis of military systems used for communications, interrogation and signal intercept, and targeting. Courses are offered in a range of areas including antennas, propagation, scattering and RCS control, microwave and millimeter wave devices, as well as in modern numerical methods for analysis and simulation of electromagnetic systems. (4)The Guidance, Control, and Navigation Systems area of concentration is designed to provide and advanced education in the modeling and simulation advanced dynamic systems, the current state of knowledge regarding state estimation (linear and nonlinear

filtering), system identification, and the control of dynamic systems, and to unite the theory with military applications. Course in specific areas of military application currently include military robotics, missile guidance and control, and integrated target tracking. (5)The Joint Services Electronic Warfare option is designed to provide advanced education in the evolving technology and systems integration which support modern electronic warfare. Courses in specific areas of relevance include sensor and data fusion, radar and IR/EO systems, radar and communications ECM/ECCM, RCS prediction and reduction, military applications of space. (6)The Power Systems option is designed to provide education in the analysis, design, simulation, and control of power electronic and electromechanical components and integrated topologies common to existing and proposed military systems. (7)The Signal Processing Systems option is designed to provide knowledge of algorithms and design of systems for analysis and

Systems option is designed to provide knowledge of algorithms and design of systems for analysis and processing of signals and images encountered in communications, control, surveillance, radar, sonar, and underwater acoustics. (8) The Signals Intelligence option provides a broad education in the fields of electrical engineering that relate to the signals intelligence area, such as Communications, Electronic Warfare, Signal Processing, and Computer Systems. This option is open only to U.S. citizens with the appropriate security clearance.

ELECTRONIC WARFARE (Intl)

CURRICULUM 596 - (MS)
MASL#: P179175
Course Start Date: September (only)
Course Length: 104 weeks

This curriculum provides the services with officers thoroughly knowledgeable in the technical and operational aspects of the role of electronic warfare as a vital, integral part of modern warfare. It is designed to provide an understanding of the principles underlying the broad field of electronic warfare.

HUMAN SYSTEMS INTEGRATION (HSI)

CURRICULUM 362
MASL Number: P179107
Course start: January (Only)
Course Length: 104 weeks

This program, the first of its kind in the nation, focuses on the integration of the human element in the design, acquisition, and operation of complex technologies and weapons systems. Human Systems Integration emphasizes human considerations as a top priority in modern systems design in order to reduce life cycle costs and optimize system performance, and advocates a human-centered approach in the design, acquisition, testing and operation of human-machine interfaces.

Human Systems Integration at NPS is a multidisciplinary program composed of several basic areas: Human Factors Engineering, System Safety, Health Hazards, Habitability, Human Survivability, and Manpower, Personnel, and Training. Similarly, our multidisciplinary approach provides students with experiences in a variety of NPS academic departments and disciplines, including Human Factors, Operations Research, Modeling of Virtual Environments and Simulation (MOVES), Systems Engineering, and Business Administration. This approach ensures that each student is exposed to a wide range of basic theory and applied research, as well as allowing for diverse opportunities for research and thesis topics. In addition, our on-site Human Systems Integration Laboratory (HSIL) provides a broad range of research and testing opportunities.

INFORMATION WARFARE (International) - (MS)

CURRICULUM 595 (MS)
MASL#: P179222
Course Start: September (Only)
Course Length: 104 weeks

A course of study appropriate for military officers who require a fundamental understanding of Information Warfare and Information Operations. Courses in the curriculum discuss the role of Information Warfare in modern warfare and the integral roles of EW, psychological operations, military deception, OPSEC, physical destruction, INFOSEC, and network attack. Mathematics, Science and Engineering

fundamentals are provided to support the theoretical and experimental aspects of Information Warfare. System level understanding of Communication Systems, Electronic Warfare Systems, Radar Systems, Network Operations, Computer Network Security and Information Systems are emphasized. The System Engineering process is presented and applied in an Information Warfare team project.

JOINT INFORMATION OPERATIONS

CURRICULUM 698
MASL Number: P179042
Course start: January (Only)
Course Length: 78 weeks

The goal of this curriculum is to educate military personnel and civilian officials of the United States and its Allies in the strategic and operational dimensions of information relative to the use of force as an

instrument of statecraft.

Graduates will be able to employ information in support of full spectrum dominance be taking advantage of information technology, exploiting the growing worldwide dependence upon automated information systems and capitalizing upon near real time global dissemination of information to affect adversary decision cycles with the goal of achieving information superiority for the United States. This capability will be possible only after students develop a thorough understanding of the enduring nature of war. The curriculum is designed for both the specialist who will be assigned to an information operations position and the generalist who will be assigned to the operations directorate.

The curriculum includes a core of military art and operations, the human dimension of warfare (psycho-social), analytical methods, and a technical sequence customized for each student. Additionally, each student will have an elective sequence designed to further develop an in-depth understanding of joint information operations. Finally, each student will write a thesis relevant to the field of information operations. This program is open to all branches of the military, federal employees, international military officers and government sponsored civilians.

LOGISTICS MANAGEMENT CURRICULA

Logistics Management includes two curricula, each a concentration area within the MBA degree program:

819 Supply Chain Management	**MASL#: P179907**
827 Material Logistics Support	**MASL#: P179913**

Start Date: January / July
Length: 78 weeks

The Logistics Management curricula are interdisciplinary, integrating mathematics, accounting, economics, management theory, operations analysis and the specialty concentration into an understanding of the process by which the defense mission is accomplished. The program is designed to provide the officer with fundamental interdisciplinary techniques of quantitative problem-solving methods, behavioral and management science, economic analysis, and financial management; furthermore, it is intended to provide the officer with a Navy/Defense Systems-oriented graduate management education and to provide the officer with the specific functional skills required to effectively manage in this subspecialty area. The objective of these curricula is to prepare officers for naval logistics system positions. The Logistics Management curricula emphasize all of the aspects for providing integrated logistics support of military systems. Skills resulting from the curricula will prepare those responsible for managing the various segments of a military system's life cycle from initial planning for support to fielding the system, through sustaining operations to phase out. These curricula additionally emphasize the management of military owned inventories at the three levels of wholesale, intermediate and retail customer support, and worldwide transportation and distribution systems. The Logistics concentration subjects are significant components of the military supply chain and each provides unique and relevant education that meets the critical needs of the armed services. The specialized logistics courses concentrate on studies in production and project management, inventory management, integrated logistics support, procurement and contract administration, systems acquisition and logistics strategic planning.

METEOROLOGY

CURRICULUM 372 - (MS/PhD)
MASL#: P174002 MS / P179176 PhD
Course Start Date: January/July
Course Length: 65 weeks MS / 156/208 weeks PhD

This curriculum will provide qualified personnel with a sound understanding of the science of meteorology. The student will develop the technical expertise to assess and forecast the impact of atmospheric conditions on operations: 1) To understand the science of meteorological data and models. 2) To sample/measure, analyze and predict atmospheric conditions. 3) To operate and control data/information management systems. 4) To plan, conduct, interpret and present results of research activities.

METEOROLOGY AND OCEANOGRAPHY (METOC)

CURRICULUM 373 - (MS/PhD)
MASL#: P174235 MS / P179176 PhD

Course Start Date: March/September
Course Length: 117 weeks MS / 156/208 Weeks PhD

This curriculum in meteorology and oceanography involves approximately 120-quarter hours of classroom lectures, supplemented by an additional 35-quarter hours of laboratory exercises. This program is designed to provide the student with: 1) A thorough understanding of the principles governing the physical and dynamic properties of the oceans and atmosphere. 2) The ability to observe, assimilate, analyze, interpret, and predict oceanic and atmospheric parameters and conditions using field experimentation, direct and remote sensing observational techniques, statistical analyses and numerical models. 3) A thorough understanding of the effects of oceanic and atmospheric properties and conditions on weapon, sensor and platform performance while conducting and supporting Naval warfare with particular emphasis on ocean acoustics and electromagnetic/optical propagation. 4) An oceanographic or meteorological research experience germane to Naval warfare culminating in a thesis of professional quality. 5) A knowledge of Joint and Maritime Strategic Planning. This education will enhance performance in all duties throughout a career, including operational billets, technical management assignments and policy making positions. Students will develop graduate-level technical ability based upon scientific principles, acquire diverse professional knowledge and develop analytical ability for practical problem solving.

MODELING, VIRTUAL ENVIRONMENTS AND SIMULATION (MOVES)

CURRICULUM 399 - (MS/PhD)
MASL#: P179067 MS / P179068 PhD
Course Start Date: September only
Course Length: 104 weeks MS / 156/208 weeks PhD

The MOVES Curriculum was developed in response for an interdisciplinary graduate education program beyond that available through the Computer Science Curriculum's Computer Graphics and Visual Simulation track. The MOVES Curriculum of the Naval Postgraduate School provides the M.S. and Ph.D. student both fundamental and specialized courses in applied computer simulation technology and the application of quantitative analyses to human-computer interaction in simulation technology. The M.S. program is a two year, eight quarter program whose core covers the fundamentals of computer science, visual simulation and human-computer interaction. Specific topics include object-oriented programming, artificial intelligence, software methodology, computer communications and networks, computer graphics, virtual worlds and simulation systems, physically based modeling, probability, statistics, stochastic modeling, data analysis, and human performance evaluation.

Specialization by the M.S. student is accomplished by choosing a track and completing a sequence of courses providing depth in the selected area. There are two tracks that support the curriculum's research efforts, the Visual Simulation Track and the Human-Computer Interaction Track.

Once the MOVES Curriculum core courses have been taken and while the specialization courses are underway, the final step in the M.S. degree program is the completion of a written thesis. This thesis is usually conducted on a research problem specified by a thesis advisor attached to a MOVES-associated laboratory. Current laboratories working with the MOVES Curriculum are the NPSNET Research Group, a leading developer of networked, large-scale virtual environments, and the Information Infrastructure Research Group (IIRG), whose focus is on advanced network issues such as asynchronous transfer mode (ATM), multicast backbone (MBONE) and internetworking regional research institutions.

NAVAL / MECHANICAL ENGINEERING

CURRICULUM 570 - (MS/PhD)
MASL#: P177715 MS /P179108 PhD
Course Start Date: any quarter
Course Length: 104 weeks MS / 156/208 weeks PhD

The objective of this program is to provide graduate education, primarily in the field of Naval/Mechanical Engineering, to produce graduates with the technical competence to operate and maintain modern warships and naval systems. It establishes a broad background of basic engineering knowledge leading to advanced studies in heat transfer, fluid mechanics, control systems, solid mechanics and vibrations and material science. The graduate will be able to participate in technical aspects of naval systems acquisition for technological advances in naval ships and systems. Through emphasis on the design aspect within the program, the graduate will be well prepared to apply these advances in technology to the warships of the future. An original research project resulting in a finished thesis is an integral part of the curriculum.

OCEANOGRAPHY

CURRICULUM 440 - (MS/PhD)
MASL#: P174011 MS /P174012 PhD
Course Start Date: January/July
Course Length: 104 weeks MS / 156/208 weeks PhD

The Oceanography Curriculum provides students with a sound understanding of the science of oceanography. The student develops the technical expertise to provide and use oceanographic and acoustical data and models in support of all aspects of at-sea operations. The graduate will be able to: 1) Interpret and predict oceanic and air-ocean interface conditions. 2) Operate modern oceanographic data management, archival and communications systems. 3) Plan, conduct, interpret and present results of research activities. This education further enhances performance in operational billets, technical management assignments and policy making positions. Students will develop a sound, graduate-level, technical ability based on scientific principles.

OPERATIONAL LOGISTICS

CURRICULUM 361 (Complimentary curriculum to Curriculum 360, Operations Analysis)
MASL#: P179918
Course Start Date: September (Only)
Course Length: 91 weeks

This program provides education in mathematics, probability and statistics, physical science, economics, logistics and computer science. These disciplines supply the theoretical background for planning and analysis of Naval and Joint Logistics. The course of study develops skills in computational capability, identifying relevant information, generating decision criteria and selecting alternatives. This education enhances performance in all duties throughout a military career, including operational billets, technical management assignments, and policy making positions.

OPERATIONAL OCEANOGRAPHY

CURRICULUM 374 - (MS)
MASL#: P174013
Course Start Date: January/July
Course Length: 104 weeks

This flexible oceanography curriculum involves approximately 100-quarter hours of classroom lectures, supplemented by an additional 20-quarter hours of laboratory exercises. This program is designed to provide the student with: 1) A thorough understanding of the principles governing the physical and dynamic properties of the oceans. 2) An understanding of the analysis and prediction of oceanic and atmospheric parameters and conditions using direct and remote sensing observational techniques, statistical analyses, and numerical models. 3) An understanding of the effects of oceanic and atmospheric properties and conditions on weapon, sensor and platform performance while conducting and supporting Naval warfare with particular emphasis on ocean acoustics. 4) An educationally significant oceanographic experience at sea. 5) An oceanographic or meteorological research experience germane to Naval warfare culminating in a thesis of professional quality. 6) A knowledge of Joint Maritime Strategic Planning.

The Operational Oceanography Curriculum has a physical oceanography and ocean acoustics base and is a very flexible program. The student selects a warfare specialization area in antisubmarine warfare, amphibious warfare, mine warfare, anti-air warfare, strike warfare, or special warfare.

OPERATIONS ANALYSIS

CURRICULUM 360 - (MS/PhD)
MASL#: P177714 MS / P179030 PhD
Course Start Date: March/September
Course Length: 91 weeks MS / 156/208 weeks PhD

Operations Analysis is the development and application of mathematical models, statistical analyses, simulations, analytical reasoning and common sense to the improvement of real-world operations. Practitioners are called upon to advise military and civilian decision makers on the allocation of scarce resources, the selection of new equipment and processes, and the optimal deployment of given resources to achieve required missions. The OA curriculum was successfully founded by NPS in 1951 in

order to retain, develop, and promulgate the methods that were used so successfully in World War II. Mathematics, probabilities, statistics, human factors, and optimization supply the theoretical background for analyzing alternative choices in tactical and strategic warfare, and in planning, budgeting, and procurement of systems and forces. The student learns the computational methods and develops skills to identify relevant information, formulate decision criteria and select alternatives. This education enhances performance in all duties throughout a military career including operational billets, technical management assignments and policy making positions.

SECURITY STUDIES (PhD)

CURRICULUM 694
MASL Number: P173401
Course Start: July (Only)
Course Length – 156 weeks

Course Description: Security Studies is an interdisciplinary field based on the traditional academic disciplines of Political Science, History and Economics. The doctoral program in Security Studies seeks to equip students with the skills and knowledge required to do work of the highest professional quality in these areas, with emphasis on understanding the challenges and characteristics of modern security and defense policy. Successful completion of the program requires a minimum of two years of in-residence study beyond the Master's degree, and the completion of a doctoral dissertation of sufficient scope and quality to constitute an original and independent contribution to knowledge.

General Degree Requirements: The NSA doctoral program requires approximately one year of formal course work beyond the Master's degree. Required courses include advanced courses on qualitative methods, and a core sequence of seminars in strategic theory, international relations, international political economy, and American foreign policy, supplemented by a program of directed reading intended to prepare the student to take the qualifying examination. Additional courses, chosen to assist student in developing their dissertation topic, or to satisfy specific sponsor requirements will be incorporated based on individual circumstances. Such work will normally include a field of concentration comprised of four or more related courses in a single topical or regional specialty.

Admissions Requirements: Admission to the Ph.D. program in Security Studies is available to all of the US armed services, civilian federal employees, a limited number of DoD contractors, and to individuals sponsored by selected allied nations. Applicants are required to have a Master's degree in hand by the time doctoral instruction begins. They should submit a letter expressing their interest and describing their goals and qualifications, along with the following supporting materials:

- Certified transcripts of prior graduate and undergraduate work. Transcripts of work completed at NPS are not necessary.
- Scores from the Graduate Record Examination (GRE), taken within the last five years.
- An expository writing sample chosen by the student to demonstrate his or her potential to do work of high academic quality.
- At least two letters of recommendation, either from former professors or from others in a position to judge the candidate's potential to do superior academic work.
- Standard NPS TOEFL requirements apply – see Admissions Requirements, page (5).

SOFTWARE ENGINEERING PROGRAM (MS) ENGINEERING PROGRAM

CURRICULUM 369 (MSSE)
MASL#: P179129
Course Start Date: September
Course Length: 78 weeks

The Software Engineering program at the U.S. Naval Postgraduate School provides military and government graduate students with an opportunity to learn all aspects of software development and the skills needed to efficiently and reliably plan and create large-scale software systems using the best available tools. These skills are essential for officers and civilians responsible for acquisition, development or maintenance of military software. The MSSE offers a six-quarter full-time curriculum with entry dates in September. An accredited Bachelor's degree in computer science, computer engineering, or related field, with above-average grades in mathematics and at least two years of software development or maintenance experience is required for entry.

SOFTWARE ENGINEERING - (PhD)

MASL #: P179131

MASL#: P179101
Course Start Date: March/September
Course Length: 156 weeks

The Ph.D. program is the first-ever doctoral program in Software Engineering. It is designed for military software practitioners who want to acquire the skill and knowledge to perform state-of-the-art research on issues related to the development and evolution of large complex software systems, and to intelligently manage the research of other software practitioners. It offers the software professionals a unique program of student and advances software engineering principles and technology vital to military researchers and program managers. An applicant should have a Master's Degree in Software Engineering (MSSE) or a related field. Applicants not meeting this requirement are encouraged to apply to the Master's program. Ph.D. applicants should have above-average grades in a typical Master's degree program and demonstrate the ability to think creatively and work independently. Other evidence of research or academic ability, such as work experience or publications, is also taken into consideration when evaluating applicants. Admitted Ph.D. students may begin in any quarter, but it is recommended that the student start in either the Fall Quarter (beginning in October) or the Spring Quarter (beginning in April) due to the requirements and timing of the Written Qualifying Examination.

SPACE SYSTEMS OPERATIONS (Intl)

CURRICULUM 364 - (MS)
MASL#: P179910
Course Start Date September (only)
Course Length: 104 weeks

A course of study modeled after Curriculum 366 is available for international students. Further information is available from the Program Officer or Academic Associate. The Space Systems Operations curriculum is designed to provide officers with an appreciation for military opportunities and applications in space, comprehensive, practical as well as theoretical knowledge of the operation, tasking and employment of space surveillance, communications, navigation and atmospheric/oceanographic/environmental sensing systems and knowledge of payload design and integration.

SPECIAL OPERATIONS

CURRICULUM 699 - (MS)
MASL#: P173200
Course Start Date: January/July
Course Length: 78 weeks

The Special Operations Curriculum is designed to provide a focused course of study of the conflict spectrum below general conventional war. Graduates of this curriculum will possess a close knowledge of the broad range of factors involved in the planning and conduct of these forms of conflict and a detailed understanding of the role of special operations and related forces in U.S. foreign and defense policy. The curriculum examines the sources and dynamics of inter-state and intra-state conflict, the challenge these forms of conflict have posed and are likely to increasingly pose for U.S. security planning, the doctrinal and institutional evolution of the U.S. special operations community, the recent history of political violence and "small wars" in Latin America, Asia, and the Middle East, the history of irregular warfare, and contemporary perspectives on low intensity conflict resolution. These curriculum specific requirements are supported by a larger program of study which provides the graduate with a broad background in the areas of international relations, comparative strategy, the technological revolution in military affairs, and advanced analytical methods.

SYSTEMS ENGINEERING

CURRICULUM 580 - (MS)
MASL Number: P174270
Course start: July (Only)
Course Length: 115 weeks

Systems Engineering at NPS provides a broad education in systems engineering methods and tools, and depth in a particular domain of application. Several domain tracks are offered, including combat systems engineering, ship systems engineering, and network-centric systems engineering. Other tracks are added, based on sponsor and student demand. The tracks consist of eight or more courses to gain depth in the domain area. These tracks complement the standard set of systems engineering courses. The curriculum is interdisciplinary and draws on courses from across campus. Graduates will:

- Demonstrate the ability to identify, formulate, and solve operational, technical, and engineering problems in Systems Engineering and related disciplines using the techniques, skills, and tools of modern practice, including modeling and simulation. These problems may include issues of research, design, development, procurement, operation, maintenance or disposal of systems and processes for military applications.
- Demonstrate proficiency in the systems engineering process, including defining requirements, conducting functional analysis, designing and architecting a system, analyzing it against requirements, allocation of requirements to sub-systems, conducting trade-off studies, determining the cost of the system, integrating human factors into the system, designing logistical supportability, and planning for its testing and evaluation.
- Demonstrate proficiency in core skills of systems analysis, to include deterministic and stochastic modeling of systems, optimization, decision analysis, risk analysis, economic models, and lifecycle supportability analysis. This includes familiarity with combat simulations and combat modeling.
- Demonstrate the ability to work as a team member or leader in a large systems engineering project, and to provide leadership in the systems engineering management process. The graduate must be able to interact with personnel from other services, industry, laboratories and academic institutions.

Students come from the uniformed services, civilian members of government, and from foreign military services. US Navy Engineering Duty Officers constitute a substantial portion of the students.

SYSTEMS ENGINEERING AND ANALYSIS

CURRICULUM 308 - (MS)
MASL#: P174015
Course Start Date: July (only)
Course Length: 104 weeks

This curriculum is designed for combat officers, and will enable the student to exploit emerging technologies to achieve war-fighting advantages. The students will blend their operational experience with a thorough technical education to expeditiously integrate new technological capabilities into operational applications. The officer will be able to evolve current tactics and doctrine to expeditiously leverage imminent technological advances. This war-fighting oriented program provides a solid understanding of the principles and applications of systems engineering, and employs these principles to gain insight into operational problems. This program includes a core of courses, in fields of modeling, simulation, weapons, and sensors that will enhance understanding and analysis of selected case studies and weapons systems. The program is designed as a highly integrated graduate education experience. There will be lectures, team projects, and individual research as well as seminars from visiting experts. Each arriving officer is evaluated for existing knowledge, skills and competencies and an individual course of study developed.

TEMASEK DEFENSE SYSTEMS INSTITUTE (TDSI) PROGRAM - (MS)

MASL#: P179039
Course Start Date: December (NPS portion)
Course Length: 52 weeks (NPS portion)

This joint Naval Postgraduate School (NPS) and National University of Singapore (NUS) program provides qualified personnel with an advanced understanding of the dynamic complexity of military warfare for exploiting emerging technologies to achieve war-fighting advantages. The joint curriculum provides a platform for the education and the integration of operational staff and defense technologists to plan, design, develop, create, operate and sustain Integrated Military Forces of the 21st Century.

The first two quarters (six months) of the joint curriculum are conducted at NUS by faculty from NUS and NPS, and provide a firm grounding in key technical and project management skills. The third to sixth quarters (one year) are conducted at NPS, where the students will enter into designated specialization tracks such as Communication Systems, Sensor Systems, Operations Research, Information Assurance and Guided Weapons Systems. The students blend their operational experience with a thorough technical education to expeditiously integrate new technological capabilities into operational applications. Upon successful completion of the coursework, an integrated project, and thesis research, the student will be awarded two separate degrees. From NPS students receive an M/S in the appropriate technical field, such as Electrical Engineering, Computer Science, Mechanical Engineering, and Operations Research. NUS awards an MS in Defense Technical Systems.

TOTAL SHIP SYSTEMS ENGINEERING (TSSE) - (MS)

TOTAL SHIP SYSTEMS ENGINEERING (TSSE) - (MS)

MASL#: P177715 – Naval/Mechanical Engineering
MASL#: P177712 – Electronic Systems Engineering
MASL#: P179906 – Combat Systems

Engineering program through the standard 533/570/590 curricula. (Naval/Mechanical Engineering, Electrical Engineering, and Combat Systems) Start – Entry Dates – Total Ship Systems Engineering will generally fit as part of an eight-quarter program, with TSSE electives commencing in October. The ease of accommodating TSSE in a student's program is influenced by the student's NPS entry quarter and undergraduate background and performance. Individuals interested in the program should explore the necessary course sequencing with the program officer as early as possible.

The objective of this program is to provide a broad-based, design oriented education focusing on the warship as total engineering system including hull, mechanical, electrical and combat systems. The program is for selected Naval/Mechanical Engineering, Electrical Engineering, and Combat Systems Sciences and Technology students and is structured to lead to the MSME, MSEE, or MS in Physics.

UNDERSEA WARFARE (Intl)

CURRICULUM 526 - (MS)
MASL#: P179911
Course Start Date: March/September
Course Length: 104 weeks

The Undersea Warfare Curriculum educates officers in the engineering fundamentals, physical principles and analytical concepts that govern operational employment of undersea warfare (USW) sensors and weapons. This interdisciplinary program divides naturally into four major academic areas, allowing the student to specialize in the area of choice and to complete a Master of Science in Engineering Acoustics (with emphasis on underwater acoustics and weapons effects), Physical Oceanography (with emphasis on environmental factors affecting acoustic surveillance), Electrical Engineering (with emphasis on signal processing), Operations Research (with emphasis on tactical applications and decision analysis), or in other disciplines depending on the student's academic background.

NPS has also developed a series of non-degree program MASL's (up-to-one year) to accommodate requests for eligible students who are not available for the full degree programs. Standard admissions eligibility and TOEFL requirements apply.

NON-DEGREE MASL's:
P179914 - Research Only - from one week to four quarters
P179268 - one quarter-one course
P179267 - one quarter-two courses
P179266 - one quarter-three courses
P179265 - one quarter-four courses P179269 - two quarters-eight courses
P179270 - three quarters-twelve courses
P179271 - four quarters-sixteen courses

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