MASTER'S PROGRAM

Follow-on Study

The Systems Engineering and Analysis (SEA) program is designed to enhance URL officer skills as war-fighters and operators. The program provides an understanding of the integration of complex warfare systems and compatible tactics. SEA is an 18-month interdisciplinary program balancing studies in information technology, engineering, applied combat systems, analytical methods and JPME Phase I. Classes begin twice a year, in January and July.

What degree will I receive?

The SEA program leads to a Master of Science in Systems Engineering. SEA is uniquely designed to enhance war-fighter and operator skills at sea. It is also relevant to a variety of shore acquisition, doctrine and operational staff assignments. An MSSE provides many post-Navy career opportunities.

Can I complete JPME Phase I while at NPS?

Yes. Naval War College faculty are stationed on-site to allow for integrated completion of the Systems Engineering and JPME Phase I programs.

TO APPLY, PLEASE CONTACT:

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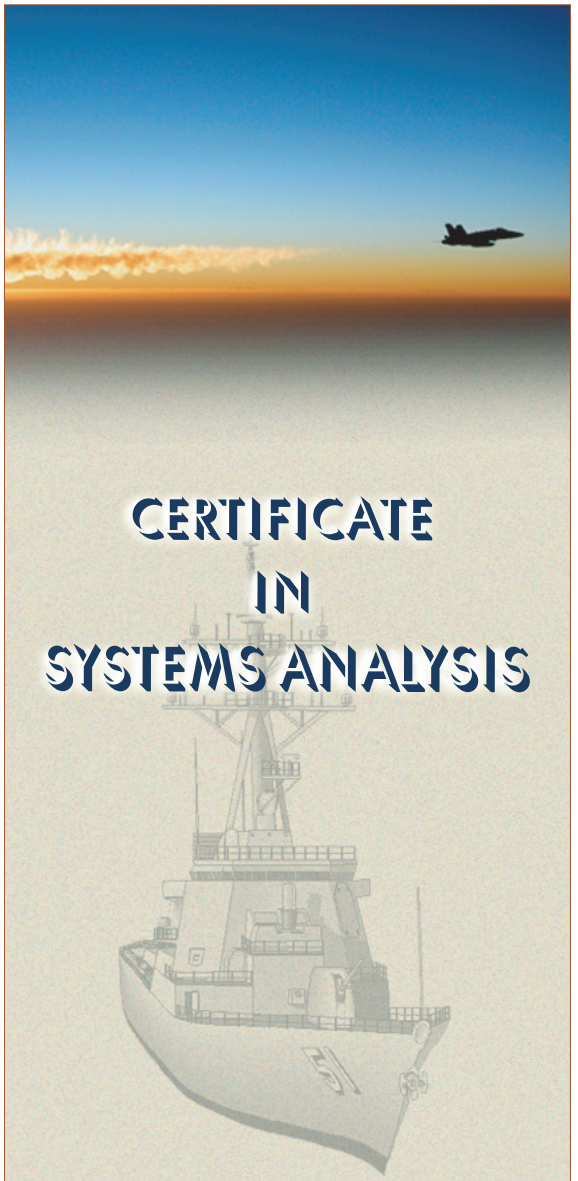

CERTIFICATE IN SYSTEMS ANALYSIS

WARGAMING FORECASTING
Statistics OPTIMIZATION Modeling
TACTICAL DECISION-MAKING
Probability SIMULATION

Naval Postgraduate School, Monterey, California

IS IT FOR ME?

What is Systems Analysis?

Systems Analysis examines existing complex defense systems to determine and choose between alternatives for system improvement and employment. Students learn and apply modeling, optimization, simulation, and decision making under risk and uncertainty.

Benefits to war-fighters

Skills learned in this certificate program will sharpen your ability to rapidly analyze a situation and more easily make a difficult decision based on facts. This background will make you a better department head, a better staff officer, and ultimately, a better commander.

Examples of Systems Analysis

Recent resident program students have:

- Developed modeling and simulation to support the concept and design of a force for combat in the littorals. The force included UAVs; a new automated fast carrier to support the UAVs; small fast fighting ships; C2 networks; logistical support system and ships; and new weapon systems such as Free Electron laser for point defense.
- In response to N7 tasking, designed a concept and force for Expeditionary Warfare. Starting from a clean sheet, the modeling included operational concepts, ships, aircraft, ground vehicles, logistical systems and the C2 necessary to enable the force.

CERTIFICATE PROGRAM

The Systems Analysis Certificate

The Systems Analysis Certificate consists of four, fully-accredited courses delivered by multiple modes of instruction (face-to-face, video tele-education, and web-based distributed learning). Offered over a one year period, these courses challenge participants academically and address current problems of interest to the Department of Defense.

SA CERTIFICATE COURSES

OS2080 - Introduction to Naval Analysis

Refresher of probability, statistics, and calculus. Introduction to simulation, grounded in relevant Naval tactical scenarios.

OS3380 - Combat Systems Simulation

Discrete event simulation, fixed step simulation, and combat models; applied to relevant Naval scenarios.

OS3680 - Naval Tactical Analysis

Search and detection, decision analysis, game theory, mine planning and counter-measures, reliability and tactical applications of simulation.

OS4680 - Naval Systems Analysis

Analysis of processes and alternatives, analysis in the systems engineering management process, multi-objective decision-making, and sensitivity analysis.

Capstone Project

During the latter three classes, students will apply newly gained knowledge and techniques to a Capstone Project that will address an operational challenge with immediate and/or long-term relevance to the Navy.

http://www.nps.navy.mil/SEA

FREQUENTLY ASKED QUESTIONS

How does this certificate program help me?

Successful completion the Systems Analysis Certificate provides you with a vital skill set recognized by Navy leadership. You may also apply completed SA courses toward master's degree requirements in the NPS-resident Systems Engineering and Analysis (SEA) program.

Subsequent completion of the Systems Engineering Certificate (in development) would permit you to complete the master's in the NPS-resident SEA program and JPME Phase I in one year.

Are there any prerequisites to enter the program?

An Academic Profile Code (APC) of 334 is required. This means a 2.2+ GPA, C (or better) in calculus, and a calculus-based physics course. Waivers may be considered.

Is there a service commitment?

There is no service commitment associated with the Systems Analysis certificate program.

What will it cost me?

Students are expected to purchase relevant textbooks and incidental supplies.

What part does my command play in this?

Your command must make a commitment to you to respect the demands of the SA program to the greatest degree possible—primarily by making you available for class sessions.