

2017 - 2019 Educational Skill Requirements  
Operations Analysis (OA)  
Subspecialty 3211  
Curriculum 360

1. Curriculum Number: 360
2. Curriculum taught at Naval Postgraduate School.
3. Curriculum Length in Months: 24 months; 21 months for MAS requirements + 3 months (1 academic quarter) to accommodate Joint Professional Military Education (JPME) requirements.
4. Academic Profile Code Required: 325
5. The officer must understand the fundamental concepts and be familiar with the basic functional areas of Operations Analysis within the Department of Navy (DoN) and the Department of Defense (DoD) including:
  - a. BASICS (ESR #1): The graduate will possess the mathematical and computer programming skills required to support graduate study in operations research and have the ability to use computers as a tool to aid in analysis.
  - b. PROBABILITY, STATISTICS, AND DATA ANALYSIS (ESR #2): The graduate will be well-versed in applications of probability, statistics, and data analysis to support the modeling and analysis of a broad range of military decision problems.
  - c. OPTIMIZATION (ESR #3): The graduate will be able to formulate and solve a wide variety of optimization problems and be conversant with the major uses of such models in DoD and the private sector.
  - d. STOCHASTIC MODELING (ESR #4): The graduate will be able to formulate stochastic models, calculate measures of performance for them, and be familiar with major applications of such models.
  - e. SIMULATION (ESR #5): The graduate will be able to employ simulation methods to model situations of interest to the defense community, be able to formulate, implement, explore, and analyze simulations, and make informed recommendations.

f. SYSTEMS ANALYSIS (ESR #6): The graduate will be able to apply systems analysis concepts as a basis for making key decisions on force requirements, weapon systems, and other defense problems, with particular emphasis in risk-benefit and cost-benefit analysis.

g. ANALYSIS OF MILITARY OPERATIONS (ESR #7): The graduate will have significant exposure to and be able to model and analyze military operations using operations analysis techniques to support concept development, tactics, and operations.

h. PRACTICE (ESR #8): The graduate will have gained experience working in all aspects of an analytical study, and will demonstrate the ability to conduct independent analytical studies and proficiency in presenting the results both orally and in writing.

i. OPTIONAL FOCUS AREA: The graduate may choose to specialize in one of the following focus areas:

(1) DATA ANALYTICS: Course matrix tailored to techniques used to manipulate and analyze large data sets.

(2) WARFIGHTING ANALYSIS: Course matrix tailored to assessment of current and future warfighting capabilities.

7. The officer must have the ability to apply operations analysis principles as well as knowledge from the relevant sciences to the development and implementation of effective policies throughout DoN and DoD.

8. The officer must be able to analyze the strengths and weaknesses of new policy proposals and suggest alternatives which recognize the potential impact on DoD/DoN programs and objectives.

9. The officer must understand and be able to apply a range of quantitative techniques (e.g., stochastic modeling) to the analysis and study of DoN/DoD issues.

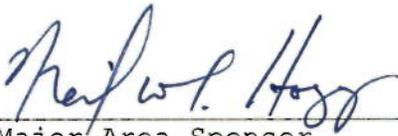
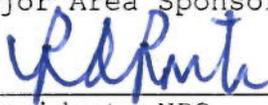
10. The officer must have the ability to use and understand operations analysis in problem solving and analysis efforts specifically as they relate to existing and proposed DoN/DoD systems.

11. The officer must be capable of understanding and evaluating the utility of the operations analysis currently employed by DoN/DoD.

12. Major Area Sponsor and Subject Matter Experts

a. Major Area Sponsor: W. K. Lescher, VADM, Deputy Chief of Naval Operations, Integration of Capabilities & Resources (OPNAV N8).

b. Subject Matter Expert: R. B. Crites, RADM, Director, Assessment Division (OPNAV N81).

APPROVED:	 Major Area Sponsor	<u>19 April 2018</u> [DATE]
APPROVED:	 President, NPS	<u>APR 27 2018</u> [DATE]
APPROVED:	 Director, OPNAV N12	<u>JUNE 2018</u> [DATE]