

ACADEMIC YEAR 15 EDUCATIONAL SKILL REQUIREMENTS
OPERATIONAL OCEANOGRAPHY (375)
Subspecialty Code 6402P

1. Curriculum Number: 375
2. Curriculum taught at: MIT/WHOI
3. Students are fully funded.
4. Curriculum Length: 27 Months
5. APC Required: MIT Admissions Board criteria applies for the Joint Program MIT/WHOI.

ESR-1: Mathematics: The officer will master the mathematical principles and techniques necessary to complete graduate level course work and research related to physical oceanography and ocean engineering.

ESR-2: Sensing: The officer must be able to observe, assimilate, analyze, and predict acoustic, oceanic and littoral water conditions using direct and remote sensing observation techniques. This understanding should include the theory of design and employment of autonomous unmanned vehicles, operator-manned, fixed remote, and satellite systems.

ESR-3: Dynamics: The officer will have a sound understanding of polar, mid-latitude and tropical oceanographic dynamics, at the meso- and synoptic scales. The officer will be able to articulate the impact of these region's conditions on military operations and systems.

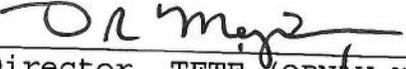
ESR-4: Acoustics: The officer will understand acoustical phenomena affecting propagation of sound in the ocean environment. This will include understanding of the theory and design principles of tactical decision aids used in fleet operations.

ESR-5: Prediction: The officer will have a thorough understanding of numerical prediction systems as it applies to the physics and dynamics of the ocean and acoustics. This understanding should include a broad understanding of the modeling systems to include strengths, weaknesses, and vulnerabilities; the state of current models and techniques; and appropriate applications of deterministic and stochastic techniques.

ESR-6: Problem Solving and Practical Applicability: The officer will develop critical thinking skills and conduct independent analyses to solve environmentally challenging problems in the field of Physical Oceanography as it applies to Naval/Joint operations, using modern scientific research techniques, field experience, tools, and equipment.

APPROVED:  11 MAR 15
Major Area Sponsor [DATE]

APPROVED:  MAR 25 2015
President, NPS [DATE]

APPROVED:  7 July 2015
Director, TFTE (OPNAV N12) [DATE]