



GEOINT Professional Certification
Maritime Analysis: Proficiency Level II (MA-II)
Essential Body of Knowledge (EBK)
11 October 2023



Core Competency 1 - Maritime Navigation Principles (21%)

Demonstrates a knowledge of Maritime Safety of Navigation (SoN) and nautical science, how they relate to Maritime GEOINT products, and an understanding of how they are used by the Maritime community.

Terminal and Enabling Certification Objectives (TCOs & ECOs)

TCO 1: Comprehend Maritime Safety of Navigation (SoN) basics.

ECO 1.1: Discuss the fundamentals of shipboard navigation to include voyage planning, piloting, electronic navigation, and ship positioning methods.

ECO 1.2: Explain Maritime Navigational Rules of the Road.

ECO 1.3: Describe Navigational aids/features and their purpose; and types of routing systems as defined in SOLAS Chapter V.

ECO 1.4: State the purpose of the Global Maritime Distress and Safety System (GMDSS), World Wide Navigational Warning Service (WWNWS) and how it relates to safety of navigation.

ECO 1.5: Explain hydrographic features, associated symbology, and other information found on Maritime products.

TCO 2: Comprehend nautical science basics.

ECO 2.1: Describe the basic elements of geodesy to include grids, datums, chart projections, and coordinate systems used on Maritime GEOINT products and databases.

ECO 2.2: Describe the key facets of tides and tidal currents.

ECO 2.3: Outline the basics of hydrography, oceanography, and bathymetry.

Core Competency 2 - Maritime Governance & Industry (5%) Demonstrates a knowledge of national and international policies and mandates governing the production and distribution of Maritime GEOINT. Understands National Geospatial-Intelligence Agency exchange agreements with other hydrographic offices and partners. Maintains a basic understanding of key relationships with external entities and their role as a part of a larger national and international hydrographic community.
Terminal and Enabling Certification Objectives (TCOs & ECOs)
TCO 3: Comprehend the Maritime statutory requirements, international agreements, and national policy/instructions that govern the mission.
ECO 3.1: State the statutory mandates within U.S. Code that dictate the production and use of Maritime GEOINT.
ECO 3.2: Cite the international conventions and resolutions that dictate the provision and carriage of Maritime GEOINT, products, and services.
ECO 3.3: Describe the Department of Defense Directives, NGA Instructions, and policies that assign Maritime GEOINT production responsibilities to NGA and the Maritime Safety Office.
TCO 4: Comprehend national Maritime partners and their missions.
ECO 4.1: Summarize the roles and responsibilities of the National Oceanographic and Atmospheric Administration (NOAA) and its relationship with NGA and the Maritime Safety Office.
ECO 4.2: Summarize the roles and responsibilities of the Naval Oceanographic Office (NAVO), and the Commander of Naval Meteorology and Oceanography Command (CNMOC) and their relationships with NGA and the Maritime Safety Office.
ECO 4.3: Summarize the roles and responsibilities of the U.S. Coast Guard and its relationship with NGA and the Maritime Safety Office.
TCO 5: Comprehend international Maritime partners and their missions.
ECO 5.1: Describe the purpose and structure of the World-Wide Navigational Warning Service (WWNWS).
ECO 5.2: Distinguish the roles and responsibilities of the International Hydrographic Organization (IHO).
ECO 5.3: Describe the purpose of Basic Exchange Agreements (BECA) and Memorandums of Understanding (MOU) between the NGA and foreign hydrographic partners.

ECO 5.4: Distinguish the roles and responsibilities of the International Maritime Organization (IMO).

Core Competency 3 - Maritime Sources (15%)

Understands internal processes and management policies on Maritime source acquisition, receipt, routing, and management. Identifies and evaluates source material from national and international partners for proper analysis and application to Maritime products and databases. Leverages understanding of Maritime sources to ensure that the most accurate and relevant source is used during production.

Terminal and Enabling Certification Objectives (TCOs & ECOs)

TCO 6: Comprehend proper processes for the acquisition, analysis, annotation, routing, storage, and management of source information used for Maritime GEOINT.

ECO 6.1: Explain the different types of Maritime sources.

ECO 6.2: Describe the processes used to identify, locate, and acquire source material.

ECO 6.3: Describe the processes used to validate, evaluate, route, and analyze source material.

ECO 6.4: State the processes used to annotate, store, and archive source material.

Core Competency 4 - Maritime GEOINT Production (17%)

Demonstrates a thorough understanding of Maritime Safety of Navigation (SoN) products and services. Incorporates knowledge of work processes, policies, standards, and specifications for production and maintenance of Maritime GEOINT. Applies knowledge of hardware and software applications in daily work.

Terminal and Enabling Certification Objectives (TCOs & ECOs)

TCO 7: Apply Maritime GEOINT production processes.

ECO 7.1: Describe the purpose, production process flow, and key facets associated with nautical publications.

ECO 7.2: Describe the purpose, production process flow, and key facets associated with the U.S. Notice to Mariners.

ECO 7.3: Describe the purpose and key facets of the various hard copy chart and/or map products.

ECO 7.4: Describe the purpose and key facets of chartlets.

ECO 7.5: Describe the purpose and key facets of subsurface products.
ECO 7.6: Describe the role of the Maritime Safety Watch and promulgation of time-sensitive Maritime Safety Information (MSI).
ECO 7.7: Describe the purpose and key facets of Digital Nautical Chart (DNC), Electronic Navigational Chart (ENC) products, and Continual Maintenance (CM).
ECO 7.8: Describe the purpose and key facets of Vector Product Format Database Update (VDU).
ECO 7.9: Describe the purpose and key facets of GHub Maritime as a Service (GMaaS).
ECO 7.10: Describe the cross dependencies of Maritime GEOINT products and services.
ECO 7.11: Operate Geographic Information System (GIS) software used in the maintenance and generation of Maritime GEOINT products and databases.
ECO 7.12: Describe the purpose and key facets of Ghub maritime as a source (GMASS).
TCO 8: Comprehend Maritime GEOINT hydrographic product specifications and standards.
ECO 8.1: Distinguish the major elements of national production standards and specifications to produce NGA Maritime GEOINT products and services.
ECO 8.2: Distinguish the major elements of international production standards and specifications to produce NGA Maritime GEOINT products and services.
<p>Core Competency 5 - Maritime Quality (12%)</p> <p>Demonstrates operational knowledge of Maritime quality control and quality assurance processes and policies. Versed in key attributes of the Maritime ISO 9001 Quality Management System (QMS) to include documenting process improvements, corrective actions, and auditing. Demonstrates knowledge of feedback mechanisms and how to initiate remedies to product deficiencies or ineffective procedures.</p>
Terminal and Enabling Certification Objectives (TCOs & ECOs)
TCO 9: Comprehend functions of the Maritime Quality Management System (QMS).
ECO 9.1: Identify the functions and roles within the Maritime Quality Management System (QMS) and know how they support quality assurance.

ECO 9.2: Discuss how process improvements are identified and implemented using the Maritime Quality Management System (QMS).
TCO 10: Outline the purpose and key facets of quality processes for Maritime GEOINT.
ECO 10.1: Outline the purpose and key facets of the Electronic Chart Display and Information System (ECDIS) Validation (EV) review.
Core Competency 6 - Maritime Databases & Information Processing (17%) Demonstrates an understanding of Maritime Safety of Navigation (SoN) databases. Incorporates knowledge of work processes, policies, standards, and specifications for the maintenance of Maritime GEOINT.
Terminal and Enabling Certification Objectives (TCOs & ECOs)
TCO 11: Comprehend Maritime databases.
ECO 11.1: Summarize the purpose and key facets of the Maritime Safety Information (MSI) databases.
ECO 11.2: Summarize the purpose and key facets of the Red dot database.
ECO 11.3: Summarize the purpose and key facets of the NGA List of Lights database.
ECO 11.4: Summarize the purpose and key facets of the Maritime Safety Watch Broadcast Warnings database.
ECO 11.5: Summarize the purpose and facets of World Port Index (WPI).
Core Competency 7 - Maritime Customer Operations & Data/Product Access (13%) Demonstrates an understanding of the means to interact, derive feedback from, and provide support to the user of Maritime products and services. Thoroughly understands the dissemination methods and availability of Maritime GEOINT to the entire customer base. Applies knowledge of National Geospatial-Intelligence Agency, Joint Service, and Combatant Command structure to assist in providing comprehensive collaboration and support.
Terminal and Enabling Certification Objectives (TCOs & ECOs)
TCO 12: Comprehend Maritime customer service.
ECO 12.1: Recognize customers of Maritime GEOINT products and services.

ECO 12.2: Describe the various ways internal and external customers can submit recommended changes and corrections to Maritime GEOINT products and services.

ECO 12.3: State the purpose of using the Maritime Quality Feedback System (MQFS) for tracking and responding to customer inquiries.

ECO 12.4: Describe the purpose and key facets of the Fleet Liaison Program.

TCO 13: Comprehend the Maritime dissemination process and product/data availability.

ECO 13.1: Explain how NGA Maritime GEOINT products are disseminated.

ECO 13.2: Summarize the content, data availability, frequency of update, and key query capabilities of the Maritime websites on all networks.