



**THE DEVELOPMENT STRATEGY
OF THE NAVAL INSTITUTE
OF THE NATIONAL UNIVERSITY “ODESA MARITIME ACADEMY”**



"The central task of education is to implant a will and a facility for learning; it should produce not learned but learning people."

*Eric Hoffer
(social philosopher, American writer)*

Approved by
The Academic Board of the Naval Institute
of the National University “Odesa Maritime Academy”
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PREFACE

The Development Strategy of the Naval Institute of the National University “Odesa Maritime Academy” (hereinafter the Strategy) is a conceptual paper which represents the Institute Leadership’s vision of its future organization. The Strategy has been elaborated with the use of NATO Member/Partner States’ experience and is based on national doctrinal documents in the field of National Security and Defense, as regards the training and the use of the Naval Forces of the Armed Forces of Ukraine (hereinafter the Navy), which will eventually make provisions for education and training of highly-qualified personnel determined on gaining victory.

All questions related to the Strategy are to be sent to the Naval Institute of the National University “Odesa Maritime Academy” (hereinafter the Naval Institute) to the address:

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GENERAL PROVISIONS

The Naval Doctrine of Ukraine from January 2021, approved by the Commander-in-Chief of the Armed Forces of Ukraine, clearly emphasizes that the Navy, by their nature, are the quintessence of all armed services that allows assuming multiple roles in existing and potential conflicts provided the required level of combat strength and proper operational readiness. These requirements are to be implemented due to the gradual and balanced development of the Navy`s combat potential along with the staged increase in the range of tasks and capabilities, notably in the field of personnel training, i.e. the creation of human capital pool consisting of commissioned and non-commissioned officers capable of becoming an example of the collective spirit of serving for the benefit of the Ukrainian people. The pool creation mission is to be based on the leadership and education constituent within the framework of NATO DOTMLPF (doctrine, organization, training, materiel, leadership and education, personnel, and facilities) consisting of 3 components as follow:

- **physical** which involves the training of a naval officer capable of critical thinking, situation envisaging, and making informed decisions along with bearing responsibility for their effects;

- **conceptual** which is based on the forming an all-round developed personality of an intellectual leader who is able to solve the problems assigned to the Navy in the context of the changing security environment at a highly professional level;

- **moral** which forms and consolidates in the consciousness of a future leader such personal qualities as honesty, devotion to the service to the Ukrainian People and the State of Ukraine as well as high moral and ethical qualities intrinsic to a naval leader, notably *loyalty, courage, and stamina*.

The Institute Command envisages the human capital training system is to be built not only in terms of its efficiency, but also its adaptability combined with career management that might make provisions for the Navy`s employment pool to be

formed by professional commissioned and non-commissioned officers trained in accordance with NATO standards, values, ethics, and morale.

A systems approach is to be applied to the representation of the latest paradigm of naval officer training in view of its complexity, versatility, and wide content within the framework of “leadership and education” concept that might ensure irreversible changes in the naval officer training system in middle and long-term perspectives as well as eliminate a number of possible errors in the course of transition process.

ENVIRONMENT DESCRIPTION

The Military Security Strategy of Ukraine approved by the Decree of the President of Ukraine № 121/2021 from March 25, 2021 defines the hybrid war against Ukraine having been unleashed by the Russian Federation by means of the covert use of regular and irregular troops, terror, propaganda, sabotage etc. as the major threat to the national security. The security aspect defined has given the international community a powerful incentive to revise the world security environment since 2014.

Aspects influencing the military specialists` training system development tendency.

1. External:

– **increase in the world trade volume** to meet the needs of humankind. Shipping as the main driving force of world trade is constantly transformed being in search of economic and environmental technologies and business solutions for the benefit of future fleet and its assets;

– **exacerbation of the struggle for world oceanic resources** along with reducing land resources stirring up strong rivalry for the redistribution of ocean and sea waters to change state sea borders and exclusive economic zone boundaries;

– **industrialization** in the course of the 4th Industrial Revolution forces a person to move through the constant development of personal moral and ethical qualities as an educator and future researcher as well as proves the acquirement of new knowledge indispensable in view of active introduction of the latest technologies related to the use of combat robot modules, unmanned vehicles, non-traditional weapons, artificial intelligence, cyber security etc.;

– **digitalization** of learning environment on account of E-learning, electronic libraries with round-the-clock remote access to their resources, software simulators etc.

2. Internal:

– the Naval Doctrine of Ukraine, setting forth the mission, assigned tasks, and combat employment principles of the Navy to protect the national interests of Ukraine at sea, makes provisions for reserve personnel training on operating not only domestic items of weapons and military equipment, but also those of partner countries to increase the combat capabilities of the Navy;

– **mentality changes** in streamlining “superior-subordinate” relation pattern for the sake of team work performance;

– **student-centric approach** to the future officer training system aimed at creating a comfortable learning environment for each student along with necessary conditions for acquiring knowledge and skills required for mastering his primary appointment in the fleet and operating newest and perspective armaments as well as creating a productive working environment for teaching staff so that, being surrounded by committed co-workers, reduce or eliminate excessive overwork.

– **lack of motivation** against the background of unresolved social and material issues along with vague self-development perspectives within the existing educational environment (e.g. limited opportunities for learning foreign languages, taking internships in leading universities etc.) causes the outflow of young promising personnel, thus, setting prerequisites for staff shortage.

– **outdated or scanty research and experimental facilities** due to the lack of financial autonomy might result in formal attitude towards auxiliary research activities to be conducted for the sake of the education quality.

Historical background

The Naval Institute is the only military institution which lost its own educational, scientific, and material facilities, up to 90% of researchers and teaching staff after the annexation of the Crimean Peninsula in 2014. Being currently located within the facilities of the National University “Odesa Maritime Academy”, in spite of a different mission to seafarers` training for the commercial fleet in accordance with the international seafaring conventions, codes, and other International Maritime Organization`s regulations, the Naval Institute makes use of the cooperation aimed at creating a modern and highly technological naval educational institution.

Legal basis

The Strategy outlining had been conducted simultaneously with the development of “The Military Security Strategy of Ukraine” (approved by the National Security and Defense Council of Ukraine and enacted by the Decree of the President of Ukraine № 121/2021 from March 25, 2021). The latter defines the objectives in order to increase the capabilities of the Armed Forces of Ukraine, territorial defense forces, and other components of the defense forces as follow:

- introduction of the commissioned and non-commissioned officers` education and training programs to be based on combat experience and NATO principles, standards, and training methods;

- development of the Military Science Concept aimed at solving theoretical and practical issues to ensure comprehensive security and defense of the Homeland and designing of modern military weaponry systems, armaments, and equipment.

The Strategy is also consistent with “The development of the national military specialists` education and training system”, the ongoing scientific project of the Ministry of Defense of Ukraine launched in 2018.

Risks anticipated

Outdated educational and scientific material base available, insufficient budget of scientific research programs, and the lack of funds being at the Navy Institute`s disposal constrain financing at the expense of the Ministry of Defense of Ukraine. The relatively low level of presence in the web space, a small proportion of teachers who are fluent in English, insufficient involvement of education cycle participants in academic virtue culture formation process might lead to reducing the number of entrants diminishing amount of funds to be allocated for educational and scientific purposes, and result in lowering the graduates` competence level.

Relatively low attractiveness of a military seafarer`s trade for the national labor market along with limited informational awareness of Ukraine populace on the development trends being currently ongoing in the Navy might inhibit the progression of the new naval leader training system likely resulting in a risk of losing potentially competent and talented military managers or future scientists in the course

of their training, particularly, at the stage of introduction of a trainee`s individual educational trajectory.

Incompletion or partial implementation of the State Defense Order Program or the Military Procurement Assistance Program might pose risks of disruptions or delays in timely deliveries of new warships, armaments, and military equipment to the Navy as well as the current state of centralized provisions with modern armaments and equipment, being hardly satisfactory, restrains the development of the Institute`s training facilities, thus, widens the gap between the theoretical and practical constituents of education incurring a risk of a graduate`s unpreparedness for immediate mastering his primary assignment in the fleet.

PRIORITY LINES OF DEVELOPMENT

Mission statement

Derived from the vision of the future Navy having been set forth in the Naval Doctrine of Ukraine as a modern, rapid, and innovative armed service manned by the motivated and professional personnel determined on gaining victory and able to protect the people of Ukraine and the national interests by conducting asymmetric and decisive operations in the maritime and littoral areas, the mission of the Naval Institute is to be stated as *“Carrying out education and training of naval specialists and leaders dedicated to loyal and honorable service to the Ukrainian people and their State”*.

Defined objectives

The mission set is to be accomplished by achieving the objectives as follow:

Objective 1: to optimize the educational process in order to increase the intellectual potential of a naval specialist to enable him not only to apply properly, but also generate new knowledge in the present as well in the future;

Objective 2: to integrate scientific research into the educational process by involving the trainees in conducting research activities on the experimental scientific base.

Objective 3: to improve the educational and material facilities in order to better the quality of trainees` practical training and make necessary provisions for the basic principles of dual education (e.g. a combination of intramural practical training with apprenticeship onboard a warship for the purpose of mastering the primary position within a period of a few month).

Objective 4: to create a new model of campus to be efficient in supporting convenient, compact, and highly-technological institutional infrastructure.

Implied tasks

Objective 1, the optimization of the educational process, is to be achieved by solving the tasks as follow:

Task 1: to improve the legal base in force to allow furthering effective management of the naval specialists` training system through the implementation of the following steps:

- to propose amendments to the Order of the Ministry of Defense of Ukraine “On approval of manning table standards for the military higher educational institutions and lyceums” which must envisage the inclusion of education quality supervision and internal audit teams in the military institution organizational staff structures for the purpose of creating an appropriate basis for the active introduction of the education quality management ideology to reinforce the effectiveness of the existing training system.

- to design the professional standards on the chief training specialties (“Armaments and military equipment” and “Combat service support”).

- to make provisions for the inclusion of the NCO Naval College into the Institute`s organizational staff structure to build a two-level military sailor training system enabling the full cycle of a naval specialist`s training.

Task 2: to start training of a new type leader, a tactical level naval officer, based on several aspects:

The first aspect, the *candidate selection cycle* for the admission to the institution, while presupposing equal opportunities for all candidates to take part in the fair contest and be selected by their highest rating to be composed of personal achievements, knowledge and skills, motivation, mental abilities, physical and psychological qualities, must also include:

- *information campaign* for the benefit of attracting active, talented, and creative youth who have consciously determined on connecting their lives with service in the Navy is to be conducted via the active presence in social networks and messengers, creation of high-quality video content reflecting the achievements and career prospects of naval personnel as well as other active cultural and information arrangements to be implemented in high schools, civilian and military lyceums, recruitment and community centers throughout the country;

- *mandatory certification of entrants` English proficiency level* (e.g. within the Common European Framework for high school graduates and within the STANAG-

6001 framework for military candidates) to ensure a higher adaptability of the new training system along with its attractiveness due to future prospects of studying and training in NATO environment.

The second aspect, *the quality of education* (i.e. compliance of learning outcomes with requirements established by the legislation, respective educational standards and/or an agreement on provision of educational services¹), might be considered as a set of characteristics which determine the consistent and practically effective formation of competence and professional consciousness resulting in level of knowledge, skills, mental and physical development attained by the postgraduates in the course of educational activity (i.e. activities of the educational actor aimed at organization, provision and implementation of the educational process in the formal and/or informal education²) within the framework of educational process (i.e. a system of scientific, methodological and pedagogical measures aimed at development of the personality by means of forming and using their competences³) in the Institute.

The adherence to the *“Plan-Do-Check-Act” cycle* appears expedient for addressing the education quality issue in the Institute, since the involvement and rational management of necessary educational resources within the framework of self-reliant educational process must assure the proper quality of educational services provided the following measures are to be implemented in terms of:

a) advanced training of scientific and pedagogical staff

– flexible approach to arranging educational activity in view of time allocation, optimization of working conditions, and creation of favorable moral environment to succeed in achieving the teamwork synergy, eliminate excessive overwork during an academic year, and extend opportunities for professional self-development;

– offering incentives, arousing professional interest, and maintaining both intrinsic and extrinsic motivation for the teaching staff with regard to equal access to studying foreign languages, taking advanced training, internship or skill sharing in leading military institutions, fair financing etc.;

¹ <https://mon.gov.ua/ua/npa/law-education>

² <https://mon.gov.ua/ua/npa/law-education>

³ <https://mon.gov.ua/ua/npa/law-education>

- maintaining comprehensive liaison in the scope of science and research between the Institute and the State Concern “UkrOboronProm” to impart a greater flexibility, dynamism, and adaptability in knowledge generation and accumulation process to the educational activity;

- rotational principle for holding teaching staff positions (“military unit-institution – military unit” cycle) to give the teaching staff an incentive for uninterrupted professional development due to the changes in activity as well as boost the interplay between the education process stakeholders and the Institute;

- cooperation with the leading universities of Ukraine (exchange of experience, internship, common workshops etc.) to adopt best practices, promote the friendly competitiveness, and encourage the willingness of self-realization.

b) organization of the educational activity

- development and implementation of a comprehensive curriculum outlining a logical pattern of naval specialist training progression and making provisions for the acquirement of necessary competences to master successfully the primary assignment in the Navy and continue professional development in the course of postgraduate and self-studies, thus, being the earnest of a successful career of a naval officer as a “holistic human” and personality of the new worldview orientation;

- introduction of an extensive and multilevel military leader training system to prepare future officers for effective and adaptive actions in difficult, dangerous, and unpredictable situations or under conditions of extreme physical and emotional exertions;



Leadership education constituents (source: United States Naval Academy Annapolis)

- introduction of distance learning technologies into the educational activity as an efficient tool to implement the continuous learning model and grant additional opportunities for professional development that, subsequently, might enable effective self-management of personal vocational strategy throughout the career;

- creation of a modern academic marine library, a smart navigator in information flows, to ensure steady remote access to its electronic resources with no time restraints.

c) advanced training of tactical level naval officers

Advanced training of tactical level naval officers to ensure effective career management, proficiency maintenance and preparedness for the study and use of the latest naval armaments and equipment must include the arrangements as follow:

- comprehensive advanced training of the Institute`s teaching staff both in national and NATO educational institutions;

- improvement of advanced training curricula and discipline programs considering NATO standards;

- development of a typical uniform curriculum for tactical level officer professional training.

Objective 2, the integration of scientific research into the educational process, is to be achieved by solving the tasks as follow:

- introduction of the training framework for Philosophy Doctor degree applicants in the field of military science to create the employment pool possessing the latest knowledge and scientific research methodology, and being capable of long-life development and quick adaptation to the emergence of new educational technologies;

- creation of “The State Oceanarium”, the Navy Research Center on the basis of the Institute, a unique scientific hub to eliminate the gap between educational and scientific activities, lay the groundwork for the evolution of naval science, set a platform for developing common views on existing and perspective scientific products in cooperation with the defense industry, ensure the accumulation and generation of scientific information, resources, and services that are not broadly used

by the majority for the present, but are likely to appear commonly applicable in the nearest future.

Objective 3, the improvement of the educational and material facilities, is to be achieved by solving the tasks as follow:

- further development of the training facilities focused on purchasing and bringing into service full-scale simulator elements emulating principal combat posts of a corvette type warship that must ultimately ensure the acquirement of naval warfare skills and practical abilities so necessary for the trainees in mastering their ship roles;

- integration of a “Neptune” missile training battery and an artillery battery into the educational process to enable quality practical training for the future coastal armament specialists;

- attachment of a training boat group under the Institute`s OPCON to improve the sea-going training to the future navigation and engineering fleet officers;

- acquisition and putting into operation a ship damage control training complex;

- building of the e-Learning technical support architecture and institutional intellectual repository to expand the academic marine library capabilities and approximate the virtual learning environment to the future officers' real activity conditions through the use of the “serious games” and “virtual worlds” simulations and learning technologies;

- purchasing of the educational process organization specialized software to enable conducting of group exercises, tactical and special warfare classes etc. with the ability to model/simulate the functioning of specific headquarters and command structures.

Objective 4, designing of a new model of campus, implies building a convenient, compact, and high-tech infrastructure aimed at setting a creative and healthy environment to foster the future officers` commitment and performance in the course of their training as well as mitigate emotional and psychological stresses which are likely to occur in view of the military life specifics. The educational room design is to be projected on “co-learning space” principle with esthetically attractive,

fully functional, and highly ergonomic educational premises to dispose the trainees to productive work by emphasizing their importance for the Navy in the capacity of future professionals, educators, scientists or researchers as well as attract potential entrants to studying in the institution`s facilities. This objective is to be achieved by solving the tasks as follow:

- defining an available land area to locate the Institute`s facilities, in particular, a water sports center, a sports complex, and a sea training ground to be constructed for the purpose of acquiring practical skills on survival at sea, as well as arranging on the transfer of the land area, to be determined, under the jurisdiction of the Ministry of Defense, specifically, the Navy;

- formation of key performance indicators on the creation of a convenient, compact, and high-tech infrastructure of the naval institution, and its adjustment in accordance with the up-to-date requirements;

- preparation and submission of proposals on cost estimations to make provisions for fund allocation for training, infrastructure, and the Institute design expenditures;

- production of the Institute perspective infrastructure design and estimate documentation.

		INTEREST	
		LOW	HIGH
AUTHORITY	HIGH	<p><i>Satisfy the demands. Keep satisfied.</i></p> <p>The Cabinet of Ministry of Ukraine The Education, Science, and Innovation Committee The National Security, Defense, and Intelligence Committee The Ministry of Education and Science of Ukraine</p>	<p><i>Key player. Closely involved.</i></p> <p>The Ministry of Defense of Ukraine, the Department of Military Education and Science The Chief Directorate of Armed Forces Training The Chief Directorate of Moral and Psychological Support The Scientific Directorate NATO DEEP</p>
	LOW	<p><i>The least important. The least effort.</i></p> <p>The Odesa City Council The National University “Odesa Maritime Academy”</p>	<p><i>Shows interest. Supports information awareness.</i></p> <p>The Navy Command Military lyceums Social organizations</p>

STAKEHOLDER ANALYSIS

Mendelov`s classification matrix by degree of authority and interest

ANTICIPATED RESULTS (ACCORDING TO THE PROFESSIONAL ACTIVITY)

- Competitive ability of the profession of a military sailor in the labor market of Ukraine and his motivation as a result of the rating growth of the institution, standardization of the quality of educational services etc.
- High performance and commitment in the course of the training as a result of creating a comfortable educational environment.
- Efficiency and permanent availability of information and educational services.
- A leader who is motivated towards a continuous process of self-development for the sake of gaining victory.
- Scientist and educator of the new generation.

GENERAL ANTICIPATED RESULTS



The vision of the Institute Command on the naval educational institution's perspective structure is given in the Annex to the Strategy.

ANNEX
to the Development Strategy
of the Naval Institute
of the National University
“Odesa Maritime Academy”

PERSPECTIVE STRUCTURE OF THE NAVAL INSTITUTE

(TO BE REORGANIZED INTO THE NAVAL ACADEMY)

The Naval Academy consists of:

The general academic departments;

The Faculty of Armaments;

The Faculty of Energetics and Search and Rescue Operations;

The NCO Naval College;

The research center “State Oceanarium”;

The Department of Military Training;

The Department of Advanced Officer Training;

Libraries

Museum.

The general academic departments

The Department of Naval Tactics and Naval History educates and trains in the fields of theory and practice of naval warfare, such as principles, forms, and methods of maritime and joint operations, naval doctrinal and procedural documents and protocols, ship maneuvering and naval campaign tactics, and Naval History.

The Department of Physical Training carries out physical training and sports coaching.

The Department of Humanities and Socio-Economic Disciplines educates in History, Philosophy, Economics, Sociology, Pedagogy and Psychology, Political Science, Culturology, and Fundamentals of Law.

The Department of Mathematics educates in Higher Mathematics, Descriptive Geometry, and Probability Theory.

The Department of Language Training teaches Ukrainian and Foreign Languages.

The Department of Information Technologies educates in Informatics, Information and Management Technologies, Digital Devices and Microprocessors, Information Security and Cyber Defense.

The Faculty of Armaments

The Department of Seamanship and Navigation educates and trains in the operation, maintenance, and combat employment of navigation equipment, organization and procedures of hydrometeorological and oceanographical combat service support to maritime operations, watch officer duties, seamanship, and Nautical Astronomy.

The Department of Surface Ship Armaments educates and trains in the operation, maintenance, and combat employment of shipborne missile, rocket, artillery, mine, and torpedo weapons.

The Department of Radio Engineering and Communications educates and trains in the operation, maintenance, and combat employment of shipborne and coastal radar, hydroacoustic, and communication equipment.

The Department of Coastal Rocket and Artillery Armaments educates and trains in the operation, maintenance, and combat employment of coastal anti-surface missile, rocket, and artillery weapons, general military subjects necessary for performing the duties of a troop/platoon leader e.g. Military Management Basics, Troops Readiness and Mobilization, Drill Training, Small Arms Training, Military Engineering, Vehicle Driving and Maintenance, Naval Infantry and Artillery Unit Tactics, Chemical, Biological, and Radiological Defense and Environmental Safety, Labor Protection etc.

The Faculty of Energetics and Search and Rescue Operations

The Department of Ship Energetics and Electric Power Engineering educates and trains in the operation, maintenance, and combat employment of diesel, gas-turbine, electric and other ship power plants.

The Department of Ship Construction, Damage Control, and Search-and-Rescue educates and trains in the ship damage control, search-and-rescue, diving, and warship/ coastal object safety assurance operational procedures, and Fundamentals of Ship Construction Theory.

The Department of Physics and General Technical Disciplines educates in Physics, Chemistry, Theoretical Mechanics, Strength of Materials, Theory of Machines and Mechanisms etc.

The NCO Naval College educates and trains naval specialists qualified for junior bachelor degree holders in accordance with the Navy Command`s requirements.

The department of advanced officer training conducts advanced training and retraining of reserve and acting naval officers.