

«APPROVED»
by the Rector of Kherson State Maritime Academy
Viktor HUSIEV
«03» November, 2025



**REVISED PLAN
of research studies conducted at Kherson State Maritime Academy for 2025**

No.	Title of the research study	Department, supervisor	Basis for conducting	UkrISTEI State Registration No.	Due date	Expected results in 2025
1	2	3	4	5	6	7
RESEARCH STUDIES AND DEVELOPMENTS CONDUCTED BY KHERSON STATE MARITIME ACADEMY						
1.	Designing Wear-Resistant Modified Epoxy Plastics for the Repair and Reliability Growth of Maritime Transport and Military Equipment	Department of Transport Technologies and Mechanical Engineering, supervisor – Doctor of Engineering, Professor A. Buketov	Order of the Ministry of Education and Science of Ukraine (MESU) dated 17.11.2022 No. 1032 Order of the MESU dated 16.03.2023 No. 283	0123U102016	01.2023 — 12.2025	Study results on the impact of the fabric nature and microdisperse particles on the creep and hydroabrasive wear resistance of “hybrid” epoxy plastics.

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2.	Enhancing Reliability of Maritime, Military and Industrial Transport Systems through the Application of Advanced Corrosion-Resistant and Anti-Fouling Polymer Nanocomposites	Department of Transport Technologies and Mechanical Engineering, supervisor – Doctor of Engineering, Professor O. Sapronov	Order of the MESU dated 27.12.23 No. 1569	0124U001881	01.2024 — 12.2026	Study results on the impact of carbon additives on physical, mechanical and thermal properties of epoxy composites. Investigation of interphase interaction using FTIR spectroscopy, DTA and TGA. Determination of optimal components using the method for mathematical design of experiments with the STATGRAPHICS© Centurion XVI software package.
3.	Developing Advanced Composite Materials with Electromagnetic Shielding for Unmanned Aerial and Marine Vehicles Frames	Department of Transport Technologies and Mechanical Engineering, supervisor – PhD, Associate Professor V. Sotsenko	Order of the MESU dated 27.12.24 No. 1801	0125U000902	01.2025 — 12.2027	Study results on the properties and structure of new modified epoxy composites using FTIR spectroscopy and optical microscopy.
RESEARCH STUDIES CONDUCTED WITHIN THE REGULAR WORKING HOURS OF TEACHING STAFF						
4.	Introducing Educational Innovations in Training Maritime Professionals within the Context of Social Sciences and Humanities	Department of Social Sciences and Humanities Training, supervisor – PhD in History, Associate Professor V. Dobrovolska	Decision of the Academic Council of KSMA, Minutes No. 5 dated 31.01.2023	0123U102044	01 .2023 — 12.2025	Implementation of study results into professional training of future specialists in maritime and inland water transport

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5.	Economic and Legal Fundamentals of Innovative Development in Maritime Industry	Department of Navigation and Ship Handling at Sea, supervisor – PhD in Economics, Associate Professor T. Stovba	Decision of the Academic Council of KSMA, Minutes No. 5 dated 31.01.2023	0123U102043	01 .2023 — 12.2025	Study results on the framework for strengthening competitiveness of shipping companies, port industry, and educational process in Ukraine’s maritime industry at global, regional and local levels
6.	Innovative Teaching Technologies for Effective Maritime Communication	English Language Department for Deck Officers, supervisor – PhD in Education, Associate Professor V. Kudryavtseva	Decision of the Academic Council of KSMA, Minutes No. 7 dated 09.01.2024	0124U001986	01.2024 — 12.2025	Implementation of the study results into professional foreign language training of students
7.	The Andragogy Fundamentals of Using Modern Teaching Technologies and Methods in Maritime English	English Language Department for Marine Engineers, supervisor – Doctor of Education, Professor I. Riabukha	Decision of the Academic Council of KSMA, Minutes No. 7 dated 09.01.2024	0124U001985	01.2024 — 12.2026	Creation of a question bank in the LMS Moodle
8.	Identifying Navigator’s Errors in Decision-Making During Ship Damage Control	Department of General Professional Training and Maritime Safety, supervisor – PhD in Engineering, Professor V. Husiev	Decision of the Academic Council of KSMA, Minutes No. 10 dated 28.03.2024	0124U004508	01.2024 — 12.2025	Development of an extended model for navigator’s decision-making in extreme situations based on theoretical and experimental studies of human error occurrence

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9.	Methods and Means of Upgrading the Performance Indicators of Ship Electrical Equipment and Automation Devices	Department of Ship Electrical Equipment and Automatic Devices Operation, supervisor – PhD in Engineering, Associate Professor H. Doshchenko	Decision of the Academic Council of KSMA, Minutes No. 10 dated 28.03.2024	0124U004090	05 2024 — 12.2026	Solution of theoretical issues related to the overall research justification. Conduction of experiments, experimental data processing, and comparison of the results obtained with theoretical calculations.
10.	Teaching Maritime English for Future Marine Engineers Following a Skill-Based Approach	English Language Department for Marine Engineers, supervisor – PhD in Philology, Associate Professor N. Ohorodnyk	Decision of the Academic Council of KSMA, Minutes No.5 dated 24.12.2024	01253000670	01.2025 — 12.2026	Identification of key linguistic and interpersonal abilities and skills of marine engineers; their competency profiling; definition of the concept of “Teaching Maritime English for Future Marine Engineers Following a Skill-Based Approach”
11.	Mathematical Models and Information Technologies in Solving Applied Problems	Department of General Professional Training and Maritime Safety, supervisor – PhD in Engineering, Associate Professor A. Motailo	Decision of the Academic Council of KSMA, Minutes No.5 dated 24.12.2024	0125U000903	01.2025 — 12.2027	Specification of scientific and engineering problems, frame of working hypotheses, and modelling of the research objects
12.	Innovation Methods and Technologies for Developing the Competence in Natural Sciences and Research of Students under the Specialty “Maritime and Inland Water Transport”	Department of General Professional Training and Maritime Safety, supervisor – PhD in Pedagogy, Associate Professor T. Spychak	Decision of the Academic Council of KSMA, Minutes No.6 dated 30.01.2025	0125U000949	02.2025 — 12.2027	Specification of scientific and engineering problems, frame of working hypotheses, and forecasting expected outcomes in artificial intelligence research

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13.	Safe Navigation Measures in Restricted Waters	Department of Navigation and Ship Handling at Sea, supervisor – PhD in Engineering, Associate Professor A. Petrovskyi, PhD in Engineering, Associate Professor D. Makarchuk	Decision of the Academic Council of KSMA, Minutes No.6 dated 30.01.2025	0125U003422	02.2025 — 12.2026	Elaboration of measures for additional verification of preliminary passage planning in restricted waters
14.	Applying the Pivot Point to Optimise Ship Manoeuvring in Restricted Waters	Department of Navigation and Ship Handling at Sea, supervisor – PhD in Engineering, Associate Professor O. Tovstokoryi	Decision of the Academic Council of KSMA, Minutes No. 7 dated 20.02.2025	0125U001783	03.2025 — 12.2026	Prototyping. Development of methods for automatic control of ship heading and manoeuvring around the pivot point with zero drift.
15.	Developing the Methods to Reduce the Human Factor Impact in Ship Automation Handling Systems	Department of Navigation and Ship Handling at Sea, supervisor – PhD in Engineering, Associate Professor E. Appazov	Decision of the Academic Council of KSMA, Minutes No. 4 dated 23.10.25	0125U001788	03.2025 — 12.2026	Elaboration of measures for collecting experimental data during manoeuvres using navigation simulators
16.	Digital Security and Managerial Decision-Making in Maritime Cybersecurity: Challenges, Risks, and Innovative Approaches	Department of General Professional Training and Maritime Safety, supervisor – PhD in Pedagogy, Associate Professor T. Zaitseva	Decision of the Academic Council of KSMA, Minutes No. 7 dated 20.02.2025	0125U001906	03.2025 — 12.2026	Research and analysis of the current state of digital security and cyber threats in the maritime industry, with a focus on shipping management, port operations, and logistics

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17	Improving the Engineering, Information and Mathematical Support for Ship Automation Handling Systems	Department of Ship Electrical Equipment and Automatic Devices Operation, supervisor – PhD in Engineering, Associate Professor V. Polyvoda	Decision of the Academic Council of KSMA, Minutes No. 1 dated 27.08.2025	0125U003319	09.2025 — 12.2027	Analysis of existing technology solutions, information flows and mathematical models applied in modern ship systems. Determination of requirements for improvement based on the analysis conducted. Identification of key problems and limitations in system operation. Development of conceptual and mathematical models to describe the operation of ship systems and their components.

Vice-Rector for Research



Andrii BEN