



MINISTRY OF EDUCATION AND SCIENCE
TECHNICAL UNIVERSITY - VARNA
FACULTY OF MECHANICAL ENGINEERING AND TECHNOLOGIES

APPROVED

DEAN:.....

/ Assoc. Prof. Dr. Eng. Radostin Dimitrov /

SYLLABUS

Discipline „*TECHNOLOGY AND ORGANIZATION OF MARITIME TRANSPORTATION*”,
code: 44B

Included in the Curriculum of the specialty: *INDUSTRIAL MANAGEMENT*

Professional field of study: *GENERAL ENGINEERING – 5.13*

Higher Education Qualification: *BACHELOR'S DEGREE*

Faculty, providing the organizational and methodological training: FACULTY OF MECHANICAL
ENGINEERING AND TECHNOLOGIES

Department, providing instruction on the discipline: *NAVIGATION, TRANSPORT MANAGEMENT
AND WATERWAYS PRESERVATION*

Excerpt from the curriculum

No by order	Name of the discipline	Forms of assessment				Auditorium workload						Extracurricular activities	Student total workload	Credits
		Examination	Continuous Assessment	Course project	Pass / Failed	Lectures	Seminars			Laboratory classes	Total hours			
							Seminar classes	Course project	Course work					
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15
44B	TECHNOLOGY AND ORGANIZATION OF MARITIME TRANSPORTATION	*				30				15	45	105	150	6

Semester: SEVENTH

ANNOTATION

The discipline “TECHNOLOGY AND ORGANIZATION OF MARITIME TRANSPORT” is a mandatory selective, according to the unified state requirements for acquiring higher education in the specialty “Industrial Management”, specialization “Shipbuilding and Shipping”, with the educational and qualification degree “Bachelor”. The discipline introduces students to the problems of the organization and technology of maritime transport and, above all, to the environment in which the water transport industry develops. The market structure of international freight markets with their main elements and so on is presented. In this regard, the main commodity markets are presented as the basis of demand and the types of ships as a consequence of market requirements. The main technological characteristics of ships and the most important cargoes are examined. The physical structure of the markets with its elements such as ports and waterways, the organizational structure of the markets with the basic market participants and intermediary companies are also examined.

A. Lectures (Topics)

Topic 1. TRANSPORTATION OF DRY BULK CARGO. 1.1 Markets of the five major bulk cargoes. 1.2 Impact of scientific and technological progress on the market	3 hours
Topic 2. TRANSPORTATION OF GENERAL CARGO. 2.1. Development of container technologies. 2.2. Influence of logistics concepts. 2.3. Conventional and other types of general cargo. 2.4. Unified loading units.	3 hours
Topic 3. TRANSPORTATION OF LIQUID CARGO. 3.1. Types of liquid cargoes and development of trade in them. 3.2. Liquefied gas markets.	3 hours

Topic 4. Basic Commercial And Technological Characteristics Of The Ship. 4.1. Linear characteristics of the ship 4.2. Volumetric characteristics of the ship 4.3. Load mark, deadweight of the ship.	2 hours
Topic 5. BULK CARGO SHIPS. 5.1. Market influence on their development. 5.2. Bulk carrier types, sizes and commercial applications	3 hours
Topic 6. TANKERS. 6.1. Market influence on their development. 6.2. Types, sizes and commercial applications. 6.3. Gas carriers	3 hours
Topic 7. General Cargo Ships. 7.1. Market influence on their development. 7.2. Types, sizes and commercial applications. 7.3. Container ships, ro-ro ships, heavy cargo ships ".	3 hours
Topic 8. PORTS AND CANALS. 8.1. Types of ports as technological units. 8.2. Canals and seaways..	3 hours
Topic 9. MARKET ENTITIES. 9.1. Shipowners, shippers. 9.2. Port operators. 9.3. Market intermediaries.	2 hours
Topic 10. ORGANIZATIONAL FORMS IN SHIPPING. 10.1. Tramp shipping. 10.2. Liner shipping	2 hours
Topic 11. TYPES OF SHIPPING MARKETS 11.1. Tramp Markets – Dry Cargo and Tanker Market 11.2. Liner Market 11.3 Market Factors	3 hours

Total: 30 **hours**

B. Seminars

NONE

Total: 0 **hours**

C. Laboratory classes

Topic 1. Dry bulk cargo markets.	1 hour
Topic 2. Liquid cargo markets.	1 hour

Topic 3. General cargo markets.	1 hour
Topic 4. Container markets and shipping.	2 hours
Topic 5. Ship characteristics	1 hour
Topic 6. Bulk carriers	1 hour
Topic 7. Tankers	1 hour
Topic 8. General cargo ships.	1 hour
Topic 9. Ports and canals	1 hour
Topic 10. Market entities	1 hour
Topic 11. Liner and tramp shipping	1 hour
Topic 12. Types of shipping canals	2 hours
Topic 13. Market factors and their impact	1 hour

Total: 15 **hours**

D. Practical Training

NONE

0 hours

Total: 0 **hours**

E. Course Project

NONE

0 hours

Total: 0 **hours**

F. Forms and organisation of the assessment throughout the semester

Forms of assessment throughout the semester	Points– K1
Final laboratory exercise Test	40
Total	40

G. Type of assessment (procedure)

Type of assessment	Points – K2
Exam - written	60

Final assessment points: $K = 1 \times K1 + 1 \times K2$

H. Reference

1. .Varbanova, A., Targovskaya exploitation of the fleet, Graphic, 2017
2. Petkov., N., Targovskaya exploitation of the ship, Steno, 2011
3. Petrovsky, V.V., Marine linear shipping, Moscow, ed. "Transport" 1977
4. P&O The Merchants Guide 2003 Edition
5. Review of Maritime Transport 2016. Geneva, UNCTAD/RMT/2016, United Nations Conference on Trade and Development.
6. Stopford, Martin, Shipping Market Prospects – 2003 & Beyond
7. Concentration In Liner Shipping, Its Causes And Impacts For Ports And Shipping Services In Developing Regions, United Nations Economic Commission For Latin America And The Caribbean – ECLAC, Distr. GENERAL LC/G.2027, 20 May 1998
8. Dry Bulk Charter Market, Drewry Shipping publications, Study No 112, May 1983
9. The Tanker Market in 2002, The crude oil transportation, Barry Rogliano Salles
10. Shipping and Shipbuilding Markets in 2002, The BRS annual review of WORLD SHIPPING and SHIPBUILDING developments in 2002 and prospects for the coming months, Barry Rogliano Salles 6

Author:..... /Assoc. Prof. Aneta Varbanova, PhD/
The program was adopted by the department council of the department " <i>NAVIGATION, TRANSPORT MANAGEMENT AND WATERWAYS PRESERVATION</i> " with protocol No.....
Head of Department..... /Assoc. Prof. B. Byakov PhD/
The programme was discussed at a Department Council meeting of the Department of „ <i>INDUSTRIAL MANAGEMENT</i> “, protocol No.
<div style="text-align: right;"> Head of Department..... /Prof. Dr. Siika Demirova/ </div> <div style="text-align: right; margin-top: 20px;"> Dean: / Assoc. Prof. Dr. Eng. Radostin Dimitrov / </div> <div style="text-align: right; margin-top: 20px;"> Agreed by:..... </div>

ECTS credits: 6	Number of hours per week: 2 + 0 + 1
Forms of assessments: Exam	Types of assessment: Exam - written
Department, providing instruction on the discipline: Department: <i>NAVIGATION, TRANSPORT MANAGEMENT AND WATERWAYS PRESERVATION</i> <i>FACULTY OF SHIPBUILDING</i>	

Lecturer: Assoc. Prof. Aneta Varbanova, PhD

Department: *NAVIGATION, TRANSPORT MANAGEMENT AND WATERWAYS PRESERVATION*

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Abstract:

Students are introduced to the environment in which the Maritime Transport industry develops.

The market structure of international freight markets with their main elements and market infrastructure is presented. In this regard, the main commodity markets are presented as the basis of demand and the types of ships as a consequence of market requirements. The physical structure of the markets with its elements such as ports and waterways, the organizational structure of the markets with the basic market participants and intermediary companies are examined. Along with the commodity markets, all market operations affecting water transport will be examined.

Main sections of the content:

- Basic concepts of the structure of the freight market;
- Basic concepts of the supply and demand of the international freight market
- Basic concepts of the market infrastructure
- Basic concepts of the main market participants
- Basic concepts of the basic forms of tonnage exploitation.

Form of presentation of the educational content:

The educational content is presented in lectures and laboratory exercises:

- in the lectures, the theoretical statements related to the individual sections of the discipline are examined and mastered;
- in the laboratory exercises, specific materials of a printed and audio-visual nature are studied, characterizing the individual problems of the discipline.