



TECHNICAL UNIVERSITY OF VARNA

Ratified by:

Rector:.....

/Prof. Ventsislav Valchev, PhD/

CURRICULUM

Professional orientation: **TRANSPORT, NAVIGATION AND AVIATION**

Educational and qualification degree: **BACHELOR**

Programme: **MARINE ENGINEERING**

Professional qualification: **MARINE ENGINEER**

Form of study: **FULL - TIME**

Term of study: **4 YEARS / 8 SEMESTERS**

Number	Subject name	Types of term control				Auditorium load						Unsupervised load	Total work hours	ECTS credits
		Examination	Progressive assessment	Course project	Approved	Lectures	Seminars			Laboratories	Total load			
							Seminar exercises	Course project	Course work					
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15
1	Mathematics, part 1	*				30	45				75	135	210	8
2	Physics	*				30	15			15	60	120	180	7
3	Technical Documentation		*			15	30		15		60	150	210	8
4	Introduction to the Speciality				*					30	30	75	105	4
5	English, part 1				*		30				30	30	60	2
6	Optional Subject				*									
a	Specialized Sport Activities, part 1											30	30	1
b	Adapted Physical Activity*													
Total for the 1 semester:		2	1	0	3	75	120	0	15	45	255	540	795	30
7	Mathematics, part 2	*				30	45				75	135	210	8
8	Industrial Chemistry	*				30				15	45	60	105	4
9	Materials Science and Technology	*				30				30	60	75	135	5
10	Technical Mechanics	*				30				30	60	75	135	5
11	Electrical Engineering and Electronics, part 1		*			30				30	60	75	135	5
12	English, part 2		*				30				30	30	60	2
13	Optional Subject				*									
a	Specialized Sport Activities, part 2											30	30	1
b	Adapted Physical Activity*					(30)	(15)				(45)	(75)	(120)	(4)
Total for the 2 semester:		4	2	0	1	150	75	0	0	105	330	480	810	30
14	Thermodynamics and Heat Transfer	*				30			15	30	75	105	180	7
15	Fluid Mechanics	*				30				15	45	60	105	4
16	Strength of Materials	*				30				30	60	75	135	5

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							Seminar exercises	Course project	Course work					
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15
17	Electrical Engineering and Electronics, part 2	*				30				30	60	75	135	5
18	Computer Aided Design		*							30	30	60	90	3
19	English Language, part 3		*				30				30	30	60	2
20	Optional Subject				*									
a	Specialized Sport Activities, part 3											30	30	1
b	Adapted Physical Activity*													
21	Practical Training, part 1				*						0	90	90	3
Total for the 3 semester:		4	2	0	2	120	30	0	15	135	300	525	825	30
22	Machine Elements	*				30			15	30	75	90	165	6
23	Theory of Mechanisms and Machines	*				30				15	45	60	105	4
24	Ship Theory and General Arrangements	*				45			15	30	90	120	210	8
25	Marine Auxiliary Machinery, part 1	*				45				30	75	90	165	6
26	English Language - specialized, part 1		*				30				30	30	60	2
27	Optional Subject				*									
a	Specialized Sport Activities, part 4											30	30	1
b	Adapted Physical Activity*													
28	Practical Training, part 2				*							90	90	3
Total for the 4 semester:		4	1	0	2	150	30	0	30	105	315	510	825	30
29	Marine Diesel Engines, part 1	*				30				15	45	90	135	5
30	Electrical Equipment of Ships	*				45				30	75	90	165	6
31	Marine Auxiliary Machinery, part 2	*				45				30	75	90	165	6
32	Marine Boilers	*				30			15	15	60	75	135	5
33	Maritime Law		*			30	15				45	45	90	3
34	English Language - specialized, part 2		*				30				30	30	60	2
35	Practical Training, part 3				*							90	90	3
Total for the 5 semester:		4	2	0	1	180	45	0	15	90	330	510	840	30
36	Automatic Control of Ship Power Systems	*				30				45	75	90	165	6
37	Marine Steam and Gas Turbines	*				30			15	15	60	105	165	6
38	Marine Diesel Engines, part 2	*				30				15	45	90	135	5
39	Marine Diesel Engines, project			*				30			30	60	90	3
40	Technical Safety and Control of Environmental Effects		*			30				30	60	75	135	5
41	English Language - specialized, part 3		*				30				30	30	60	2
42	Practical Training, part 4				*							90	90	3
Total for the 6 semester:		3	2	1	1	120	30	30	15	105	300	540	840	30
43	Ship Electronics and Microprocessor Systems	*				30				30	60	105	165	6
44	Technical Maintenance and Repair of Marine Machinery, part 1	*				30				60	90	90	180	7

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		Examination	Progressive assessment	Course project	Approved	Lectures	Seminars			Laboratories	Total load				
							Seminar exercises	Course project	Course work						
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	
45	Ship Power Plants	*				30				30	60	105	165	6	
46	Ship Power Plants, project			*				30			30	60	90	3	
47	English Language - specialized, part 4		*				60				60	75	135	5	
48	Practical Training, part 5				*							90	90	3	
Total for the 7 semester:		3	1	1	1	90	60	30	0	120	300	525	825	30	
49	Technical Operation of Ship Power Plants	*				30				30	60	120	180	7	
50	Vibrations and Vibrodiagnostics of Marine Machinery	*				30				30	60	120	180	7	
51	Technical Maintenance and Repair of Marine Machinery, part 2	*				30				60	90	120	210	8	
52	English Language - specialized, part 5		*				60				60	75	135	5	
53	Practical Training, part 6				*							90	90	3	
Total for the 8 semester:		3	1	0	1	90	60	0	0	120	270	525	795	30	
54	Optional Subject				*						0	540	540	18	
a	Onboard Training														
b	Shipyards Training														
Totals for the whole course of education		27	12	2	13	975	450	60	90	825	2400	4695	7095	258	
Facultative Subjects															
1	Additional Training for Seafarers in Compliance with STCW Convention, part 1				2	40				20	60	60	120	4	
2	Additional Training for Seafarers in Compliance with STCW Convention, part 2				4	20				6	26	34	60	2	
3	Additional Training for Seafarers in Compliance with STCW Convention, part 3				6	12				28	40	50	90	3	
4	Additional Training for Seafarers in Compliance with STCW Convention, part 4				7	20				20	40	50	90	3	
5	Additional Training for Seafarers in Compliance with STCW Convention, part 5				8	55				40	95	95	190	7	

Types of graduation	Semester	Unsupervised load	ECTS credits
Preparation for State Examinations	8	300	10
• State examination in Marine Engineering			
• State examination in English			

Notes:

1. The duration of the optional subject "Onboard Training" or "Shipyards Training" is 3 months. It is conducted after the 4th, 6th and 8th semester and/or partially during the period of state exams preparation.
2. The facultative subjects are a necessary prerequisite for starting an onboard practice aimed at attaining seafarer's license.
3. The curriculum is valid for Bulgarian and English language training
- 4.* The discipline "Adapted Physical Activity" is an alternative to "Specialized Sport Activities", it is studied in the second semester and is intended for students who cannot do sports for health reasons.

Approved by the Academic Board of TU-Varna:

Protocol № 17 / 01.06.2020, № 31 / 29.03.2021

Modified with Protocols: № 62 / 27.02.2023

Valid from 2022/2023 academic year

The weekly plan of the lessons is fixed according to the Academic Board "Structure of the Learning Process" adopted for the current academic year.

Head of Department:

/Assoc. Prof. Ch. Pirovsky, PhD/

Dean of Faculty:

/Assoc. Prof. I. Hadzhidimov, PhD/

Executive Director of Executive Agency "Maritime Administration":

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