



CURRICULUM

Professional orientation: **Transport, Navigation and Aviation**

Program: **Navigation**

Professional qualification: **Engineer Navigator**

Educational and qualifical degree: **Bachelor**

Form of study: **Full - Time**

Term of study: **4 years / 8 semesters**

| No | Subject Name | Types of term control | | | | Semester auditorium load | | | | | Unsupervised load | Total work hours | ECTS credits |
|----------------------------------|--|-----------------------|----------|----|----------|--------------------------|------------|-----------|-----------|------------|-------------------|------------------|--------------|
| | | E | PA | CP | A | L | S | L | CP CPR | Total | | | |
| 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 | 13 | 14 |
| 1 | Higher Mathematics, part 1 | 1 | | | | 15 | 45 | | | 60 | 115 | 175 | 7 |
| 2 | Computer Science and Computer Technology | 1 | | | | 15 | | 15 | | 30 | 75 | 105 | 4 |
| 3 | Commodity Science | | 1 | | | 30 | | 30 | | 60 | 90 | 150 | 6 |
| 4 | Engineering Graphics | | | | 1 | 15 | 15 | | | 30 | 75 | 105 | 4 |
| 5 | First Medical Aid | | 1 | | | 30 | | 15 | | 45 | 60 | 105 | 4 |
| 6 | English, part 1 | | 1 | | | | 45 | | | 45 | 60 | 105 | 4 |
| 7 | Elective Subject | | | | 1 | | | | | | 30 | 30 | 1 |
| 7a | Specialized Sport Activities, part 1 | | | | 1 | | | | | | 30 | 30 | 1 |
| 7b | Sport and Social Adaptation, part 1 | | | | 1 | | | | | | 30 | 30 | 1 |
| Total for the 1 semester: | | 2 | 3 | | 2 | 105 | 105 | 60 | | 270 | 505 | 775 | 30 |
| 8 | Higher Mathematics, part 2 | 2 | | | | 30 | 30 | | | 60 | 60 | 120 | 4 |
| 9 | Seamanship | 2 | | | | 30 | | 30 | | 60 | 60 | 120 | 4 |
| 10 | Technical Mechanics | | 2 | | | 30 | 15 | | | 45 | 60 | 105 | 4 |
| 11 | Physics | 2 | | | | 30 | | 15 | | 45 | 60 | 105 | 4 |
| 12 | Basic Training on Safety Issues | | 2 | | | 30 | | 30 | | 60 | 60 | 120 | 4 |
| 13 | English, part 2 | | 2 | | | | 45 | | | 45 | 60 | 105 | 4 |
| 14 | Elective Subject | | | | 2 | | | | | | 30 | 30 | 1 |
| 14a | Specialized Sport Activities, part 2 | | | | 2 | | | | | | 30 | 30 | 1 |
| 14b | Sport and Social Adaptation, part 2 | | | | 2 | | | | | | 30 | 30 | 1 |
| 15 | Navigation Training, part 1 | | | | 2 | | | | | | 480 | 480 | 16 |
| Total for the 2 semester: | | 3 | 3 | | 2 | 150 | 90 | 75 | | 315 | 870 | 1185 | 41 |
| 16 | International Maritime Conventions | 3 | | | | 30 | 15 | | | 45 | 90 | 135 | 5 |
| 17 | Leadership and Teamwork | 3 | | | | 15 | 15 | | | 30 | 105 | 135 | 5 |
| 18 | Methods and Means for Environmental Preservation | 3 | | | | 15 | 15 | | | 30 | 75 | 105 | 4 |
| 19 | Safety of Navigation | 3 | | | | 30 | 15 | | | 45 | 105 | 150 | 6 |
| 20 | Electrical Engineering and Electronics | | 3 | | | 30 | | 15 | | 45 | 90 | 135 | 5 |
| 21 | English, part 3 | | 3 | | | | 45 | | | 45 | 90 | 135 | 5 |
| 22 | Elective Subject | | | | 3 | | | | | | 30 | 30 | 1 |
| 22a | Specialized Sport Activities, part 3 | | | | 3 | | | | | | 30 | 30 | 1 |

| No | Subject Name | Types of term control | | | | Semester auditorium load | | | | | Unsupervised load | Total work hours | ECTS credits | |
|--|--|-----------------------|-----------|----|----------|--------------------------|------------|------------|------------|------------|-------------------|------------------|--------------|------------|
| | | E | PA | CP | A | L | S | L | CP CPR | Total | | | | |
| 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 | 13 | 14 | |
| 22b | Sports Management, part 1 | | | | 3 | | | | | | 30 | 30 | 1 | |
| Total for the 3 semester: | | 4 | 2 | | 1 | 120 | 105 | 15 | | 240 | 585 | 825 | 31 | |
| 23 | Meteorology and Oceanography | 4 | | | | 45 | 15 | 15 | | 75 | 75 | 150 | 6 | |
| 24 | Navigation I, part 1 | 4 | | | | 30 | 15 | 15 | | 60 | 90 | 150 | 6 | |
| 25 | Ship Theory and General Arrangements | 4 | | | | 30 | 30 | | | 60 | 90 | 150 | 6 | |
| 26 | English, part 4 | | 4 | | | | 45 | | | 45 | 90 | 135 | 5 | |
| 27 | Elective Subject | | | | 4 | | | | | | 30 | 30 | 1 | |
| 27a | Specialized Sport Activities, part 4 | | | | 4 | | | | | | 30 | 30 | 1 | |
| 27b | Sports Management, part 2 | | | | 4 | | | | | | 30 | 30 | 1 | |
| 28 | Navigation Training, part 2 | | | | 4 | | | | | | 480 | 480 | 16 | |
| Total for the 4 semester: | | 3 | 1 | | 2 | 105 | 105 | 30 | | 240 | 855 | 1095 | 40 | |
| 29 | Navigation I, part 2 | 5 | | | | 30 | | 30 | | 60 | 90 | 150 | 6 | |
| 30 | Ships Operation and Cargo Handling, part 1 | 5 | | | | 30 | 15 | | | 45 | 90 | 135 | 5 | |
| 31 | On Shipboard Damage Control | 5 | | | | 30 | 30 | | | 60 | 75 | 135 | 5 | |
| 32 | Pilotage and Hydrography | 5 | | | | 15 | 15 | | | 30 | 75 | 105 | 4 | |
| 33 | English, part 5 | | 5 | | | | 45 | | | 45 | 90 | 135 | 5 | |
| 34 | Ship Power Plants | 5 | | | | 30 | | 15 | | 45 | 90 | 135 | 5 | |
| Total for the 5 semester: | | 5 | 1 | | | 135 | 105 | 45 | | 285 | 510 | 795 | 30 | |
| 35 | Astronavigation | 6 | | | | 45 | | 15 | | 60 | 60 | 120 | 4 | |
| 36 | Technical Aids to Navigation | 6 | | | | 30 | 15 | 15 | | 60 | 60 | 120 | 4 | |
| 37 | English, part 6 | | 6 | | | | 45 | | | 45 | 60 | 105 | 4 | |
| 38 | Theory of Manoeuvring | 6 | | | | 15 | | 30 | | 45 | 60 | 105 | 4 | |
| 39 | Ships Operation and Cargo Handling, part 2 | 6 | | | | 30 | 15 | | | 45 | 90 | 135 | 5 | |
| 40 | Navigation II | 6 | | | | 30 | | 30 | | 60 | 60 | 120 | 4 | |
| 41 | Navigation Training, part 3 | | | | 6 | | | | | | 480 | 480 | 16 | |
| Total for the 6 semester: | | 5 | 1 | | 1 | 150 | 75 | 90 | | 315 | 870 | 1185 | 41 | |
| 42 | Navigation III | 7 | | | | 30 | | 30 | | 60 | 90 | 150 | 6 | |
| 43 | Usage of ECDIS (Electronic Chart Display and Information System) and AIS (Automatic Identification System) | 7 | | | | 30 | | 30 | | 60 | 90 | 150 | 6 | |
| 44 | English, part 7 | | 7 | | | | 45 | | | 45 | 90 | 135 | 5 | |
| 45 | Radar Watch and Plotting | | 7 | | | 30 | | 15 | | 45 | 105 | 150 | 6 | |
| 46 | Ship's Handling, Bridge Team Management and Teamwork | 7 | | | | 30 | 30 | | | 60 | 75 | 135 | 5 | |
| 47 | Collision Regulations, part 1 | 7 | | | | | | 45 | | 45 | 90 | 135 | 5 | |
| Total for the 7 semester: | | 4 | 2 | | | 120 | 75 | 120 | | 315 | 540 | 855 | 33 | |
| 48 | English Simulator in Emergencies | | 8 | | | | | 45 | | 45 | 75 | 120 | 4 | |
| 49 | Communications at Sea | 8 | | | | 30 | 15 | | | 45 | 90 | 135 | 5 | |
| 50 | GMDSS (Global Maritime Distress and Safety System) | 8 | | | | 30 | | 30 | | 60 | 90 | 150 | 6 | |
| 51 | English, part 8 | 8 | | | | | 60 | | | 60 | 90 | 150 | 6 | |
| 52 | Collision Regulations, part 2 | 8 | | | | | | 60 | | 60 | 75 | 135 | 5 | |
| Total for the 8 semester: | | 4 | 1 | | | 60 | 75 | 135 | | 270 | 420 | 690 | 26 | |
| Total for all courses of education: | | 30 | 14 | | | 8 | 945 | 735 | 570 | | 2250 | 5155 | 7405 | 272 |

Facultative subjects

| No | Subject Name | Types of term control | | | | Semester auditorium load incl: | | | | | Unsuper-vised load | Total work hours | ECTS credits |
|----|--|-----------------------|----|----|---|--------------------------------|---|----|--------|-------|--------------------|------------------|--------------|
| | | E | PA | CP | A | L | S | L | CP CPR | Total | | | |
| 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 | 13 | 14 |
| 1 | Additional Training for Seafarers in Compliance with STCW Convention, part 1 | | | | 2 | 40 | | 15 | | 55 | 55 | 110 | 4 |
| 2 | Additional Training for Seafarers in Compliance with STCW Convention, part 2 | | | | 6 | 60 | | 40 | | 100 | 100 | 200 | 7 |
| 3 | Additional Training for Seafarers in Compliance with STCW Convention, part 3 | | | | 4 | 20 | | 6 | | 26 | 26 | 52 | 2 |
| 4 | Navigation with ECDIS & AIS (chapter II, A – II/1) | | | | 8 | 22 | | 20 | | 42 | 58 | 100 | 4 |
| 5 | Bridge Resources Management and Teamwork (chapter II, A – II/1) | | | | 8 | 20 | | 20 | | 40 | 40 | 80 | 3 |
| 6 | Navigation with Radar and ARPA (chapter II, A – II/1) | | | | 7 | 30 | | 40 | | 70 | 70 | 140 | 5 |
| 7 | GMDSS Ship General Operator Category (Chapter IV, A – IV/2) | | | | 7 | 62 | | 64 | | 126 | 126 | 252 | 9 |

| Types of graduation | Semester | Unsupervised load | ECTS credits |
|--|----------|-------------------|--------------|
| State Examination in English | 8 | 300 | 10 |
| Preparation for State Examination | 8 | | |
| State Examination in Navigation | 8 | | |
| State Examination in Ship Cargo Handling | 8 | | |

Note:

1. The facultative subjects shall be conducted in accordance with the requirements of the STCW-78 Convention as amended and Ordinance No. 6 on Seafarers Competence in the Republic of Bulgaria. The training is conducted in courses, according to the National Standard of the Executive Agency "Maritime Administration" of the Republic of Bulgaria and according to the procedure regulated therein.

2. The curriculum is valid for teaching in Bulgarian and English language.

Accepted from AU with

Protocol No 11 / 06.06.2016

Modified with Protocols No 18 / 23.01.2017, No 44 / 01.07.2019

Valid from the 2016 / 2017 academic year.

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

Head of Department NT:

/ Assoc. Prof. PhD Dyakov B. /

Dean of Faculty FSB:

/ Assoc. Prof. PhD Hadzhidimov I. /