

## **Bachelor degree – NAVAL AND PORT ENGINEERING AND MANAGEMENT (250 ECTS)**

### **Name of Study Programme**

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### **Introduction**

**The mission** of the “Naval And Port Engineering and Management” - Bachelor degree, developed by the Merchant Maritime Faculty as distinct higher education structure of “Mircea cel Batran” Naval Academy is to continue standing the naval transport traditions by developing general, specific and attitudinal competences related to managing resources and operation activities within modern ports and harbour businesses.

After completing the studies graduates will:

- obtain the competency support for a successful career based on self professional development, focused on acquiring the scientific and applied principles of technical, technological and operating basis activities together with business administration principles within port and naval industry;
- develop their managerial and entrepreneurial abilities applied within naval and harbour sector.

This mission will be accomplished by applying all those procedures and activities required by the institutional implemented Quality Management System, standing a fully compatible manner related to the academic community internal and external standards.

The main values sighted to be implemented in order to assure our institutional success and academic recognition are:

- the professionalism and commitment, the high respect and full responsibility for sustained activities, honesty and correctitude related to the educational and academic desiderates ;
- the respect of the public interest, respect of the law, tolerance and respect of the education traditions, values and virtues, in fully accordance with the universal human values and European ideas;

### **Duration**

8 semesters on full time education or part time education

### **Credits**

240+10 ECTS

### **Level**

Higher education

### **Degree**

Bachelor degree – “Naval And Port Engineering and Management”

## Prerequisites

- High School Bachelor Degree
- fully accomplishing of admission requirements and, after case,
- exam positive results.

## Structure and organization

The study term covers a period length up to four years. Each year of study implies two semesters of studies consisting in 14 weeks for direct teaching activities. Only the eighth semester consists in 12 weeks for teaching activities and two weeks for undertaking the graduation thesis.

Throughout the education period of four study years (8 semesters) the students are attending mandatory, optional and elective courses, being educated and instructed as specialists, in both fields of fundamental or behavioural disciplines, approaching together engineering and managerial area of studies.

The optional courses are selected from an annual double discipline package, which is available to be chosen by students at the end every year for the next year of academic year.

The academic studies are cleared through a graduation consisting in two evaluation stages passing, as follows: the sustenance of the graduation thesis and the successfully attendance of a theoretical exam based on multiple choice computer tests.

## Study Programs' General Objectives

The main objectives of “Naval And Port Engineering and Management” study program are associated generally to engineering and management domain and particularly to naval and port sectors, targeting to acquire those necessary competencies and knowledge, in order to deal successfully with technical, logistic and managerial problems associated to this sector, specifically attending to approach:

- the general ensemble of knowledge regarding the scientific and practical instruments of execution, planning, control and invocation in naval and port operation area;
- the processes and activities developed and organized in naval and port operation sectors, valuing specific techniques and instruments into a multidisciplinary and interdisciplinary manner;
- the managerial aspects related to business administration in order to organize and lead international and multicultural teams, using theoretical concepts and practical abilities from the specific area of naval and port operation;
- the optimum blending usage of drawn resources in naval and port business, referring to financial, economic, technical and logistic dimensions;
- the analytical and syntactical capacity to collect, analyze and to interpret different data and information, valuing the personal experience, in order to choose the optimum decision in dynamic situations;
- the communication capacity within international and multicultural environment, into an international language, using technical and managerial specific concepts from naval and port sectors;
- the modern communication techniques and soft solution.

All stated objective will be sighted by dedicated courses, in order to acquire declared learning outcomes, designed and transversal competencies

## **Learning outcome**

The main learning outcomes of “Naval And Port Engineering and Management” study program are focused on acquiring and modelling the capacity of a professional attitude, in order to succeed in solving the strategic and operational problems, within national and international naval and port sectorial activities, defined by the specific issues as:

- Performing calculations, demonstrations and applications to solve specific engineering and management tasks and assignments, based on engineering and fundamental sciences knowledge.
- Drafting and interpreting technical, economic and managerial documentations.
- Designing and management processes and technical and economic systems from naval and harbour field.
- Solving technical, economic and managerial problems faced in naval and port sector.
- Settling, developing and managing, into an effective and profitable manner, the small and medium enterprises within naval industry, sighting naval transport, operation and harbour administration, expeditions or related services.
- Inventory administration and optimal management of drawn and spent logistic and financial resources within naval and port companies.
- Responsible employment acting, based on the principles of professional ethics values, in order to accomplish assigned tasks or responsibilities drawn to be achieved, through the efficient blending of available resources, work capabilities, deadlines desiderates and associated risks.
- Identifying with the assigned roles and responsibilities in a multidisciplinary team assuming an optimum relation between technical resources and effectively team work capacity.
- Identifying the long life learning opportunities, standing up raising self development standards, using information sources and communication resources, approaching on-line training resources (internet portals, specialized software, data bases, on-line courses), in Romanian language and into international language as well.

## **Teaching and working methods**

Methods of teaching/lecturing are: lectures, heuristic conversation, explanation, discussion, case study, problem-solving, simulation of situations, methods of group work, individual and frontal methods for developing critical thinking, study references.

Class time is primarily devoted to lectures. It will be used different materials from the supplementary readings or other visual elements, in order to illustrate some of the basic points in the daily lecture, and to encourage discussions and debates around these points. Homework and workpapers will be written with accuracy, focusing on the results' interpretation that allows the valuable judgments drafting.

## Internationalization

All subjects are taught in Romanian.

Code	Course title	Credits	O/V *)	Credits per semester	
				S1(A)	S2(S)
1 <sup>st</sup> Year					
IMNP-01	<a href="#">Algebra, Analytical and Differential Geometry</a>	6	0	6	
IMNP-02	<a href="#">Mathematical Analysis</a>	8	0	4	4
IMNP-03	<a href="#">Computer Programming, Programming Languages</a>	7	0	3	5
IMNP-04	<a href="#">Physics</a>	5	0		5
IMNP-05	<a href="#">Chemistry</a>	3	0	3	
IMNP-06	<a href="#">Fundamentals of Economics</a>	4	0	4	
IMNP-11	<a href="#">Study and Technology of Materials</a>	5	0		5
IMNP-20	<a href="#">Fundamentals of Management</a>	6	0	2	4
IMNP-56	<a href="#">Physical Education</a>	4	0	2	2
IMNP-57	<a href="#">English</a>	4	0	2	2
Optional courses Module A					
IMNP-07	<a href="#">Descriptive Geometry and Technical Drawing</a>	7	V		
IMNP-08	<a href="#">Technical Drawing and Engineering Graphics</a>	7	V		
	Total:			30	30

\*) O - Mandatory course, V - Optional course

Code	Course title	Credits	O/V *)	Credits per semester	
				S1(A)	S2(S)
2 <sup>nd</sup> Year					
IMNP-09	<a href="#">Special Mathematics</a>	5	0	5	
IMNP-21	<a href="#">Modelling and Simulation</a>	4	0		4
IMNP-12	<a href="#">Mechanics and Mechanics of Fluids</a>	8	0	5	3
IMNP-10	<a href="#">Numerical Analysis</a>	4	0		4
IMNP-44	<a href="#">Organisation of Naval and Harbour System</a>	3	0	3	
IMNP-13	<a href="#">Termotechnics</a>	4	0		4
IMNP-14	<a href="#">Strength of Materials</a>	4	0		4
IMNP-15	<a href="#">Electrotechnics</a>	5	0	5	
IMNP-16	<a href="#">Mechanisms and Machinery Parts</a>	4	0		4
IMNP-22	<a href="#">Marketing</a>	3	0	3	
IMNP-56	Physical Education	4	0	2	2
IMNP-57	<a href="#">English</a>	4	0	2	2
IMNP-32	Training in the Field	3	0		3
Optional courses Module A					
IMNP-29	<a href="#">Economic Legislation</a>	5	V		
IMNP-30	<a href="#">Commercial Legislation</a>	5	V		
	Total:			30	30

\*) O - Mandatory course, V - Optional course

Code	Course title	Credits	O/V *)	Credits per semester	
				S1(A)	S2(S)
3 <sup>rd</sup> Year					
IMNP-23	<a href="#">Accountancy</a>	3	0		3
IMNP-24	<a href="#">Finance</a>	4	0	4	
IMNP-33	<a href="#">Theory and Ship Design</a>	5	0	5	
IMNP-17	<a href="#">Electronic Devices and Circuits</a>	4	0	4	
IMNP-18	<a href="#">Hydraulic Drive and Machinery</a>	5	0	5	
IMNP-19	<a href="#">Electric Drive and Machinery</a>	5	0		5
IMNP-52	<a href="#">Maritime Law</a>	4	0		4
IMNP-45	<a href="#">Naval and Harbour Management</a>	9	0	4	5
IMNP-34	<a href="#">Ship and Port Operation Equipment</a>	9	0	4	5
IMNP-31	<a href="#">Work Legislation</a>	4	0	4	
IMNP-25	<a href="#">Managerial Computer Studies</a>	3	0		3
IMNP-32	<a href="#">Training in the Field</a>	2	0		2
Optional courses Module A					
IMNP-26	<a href="#">Production Management</a>	3	V		
IMNP-27	<a href="#">Financial Management</a>	3	V		
	Total:			30	30

\*) O - Mandatory course, V - Optional course

Code	Course title	Credits	O/V *)	Credits per semester	
				S1(A)	S2(S)
4 <sup>th</sup> Year					
IMNP-46	<a href="#">Management of Quality in the Naval Industry</a>	3	0	3	
IMNP-47	<a href="#">Transport Economy and International Expeditions</a>	8	0	5	3
IMNP-35	<a href="#">Protection of Environment in the Naval and Harbour Activity</a>	4	0		4
IMNP-36	<a href="#">Naval Communications</a>	5	0		5
IMNP-37	<a href="#">Electric Drive of Harbour Installations</a>	6	0	6	
IMNP-38	<a href="#">Maritime Transport</a>	4	0	4	
IMNP-53	<a href="#">Marine insurance</a>	4	0	4	
IMNP-28	<a href="#">Managerial communication</a>	3	0	3	
IMNP-44	<a href="#">Maintenance and Logistic Activities Management</a>	5	0		5
IMNP-54	<a href="#">Graduation Project</a>		0		
IMNP-62	<a href="#">License</a>	10	0		10
Optional courses Module A					
IMNP-39	<a href="#">Hydrotechnic Constructions</a>	4	V		
IMNP-41	<a href="#">Harbour Operation Technologies</a>	6	V		
IMNP-48	<a href="#">Financial Settlement Techniques in Naval Industry</a>	3	V		
IMNP-50	<a href="#">Project Management in the Naval Industry</a>	5	V		
Optional courses Module B					
IMNP-39	Harbours and Waterways	4	V		
IMNP-41	Cargo Handling in Harbours	6	V		
IMNP-48	Economic Policies in Transports	3	V		
IMNP-50	Investments' Management in the Naval Industry	5	V		
	Total:			30	30

\*) O - Mandatory course, V - Optional course

## Elective Discipline

Code	Course title	Credits	Credits per semester	
			S1(A)	S2(S)
1 <sup>st</sup> Year				
IMNP-58	<a href="#">Foreign language II (French, German, etc.)</a>	4	2	2
IMNP-55	<a href="#">History of Romanian Navy</a>	2	2	
2 <sup>nd</sup> Year				
IMNP-58	<a href="#">Foreign language II (French, German, etc.)</a>	4	2	2
IMNP-59	<a href="#">Politology</a>	3		3
3 <sup>rd</sup> Year				
IMNP-58	<a href="#">Foreign language III (French, German, etc.)</a>	4	2	2
IMNP-60	<a href="#">English</a>	4	2	2
IMNP-61	<a href="#">Commercial exploitation of a ship</a>	4		4
4 <sup>th</sup> Year				
IMNP-58	<a href="#">Foreign language IV (French, German, etc.)</a>	4	2	2
IMNP-60	<a href="#">English</a>	4	2	2