## UNIVERSITY OF RIJEKA - FACULTY OF MARITIME STUDIES

# UNDERGRADUATE AND GRADUATE ACADEMIC PROGRAM

MARINE ENGINEERING AND MARITIME TRANSPORT TECHNOLOGY

#### MAIN DATA AND ORGANIZATION OF THE FACULTY

#### MANAGEMENT OF THE FACULTY

Dean:

Professor Serdo Kos, Ph.D., FRIN

Vice-Dean for Academic Affairs

Assistant professor Igor Rudan, Ph.D.

Vice-Dean for Business Relations and Finance:

Assistant professor, Alen Jugović Ph.D.

Vice-Dean for Vocational Training and Development:

Assistant professor Dragan Martinović, Ph.D.

Vice-Dean for Scientific and Research Activities:

Associate professor Boris Sviličić, Ph.D.

Secretary:

Željko Ševerdija, L.L.B.

#### INTERNAL ORGANIZATION

## **Department of Marine Engineering and Power Supply Systems**

• Headed by: Professor Ivica Šegulja, Ph.D.

## Department of Marine Electronic Engineering, Automatic Theory and Information Technology

• Headed by: Associated professor Nikola Tomac, Ph.D.

## Department of Logistics and Management in Maritime Affairs and Transport

• Headed by: Professor Dragan Čišić, Ph.D.

## **Department of Nautical Sciences and Maritime Transport Technology**

• Headed by: Associated professor Robert Mohović, Ph.D.

## Department of Technology and Organization in Maritime Affairs and Transport

• Headed by: Professor Čedomir Dundović, Ph.D.

#### **Department of Social Sciences**

• Headed by: Assistant professor Biserka Rukavina, Ph.D.

## **Department of Natural Sciences**

• Headed by: Assistant professor Biserka Draščić Ban

## **Department of Foreign Languages**

• Headed by: Jadranka Valentić, M.A.

## **ADMINISTRATIVE STAFF**

Dean's Office Secretary: Blaženka Konjhodžić

Head of the Seafarers Vocational Training Centre and Public Relations Officer: **Marija Šimić Hlača, MSc.** (in maritime transport technology)

## **Student Records Office:**

- Headed by: Mirjana Petelin, MSc. (educationist and informatician)
- Administrative Staff: Jadranka Gumbarević, Željka Vidmar, Vanja Nakičenović

## **Informatics and Computer Centre:**

- Headed by: Ezio Hafner
- Computer Officers: Slobodan Popić, Marko Bratic

## Library:

- Headed by: **Dolores Markotić**, **MSc.**,librarian
- Assistant librarian: Tamara Gržinčić

Course Materials Bookshop:

• Publishing Associate: Vesna Vranić Kauzlarić, MSc. (in maritime technology)

**Accounting Department:** 

• Headed by: Spomenka Georgijević, MSc. (Econ.)

Personnel and General Administrative Service Department:

• Headed by: **Tatjana Domazet** 

#### **CONTACTS:**

#### **Telephone Exchange and Doorman's Booth:**

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#### **Dean's Office:**

**Room 308** 

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#### **Student Records Office:**

Room 305 **Office hours:** from 11 a.m. to 1 p.m. Tel.No.: +385 51 33 84 11 on working days

(extension 142, 148,149,154)

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## Library:

Room 332

Tel.No.: +385 51 21 46 05

+ 385 51 33 84 11 (extension 162, 163)

Working hours: Monday, Tuesday, Wednesday, Thursday from 9 a.m. to 7 p.m.

Friday from 9 a.m. to 1 p.m.

Computers available: Monday, Tuesday, Wednesday, Thursday from 9 a.m. to 7 p.m.

Friday from 9 a.m. to 1 p.m.

For detailed information about the rules of lending books please contact the library.

E-mail: bib@pfri.hr

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## **Course Materials Bookshop:**

- located in the courtyard of the Faculty. **Working hours:** from 10 a.m. to 2 p.m. on working days

on working days

Exam registration and withdrawal forms and books can be bought here.

E-mail: <a href="mailto:vvranic@pfri.hr">vvranic@pfri.hr</a>

## Students' Union, Pom-f-ri, Plima:

Location: a little house in the courtyard of the Faculty, near the gym.

Tel. No.: +385 51 33 84 11 E-mail: <u>sz-plima@net.hr</u>

For any questions or problems concerning your study, please contact your year study programme representative.

Consultations with students are held in the "Plima" premises on Monday from 10 to 12 a.m.

#### A HISTORY OF THE FACULTY OF MARITIME STUDIES

The Rijeka Faculty of Maritime Studies can trace its origins back to the year 1866 when, in the premises of the today's City Hospital, the Austro-Hungarian Naval Academy was founded and which flourished in its activities till 1914. In 1889 it became the Imperial and Royal Naval Academy (Marine Academie).

At the outbreak of the First World War, the Academy was closed and moved from Rijeka to Vienna. It is important to notice that some famous Croats, Admiral Maximilian Njegovan (1858-1930) and the noble Admiral Janko Vuković-Podkapelski (1871-1918), a distinguished officer in the Austro-Hungarian navy appointed as the first commander-in-chief of the navy of the State of the Slovenes, Croats and Serbs, graduated from the Academy.

The education at the Academy included a four-year study programme attended by all those coming from across the Austro-Ungarian Monarchy and holding an A-level secondary school diploma. The Academy ceased its activities in 1914 when it turned into a field hospital functioning as such till 1918, when, after the fall of the Austro-Ungarian Monarchy, it was transformed into the main City Hospital.

This break into the field of maritime higher education lasted till 1949, when, on 4<sup>th</sup> April 1949, the Rijeka Merchant Marine College was founded by the decree issued by the Government of the Federal People's Republic of Yugoslavia. In the years to follow, the Rijeka Merchant Marine College developed into the Faculty of Maritime Studies and is still today one of the world's leading maritime education and training institutions.

Since the very beginning of its educational activities, the Rijeka Merchant Marine College has experienced several stages in its development:

- In 1978, the Merchant Marine College was transformed into the Faculty of Maritime Studies and Transportation. Its activities continued until 1998, when two independent educational institutions were established the Rijeka College of Maritime Studies and the University Department of Maritime Studies of the University of Rijeka.
- In the course of the year 2001, the Ministry of Science and Technology of the Republic of Croatia brought a decision on the merge of the Department of Maritime Studies of the University of Rijeka and the Rijeka College of Maritime Studies into the Faculty of Maritime Studies of the University of Rijeka, the one and only maritime education and training institution that has been acting as such since then.

## MARINE ENGINEERING

The study programme faces its application in different branches of maritime economy and in different scientific fields, thus representing the basis for successful activities of shipping companies and for that of competent public and civil authorities as well. After graduting from the Faculty, the students are prepared for work as marine engineers on board merchant marine ships, with an open possibility to reach the highest possible vocation of a chief engineer. They can also be employed in institutions the activities of which are closely connected with maritime affairs, as well as in shipping, transport and business companies responsible for the realization and management of transport services.

The undergraduate study programme is grounded in the knowledge of technique and technology in shipping, electromechanical engineering, maintenance, information technology, ecology, marine engineering, maritime economy, law and ship operational management, enabling the graduates to find work in many institutions of their proper field as well as in different areas closely associated with maritime practice. The first two-year programmes of undergraduate study are in accordance with the STCW 78/95 Convention. Upon completion of the undergraduate cycles and upon a documentary evidence of, students are eligible for taking exams leading to a certificate of competency to perform the duties of a Second Marine Engineer and Chief Engineer of a ship of 3.000 gross tonnage or morein.

The one- or two-semester courses are designed to promote mobility and access to study at different Universities at any time during the study period.

First year students enrolled at the *undergraduate study of* **Marine Engineering** register for the following courses in the academic year 2013/2014:

#### Winter semester (I)

No.	Course holder	Compulsory course	Lectures	Practical work	ECTS
				sessions	credits
1	Axel Luttenberger	Maritime law	2	0	5
	Igor Vio				
2	Boris Pritchard	English language 1	1	2	4
3	Biserka Draščić Ban	Mathematics 1	2	2	5
	Željko Glavan				
4	Mato Tudor	Applied computer science	2	2	5
5	Nikola Tomac	Engineering mechanics 1	3	2	6
	Goran Vukelić				
6	Nikola Tomac	Technology of materials and machining	2	2	5
8	Albino Redžić	Physical training 1	0	2	1

## Summer semester (II)

No.	Course holder	Compulsory course	Lectures	Practical work	ECTS
				sessions	credits
1	Antun Kraš	Marine eletrical engineering	2	2	5
2	Ante Bukša	Marine engineering elements	3	2	6
3	Boris Pritchard	English language 2	1	2	3
4	Biserka Draščić Ban	Mathematics 2	2	2	5
	Željko Glavan				
5	Goran Vukelić	Engineering mechanics 2	2	1	5
6	Pavao Komadina	Ship design and construction	4	2	6
7	Albino Redžić	Physical training 2	0	2	1

Second year students enrolled at the *undergraduate study of* **Marine Engineering** register for the following courses in the academic year 2013/2014:

## Winter semester (III)

No.	Course holder	Compulsory course	Lectures	Practical work	ECTS
				sessions	credits
1	Dubravko Vučetić	Marine electrical systems	2	2	4
2	Josip Orović	Marine steam generators	2	1	3
3	Enco Tireli	Marine heat turbines	2	0	2
4	Dragan Martinović	Marine auxiliaries	4	1	5
5	Boris Pritchard	English language 3	1	2	2
6	Enco Tireli	Fuels, lubricants and water	2	0	2
7	Pavao Komadina	Ship construction	2	1	4
8	Axel Luttenberger	Maritime administrative law and	2	0	2
	Igor Vio	marine averages			
9	Dean Bernečić	Simulator and on-board training 1	0	2	2
10	Vjekoslav Koljatić	Marine environment protection	2	0	3
11	Albino redžić	Physical training 3	0	2	1

## Summer semester (IV)

No.	Course holder	Compulsory course	Lectures	Practical work	ECTS
				sessions	credits
1	Vinko Tomas	Automated ship propulsion	3	1	5
2	Ivica Šegulja	Marine engines	4	2	6
3	Predrag Kralj	Ship engineering systems	3	1	5
4	Boris Pritchard	English language 4	1	2	3
5	Vjekoslav Koljatić	Machinery preparation and control	2	0	3
6	Josip Orović	Simulator and on-board training 2	0	4	3
	Dean Bernečić				
7	Vjekoslav Koljatić	Crew organization and management	2	0	2
8	Pavao Komadina	Ship design and construction	2	1	3

Third year students enrolled at the *undergraduate study of* **Marine Engineering** register for the following courses in the academic year 2013/2014:

## Winter semester (V)

No	Course holder	Compulsory course	Lectures	Practical work	ECTS
				sessions	credits
1	Josip Orović	Failure diagnosis	2	1	3
2	Biserka Draščić Ban	Mathematics 3	2	1	3
	Željko Glavan				
3	Ivica Šegulja	Maintenance management	2	1	3
4	Boris Pritchard	English language 5	1	1	1

In the fifth semester, students can register for the following optional courses to the minimum workload of 20 ECTS credits:

No.	Course holder	Optional course	Lectures	Practical work sessions	ECTS credits
1	Ante Bukša	Marine hydraulics and pneumatics	2	1	4
2	Dubravko Vučetić	Marine electric power systems	2	1	3

3	Vinko Tomas	Marine automatic control	2	2	4
4	Ivica Šegulja	Economics of ship running	2	1	3
5	Goran Vukelić	Mechanisms and vibrations	2	1	3
6	Dean Bernečić	Liquid cargo transport technology	3	1	5

## Summer semester (VI)

No	Course holder	Compulsory course	Lectures	Practical work	ECTS
				sessions	credits
1	Predrag Kralj	Marine refrigeration plant	2	1	2
2	Vjekoslav Koljatić	Technical supervision and ship	2	0	1
		classification			
3		B.Sc.essay	0	2	6

In the sixth semester, students can register for the following optional courses to the minimum workload of 17 ECTS credits:

No.	Course holder	Optional course	Lectures	Practical work	ECTS
				sessions	credits
1	Ante Bukša	Engineering drawing	1	2	3
2	Nikola Tomac	Corosion and material protection	2	1	4
3	Mirano Hess	Ship navigation	1	2	3
4	Mato Tudor	Marine information systems	2	1	4
5	Čedomir Dundović	Cargo handling system	2	1	3
6	Biserka Draščić Ban	Statistics	2	1	3

The graduate study programme is conceived as an addition to the undergraduate study programme level. It aims at providing students with competences for management, maintenace and successful work in various maritime and transport institutions and other maritime oriented companies. The courses, planned as flexible one-semester courses with a great number of optional courses, are designed to promote mobility and access to study at different universities at any time during the study period. The programme provides an excellent theoretical grounding in engineering, technology, economics, law and management. It enables students to specialise studies in a range of disciplines including engineering studies, marine ecology and protection, maritime management and technological transport systems.

First year students enrolled at the *graduate study of* **Marine Engineering** register for the following courses in the academic year 2013/2014:

#### Winter semester (I)

No	Course holder	Compulsory course	Lectures	Practical work	ECTS
				sessions	credits
1	Tibor Poganj	Applied mathematics	2	1	6
2	Čedomir Dundović	Research work methodology	2	0	4
	Ines Kolanović				
3	Đani Mohović	Risk management in shipping	2	2	5
4	Enco Tireli	Shipboard energy	3	1	6

## First semester optional courses:

No.	Course holder	Optional course	Lectures	Practical work sessions	ECTS credits
1	Enco Tireli	Heat and mass transfer	2	1	5
2	Svjetlana Hess	Operational researches	2	1	5
3	Damir Zec	Marine technology	2	1	5

## Summer semester (II)

No	Course holder	Compulsory course	Lectures	Practical work sessions	ECTS credits
1	Ivica Šegulja	Maintenance systems	2	0	5
2	Vjekoslav Koljatić	Ecology in maritime transport	2	1	5
3	Serđo Kos	Intergrated and mulimodal transport	3	1	6
4	Dragan Čišić	Management information systems	2	1	5

## Second semester optional courses:

No.	Course holder	Optional course	Lectures	Practical work sessions	ECTS credits
1	Čedomir Dundović	Planning and designing transport terminals	2	2	4
2	Vlado Frančić	International maritime safety system	2	1	5

Second year students enrolled at the *graduate study of* **Marine Engineering** register for the following courses in the academic year 2013/2014:

## Winter semester (III)

No	Course holder	Compulsory course	Lectures	Practical work	ECTS
				sessions	credits
1	Vinko Tomas	Automatic control of floating crafts	2	2	6
2	Vjekoslav Koljatić	Process ship systems	2	1	5
3	Dragan Čišić	Modeling and simulation	2	2	6
4	Ivica Šegulja	Ship propulsion	2	1	6

## Third semester optional courses:

No	Course holder	Optional course	Lectures	Practical work sessions	ECTS credits
1	Vinko Tomas	Controlling technical systems	2	1	5
2	Ines Kolanović	Quality management in maritime affairs	2	0	4
3	Svjetlana Hess	Technological processes in transport	2	2	5
4	Axel Luttenberger	Transport law	2	0	4

## Summer semester (IV)

No ·	Course holder	Compulsory course	Lectures	Practical work sessions	ECTS credits
1	Josip Orović	Ship propulsion unit optimization	2	1	6
		M.Sc. thesis	0	10	18

## Fourth semester optional course:

No	Course holder	Optional course	Lectures	Practical work	ECTS
				sessions	credits
1	Vinko Tomas	Intelligent transport systems	2	1	4