

UNIVERSITY OF RIJEKA
**FACULTY OF
ENGINEERING**

Marine Vessels

MSc microqualification

One semester | Six courses
30 ECTS | Taught in English

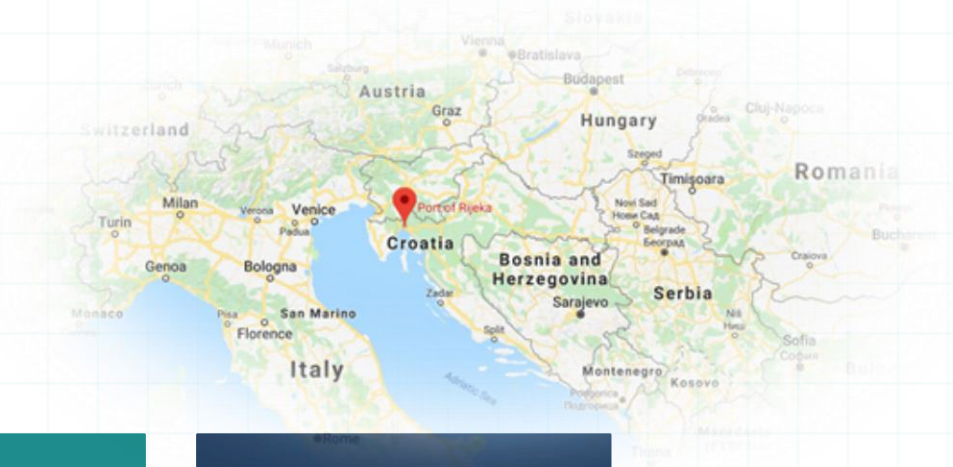


Where you would be studying

● University of Rijeka

YUFE Alliance

Member of YERUN, EUA, UniAdriion, CEEPUS, Fulbright, CEI
Strategic Partner of Coursera (Free Online Learning)



16.000

Students

17

*16 Faculties +
1 Academy*

368

Study Programmes

15

*Study Programmes in
English*

Top 1.000

*QS World University
Rankings*

800+

*ERASMUS
Agreements*

1.600+

*Students on Mobility
per Year*

● The Faculty of Engineering - RITEH

One faculty, several engineering departments, one campus. Small cohorts, open doors, and laboratories you can actually get into as a student.

● Naval Architecture and Ocean Engineering

The department that runs this microqualification. Teaching is tied directly to shipyards, design offices and research projects on the Adriatic.



What a microqualification is

1

Short and focused

One semester. Six courses, all already accredited inside our naval architecture programme.

2

Full ECTS value

30 ECTS, awarded and documented like any other semester. They transfer to your home degree through the normal Learning Agreement.

3

It adds up

It builds upon a mechanical, marine or general engineering background, and it can be carried forward into further study or straight into industry.

THE PROGRAMME

At a glance

1

semester

6

courses
all compulsory

30

ECTS
fully transferable

34

hours/week
lectures, tutorials, labs

LANGUAGE

English, start to finish

LEVEL

Third year and graduate engineering

CURRICULUM

The six courses

Introduction to Marine Vessels

Prof. Hadjina / Matulja

45 + 30 h

5 ECTS

Ship Hydromechanics

Prof. Turk

45 + 45 h

5 ECTS

Ship Structures

Prof. Zamarin

45 + 45 h

5 ECTS

Ship Equipment

Prof. Matulja

45 + 30 h

5 ECTS

Ship Outfitting and Maintenance

Prof. Rubeša

45 + 45 h

5 ECTS

Marine Propulsion and Ship Systems

Prof. Mrakovčić

45 + 45 h

5 ECTS

Six compulsory courses | 34 contact hours per week | 30 ECTS in a single semester

CURRICULUM IN DETAIL

How a ship is understood

Introduction to Marine Vessels

Prof. Hadjina / Prof. Matulja

- Ship types, sizes and areas of navigation
- General arrangement, hull, superstructure
- IMO conventions and classification rules
- First steps in naval architecture software

Ship Hydromechanics

Prof. Anton Turk

- Hull geometry and its effect on performance
- Buoyancy, metacentric height, trim
- Intact and dynamic stability calculations
- Resistance, propulsion and model testing

Ship Structures

Prof. Albert Zamarin

- Structural loads and longitudinal strength
- Transverse, longitudinal and mixed framing
- Scantlings to classification society rules
- Structural details, continuity and alignment

CURRICULUM IN DETAIL

How a ship is built and run

Ship Equipment

Prof. Tin Matulja

- Anchoring, mooring and towing equipment
- Steering, navigation and communication
- Life-saving appliances and fire protection
- You produce a full fire and safety plan

Ship Outfitting and Maintenance

Prof. Rajko Rubeša

- Work breakdown and modular outfitting
- Scheduling, man-hours and direct costs
- Piping, machinery and shaft installation
- Dry-docking, repair, recycling

Marine Propulsion and Ship Systems

Prof. Tomislav Mrakovčić

- Propulsion power and engine selection
- Low-speed two-stroke diesels, turbocharging
- Fuel, cooling, lubrication, compressed air
- Ballast, bilge and LNG cargo systems

How you learn and you are assessed

Lectures

The theory, delivered in English by the course leader.

Tutorials and design work

Auditory, laboratory and design tutorials - where the calculations actually happen.

Laboratories and software

Hull modelling, hydromechanics work, classification rules applied to a real hull.

Projects and seminar papers

Four of the six courses end in something you have built or written yourself.

Assessment

- Two mid-term exams in every course
- Written and oral final examinations
- Projects in hydromechanics, structures and equipment
- Seminar papers in outfitting and equipment
- Attendance and participation count

OUTCOME

What you can do at the end of the semester

Six things you will be able to do

- Read and produce a general arrangement plan
- Calculate intact stability, trim and loading conditions
- Estimate resistance and choose a propulsion plant
- Dimension hull scantlings to classification rules
- Draw up a ship fire and safety plan
- Plan outfitting work and estimate the man-hours

Where these skills are used

Shipyards

Ship design offices

Classification societies

Shipowners and operators

Marine equipment suppliers

Offshore and marine energy

Ports and maritime administration

Who teaches you



Prof. Marko Hadjina

Introduction to Marine Vessels



Prof. Tin Matulja

Marine Vessels / Ship Equipment



Prof. Anton Turk

Ship Hydromechanics



Prof. Albert Zamarin

Ship Structures



Prof. Rajko Rubeša

Ship Outfitting and Maintenance



Prof. Tomislav Mrakovčić

Marine Propulsion and Ship Systems

Small groups. The reading lists are written for ten students, not for two hundred - you will know every one of these people by name.

How to join us



1

Talk to your coordinator

Tell the international office at Debrecen you want a semester at RITEH.

2

Get nominated

Your home faculty nominates you. We confirm the place from Rijeka.

3

Learning Agreement

All six courses go on the agreement as a single block of 30 ECTS.

4

Come to Rijeka

One semester, and you leave with 30 ECTS and the qualification.

Before you come

Mathematics is assumed. Strength of materials helps in Ship Structures. No naval architecture background is required.

While you are here

Teaching, examinations and all materials are in English. Learning some Croatian is optional and appreciated.

Come and build ships with us

One semester in Rijeka. Six courses. 30 ECTS. And a hull you have designed yourself.

Questions?

