

EMship key points

- > An interdisciplinary combination of technical, scientific and management skills obtained through a worldwide unique qualification program supported by six leading European universities, offering excellent career opportunities to graduates.
- > Six different specializations offered during the third semester, after a one-year common core.
- > The opportunity to experience a variety of academic and cultural environments through a mobility scheme covering three different countries.
- > An international network of associated universities and industries.

Language

All the lectures will be in English.

French, Italian, German, Romanian and Polish language courses will be available.

A four weeks compact Course of English will be available at the University of Liège before the start of the first semester.

Scholarships

Students may receive a scholarship:

- ERASMUS MUNDUS scholarship:

online application only from Sept. to Dec. (each year) using website www.emship.eu. Excellent applicants from outside EU as well as from EU countries will be granted scholarships covering the tuition fees, travel to and from Europe and a monthly living allowance of €500 (EU students) or €1.000 (non-EU students) during the full duration of the course (18 months).

- **INDUSTRIAL Scholarship:** best candidates may be supported by the EMSHIP industrial partners. Application March-April (each year) to ULg/Prof Rigo.

- **ACADEMIC Scholarship:** for reduced tuition fees and/or living expenses (€ 500 to € 850/month). Application March-May (each year) to ULg/Prof Rigo.

- **LRF Scholarship** (which covers the tuition fees). The Lloyd's Register Foundation (the LRF) funds education, training and research programs in transportation, science, engineering, technology and the safety of life, worldwide for the benefit of all.

Tuition fees

For the cycle of 90 credits (18 months):
€ 9.450 for non European students
€ 4.950 for EU Students

Application

see <http://www.emship.eu>
and follow the application procedure



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Master of Engineering Advanced Design of Ship and Offshore Structures



Erasmus Mundus
Master Course

www.emship.eu



Presentation of EMship

The objective of the EMship Master Course is to provide an outstanding university program in Naval Architecture, ship and offshore design, structures and production through a 1.5 year - 90 ECTS Credits - Master Course.

This program is supported by the European Commission under the Erasmus Mundus funding scheme.



Admission criteria

In order to be eligible, candidates will have to hold a BSc or a Master degree, corresponding either to a 5-year education program (300 ECTS), or to a 4-year education program completed with one year of professional experience.

Candidates with specific CVs are also invited to apply:

- Engineering officers with 3-5 years sea service planning a career onshore.
- Students seeking complementary education in deep sea transport, mega/motor yachts, sailing pleasure crafts and also in safer and cleaner navigation.
- Engineers searching for advanced education in hydrodynamics, design, production, structures of ships or offshore installations, CAD and information technology.

EMship directly relates to the future needs of the European and international marine industry.

Consortium

The consortium is composed of six European universities with a strong expertise in the diverse fields of Ship Design and Offshore Engineering:

- **University of Liège** (Belgium)
coordinator of the program
<http://www.anast.ulg.ac.be>
- **Ecole Centrale de Nantes** (France)
<http://www.ec-nantes.fr>
- **Dunarea de Jos University of Galati** (Romania)
<http://www.ugal.ro>
- **University of Genoa** (Italy)
<http://www.unige.it>
- **University of Rostock** (Germany)
<http://www.schiffbau Forschung.de>
- **West Pomeranian University of Technology** (Poland)
<http://www.wtm.zut.edu.pl>

The consortium includes seven associated partners from prestigious universities worldwide:

- **University of Michigan** (USA)
- **University of Osaka** (Japan)
- **Federal University of Amazon** (Brazil)
- **VIMARU Maritime University** (Vietnam)
- **University of New South Wales** (Australia)
- **University of Sciences and Technology of Oran** (Algeria)
- **ICAM : Institut Catholique d'Arts et Métiers** (France)

A Strategic Advisory Board consisting of high level decision makers of leading European maritime companies and representatives from the associated universities worldwide actively contribute to the total quality management.

The EMship program is supported by the WEGEMT organisation (www.wegemt.org).

Study Program

The mobility scheme involves 3 semesters in 3 countries (within a selection of 6 countries):

The first and second semesters (60 credits) are dedicated to general lectures in Ship & Offshore Design:

1 st semester: University of Liège (Belgium) Ship design, theory, structures & production 25 ECTS credits		2 nd semester: Ecole Centrale de Nantes (France) Marine hydrodynamics 25 ECTS credits	
Modules	ECTS	Modules	ECTS
Ship theory (statics, dynamics and propulsion)	6	Water wave and sea state models for ship design	5
Ships & offshore structures & ship production	8	Seakeeping: theory & numerical modeling	5
Ship project & ship design	6	CFD for ship hydrodynamics	6
Electricity, ship equipment & diesel engines	2	Multi-objective optimisation for ship design	4
Design of high speed vessels	3	Experimental ship hydrodynamics	5
End of 2nd semester: Ecole Centrale de Nantes (France), 10 ECTS Credits Initiation of research & developpement			

The third semester (30 credits) is dedicated to Advanced lectures:

University of Galati (Romania) Maneuvering & propulsion 10 ECTS credits		University of Genoa (Italy) Sailing & motor yachts 10 ECTS credits	
Modules	ECTS	Modules	ECTS
Ship maneuvering	5	Theory and design of motor yachts	5
Ship propulsion	5	Theory and design of sailing yachts	5
University of Rostock (Germany) CAD, information technology & marine structures 10 ECTS credits		West Pomeranian University of Technology (Poland) advanced ship and offshore structures 10 ECTS credits	
Modules	ECTS	Modules	ECTS
Information technology in ship design and production	4	Advanced mechanics of ship and offshore structures	4
Sea loads on offshore structures	3	Advanced production technology of ship and offshore structures	3
Advanced analysis of marine structures	3	Advanced design of ship and offshore Installations	3

ICAM (France)		Composite materials : production and recycling)	
Modules	ECTS	Modules	ECTS
Naval composite structure dimensioning	4	Manufacturing and recycling naval composite structures	6

MASTER THESIS AND INTERNSHIP, 20 ECTS credits
Internship and master thesis with industry, coordinated by the university visited during the third semester

Emship graduates will be awarded a Double degree from University of Liège (Belgium) and Ecole Centrale de Nantes (France) with an explicit reference to the third semester mobility.