

**Vue bloc du programme des cours**

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**Bloc 1**
**Compulsory courses from the core curriculum (Uliece)**
**Lectures in Mechanical Engineering**

MECA0018-2	<i>Manufacturing processes</i> (anglais) - Yves MARCHAL - [15h Labo., 11h Proj., 0,5j T. t.]	Q2	30	-	[+]	5
MECA0029-1	<i>Theory of vibration</i> (anglais) - Loïc SALLES - [30h Proj.]	Q1	26	26	[+]	5
MECA0462-2	<i>Materials selection</i> (anglais) - Anne MERTENS, Davide RUFFONI - [30h Proj., 1j T. t.]	Q1	26	26	[+]	5
GEST3162-1	<i>Principles of management</i> (anglais) - Michaël PARMENTIER, Willem STANDAERT - [25h Proj.]	Q1	30	-	[+]	5

**Optional courses from the core curriculum**

Courses to be chosen among the following list :

**Lectures in Mechanical engineering**
*Remarque* : Preferential choices for students of the "Advanced Ship Design" are MECA0036-2 and MECA0027-1

MECA0036-2	<i>Finite Element Method</i> (anglais) - JeanPhilippe PONTHOT - [40h Proj.]	Q2	26	26	[+]	5
MECA0027-1	<i>Structural and multidisciplinary optimization</i> (anglais) - Pierre DUYSINX, Patricia TOSSINGS - [18h Proj.]	Q1	30	12	[+]	5
MECA0031-2	<i>Kinematics and dynamics of mechanisms</i> (anglais) - Olivier BRULS - [40h Proj.]	Q2	30	20	[+]	5
MECA0023-1	<i>Advanced solid mechanics</i> (anglais) - JeanPhilippe PONTHOT - [30h Proj.]	Q1	26	26	[+]	5
MECA0010-1	<i>Uncertainty quantification and stochastic modeling</i> (anglais) - Maarten ARNST - [28h Proj.]	Q1	16	16	[+]	5

**Focus courses**

APRI0009-1	<i>Integrated Design Project of Ships, Small Crafts &amp; High Speed vessels</i> (anglais) - [150h Proj., 5j T. t.]	TA	80	-	[+]	15
CNAV0021-1	<i>Ship Theory : Statics and Dynamics</i> (anglais)	Q2	32	20	-	5
CNAV0014-3	<i>Ship and offshore structures and production (including 7 days technical visit)</i> (anglais) - [7j T. t.]	Q2	40	60	[+]	7
CNAV0022-1	<i>Ship Equipment and Propulsion Systems</i> (anglais) - [1j T. t.]	Q2	20	20	[+]	3

**Bloc 2**
**Compulsory courses from the core curriculum (Uliece)**
**Master Thesis and Internship**

HULG9455-1	<i>Master Thesis</i> (anglais)	-	-	-	-	25
HULG9456-1	<i>Internship in Companies or Laboratories</i> (anglais)	-	-	-	-	5

**Optional courses from the core curriculum**

Choose a program at UPM, URO or ECN :

**Polytechnic University of Madrid**
**Lectures in Offshore Renewable Energy**

HULG9449-1	<i>Oceanology</i> (anglais)	-	-	-	-	1,5
HULG9450-1	<i>Structural Design of OWT</i> (anglais)	-	-	-	-	8

HULG9451-1	<i>Electric Generation and Export Technologies</i> (anglais)	-	-	-	<b>5,5</b>
HULG9452-1	<i>Manufacturing and Maritime Operations</i> (anglais)	-	-	-	<b>7</b>
HULG9453-1	<i>Project Operation and Management</i> (anglais)	-	-	-	<b>4</b>
HULG9454-1	<i>Structural Analysis of Offshore Platforms</i> (anglais)	-	-	-	<b>4</b>

**Ecole Centrale de Nantes (ECN) - France**

**Marine Hydrodynamics**

HULG9411-1	<i>General concepts of hydrodynamics</i> (anglais)	-	-	-	<b>4</b>
HULG9412-1	<i>Water Waves and Sea States Modeling</i> (anglais)	-	-	-	<b>4</b>
HULG9413-1	<i>Wave-structure Interactions and Moorings</i> (anglais)	-	-	-	<b>5</b>
HULG9414-1	<i>Numerical hydrodynamics</i> (anglais)	-	-	-	<b>5</b>
HULG9415-1	<i>Experimental hydrodynamics</i> (anglais)	-	-	-	<b>5</b>
HULG9416-1	<i>Naval engineering</i> (anglais)	-	-	-	<b>5</b>
HULG9417-1	<i>Foreign language</i> (anglais)	-	-	-	<b>2</b>

**University of Rostock (URO) - Allemagne**

**Ship Technology - Ocean Engineering**

Choose 30 credits :

HULG9418-1	<i>Theory and design of floating and founded offshore systems</i> (anglais)	-	-	-	<b>6</b>
HULG9419-1	<i>Selected topics of the analysis of marine structures</i> (anglais)	-	-	-	<b>6</b>
HULG9420-1	<i>Mathematical Models in ship theory</i> (anglais)	-	-	-	<b>6</b>
HULG9421-1	<i>IT in ship design and production</i> (anglais)	-	-	-	<b>6</b>
HULG9422-1	<i>Safety of ships under damaged conditions, in waves</i> (anglais)	-	-	-	<b>6</b>
HULG9423-1	<i>Ocean Research technology</i> (anglais)	-	-	-	<b>6</b>
HULG9424-1	<i>Team project</i> (anglais)	-	-	-	<b>6</b>