

Handbook of MSc Program in Ocean Engineering
School of Mechanical Engineering, Sharif University of Technology

The MSc program in Ocean Engineering comprises of minimum 29 credits over a period of 2 years. The program has five components as follows.

A- Compulsory Core Courses	3 Credits
B- Compulsory Specialized Courses	12 Credits
C- Elective Specialized Courses	6 Credits
D- Seminar	2 Credits
E- Thesis	6 Credits

A- Compulsory Core Courses

Course #	Courses Title	Credits
28031	Advanced Mathematics I	3

B- Compulsory Specialized Courses: (At least four courses required)

Course #	Course Title	Credits
28195	Advanced Hydrodynamics	3
28984	Ship Structural Design	3
28961	Wave Theory	3
28971	Marine Dynamics I	3
28987	Analysis and Design of Floating Structures	3
28922	Subsurface Engineering	3
28579	Random Vibrations	3
	Under Water Acoustics	3

C- Elective Specialized Courses: (Need supervisor's approval)

Course #	Course Title	Credits	Prerequisite
-	Experimental Fluid Dynamics (EFD)	3	-
-	Advanced Ship Design	3	-
-	Analysis And Design Of Offshore Structures	3	-
-	Rotor Dynamic & Lab	3	
28016	Computational Fluid Dynamics (CFD)	3	28195
28033	Continuum Mechanics	3	-
28036	Elasticity	3	-
28042	Finite Element Method (FEM)	3	28031

28051	Selected Topics	3	-
28052	Advanced Mechanism Design	3	-
28372	Engineering Acoustics	3	-
28558	Condition Monitoring & Fault Diagnosis	3	-
28583	Theory Of Plats And Shells	3	28031
28923	Advanced Marine Propulsion Systems	3	-
28972	Marine Dynamics II	3	-
28973	Advanced Ship Vibration	3	28031
28975	Ship Construction Technology	3	
28979	Marine Propulsors Design	3	
28988	Advanced Hydraulics	3	28031
28989	High Speed Crafts	3	28915
28991	Continuum Mechanics & Elasticity	3	-
28992	Advanced Welding	3	-
28994	Reliability In Marine Structures	3	28955
28926	Marine Pipelines	3	-

Note: MSc candidates can take up to one course out of the above table provided their supervisor approves it.

D- Seminar: (One course is required)

Course #	Course Title	Credits
28040	Seminar	2
28018	Research Method	3

E- Individual project

Course #	Course Title	Credits
28980	Thesis	6

All candidates should select their project supervisor by the end of December and hand over their project proposal by the end of March.

F- Compensatory courses

If your background is not in ocean engineering, you may need to take some extra courses based on the decision of education committee.

Annual Curriculum

Semester One (Autumn)

Wave Theory
Advanced Mathematics I
Continuum Mechanics And Elasticity
Advanced Hydrodynamics
Theory Of Plates And Shells
Computational Fluid Dynamics (CFD)
Ship Construction Technology
Inspection And Maintenance Of Machineryes
Analysis and Design of Floating Structures
Reliability In Marine Structures
Marine Propulsors Design
Continuum Mechanics
Elasticity
Engineering Acoustics
Advanced Mechanism Design

Semester Two (Winter)

Marine Dynamics II
Advanced Welding
Advanced Ship Vibration
Finite Element Method (FEM)
Ship Structural Design
Subsurface Engineering
Seminar
High Speed Crafts
Experimental Fluid Dynamics (EFD)
Advanced Propulsion Systems
Random Vibration
Selected Topics
Analysis & Design of offshore Structures

For further information, please read the regulations of MSc program at the following link. It is your responsibility to comply with the regulations and if required, please consult with your supervisor.

<http://www.sharifgradschool.ir/fa/mosavabatdetail.asp?rid=14>