COURSE OF STUDY Strategic Maritime and Port Sciences
ACADEMIC YEAR 2024-2025
ACADEMIC SUBJECT Production systems for Port related industries

General information	
Year of the course	I
Academic calendar (starting and ending date)	from February 23rd, 2026, to May 30th, 2026
Credits (CFU/ETCS):	6
SSD	Manufacturing systems and technologies IIND/04A
Language	Italian
Mode of attendance	Non mandatory

Professor/ Lecturer	
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Department and address	Centro Taranto Politecnico, Viale del Turismo 8, Taranto
Virtual room	Teams channel, code lenhlkq
Office Hours (and modalities: e.g., by appointment, on line, etc.)	Scheduled by email, on teams platform

Teaching strategy	The course is delivered in telematic mode, with the exception of the introductory lesson and the last laboratory lesson. The workshop activity will consist of the 3D printing of objects identified by the students.
Expected learning outcomes in terms of	
Knowledge and understanding on:	Acquisition of the appropriate methodology for the study of management engineering, industrial processes, design criteria and maintenance systems and processing, assembly and disassembly technologies in the maritime and port sector; Understanding of the issues of sustainability of logistics systems and manufacturing production, assembly and disassembly systems, as well as the basic principles of Computer-Aided Manufacturing, additive manufacturing and repair technologies, also called 3D printing, with a view to digitizing production processes for Industry 4.0.
Work schedule	

Hours			
Total	Lectures	Hands-on (laboratory, working workshops, groups, seminars, field trips)	Out-of-class study hours/ Self-study hours
150	48		102

CFU/ETCS			
6			

Learning Objectives	Knowledge of management engineering, with reference to industrial processes in the maritime and port sector;
Course prerequisites	Basic knowledge of Production Processes

Applying knowledge and understanding on:	Acquisition of the ability to set up, face and solve the problems posed and formulate appropriate application solutions to the engineering problems of maritime-port activities, with particular attention to the ability to guide the organizational and managerial choices for the development, implementation and management of large investments in the context of the Blue Growth strategy, evaluation of inbound/outbound transport strategies and modes more to plan a logistics system pursuing objectives of cost-effectiveness and sustainability, to include a cycle of manufacture, assembly, disassembly or repair.
Soft skills	• Making informed judgments and choices The training course allows students to acquire the ability to evaluate the engineering implications of operating methods, in order to have an overview of the problems related to maritime-port activities, such as to allow the identification of problems and their solutions to specific interlocutors. To achieve this goal, the realization, within the training activities, of practical and applicative activities, such as laboratory activities, contributes. • Communicating knowledge and understanding The ability to communicate the knowledge, skills and abilities acquired through the training course to the outside world, highlighting the problematic aspects is pursued through activities carried out in groups, on 3D printing. • Capacities to continue learning The acquisition of a rigorous and conscious working method is ascertained through any intermediate tests, exams, internship activities and the final exam, in order to verify the ability to apply the theoretical knowledge, skills and abilities acquired. o
Syllabus	
Content knowledge	1.THE OIL INDUSTRY 2.THE STEEL INDUSTRY 3.METAL CARPENTRY 4.LA SHIPBUILDING 5.INDUSTRY 4.0 and PORTS 4.0 6.ADVANCED MANUFACTURING SOLUTIONS 7.ADDITIVE MANUFACTURING 8.AUGMENTED REALITY & 3D SCANNING
Texts and readings	Lecture notes, slides and notes of the course.
Notes, additional materials	
Repository	Teams virtual classroom

Assessment	
Assessment methods	Oral Exam

Assessment criteria	Knowledge and understanding: quality of theoretical knowledge and adequacy of references to sources; Applied knowledge and understanding: ability to apply and use the knowledge and methodologies proposed in relation to real contexts; Making judgements: Ability to choose between technical solutions Communication skills: Ability to express concepts Ability to learn: ability to autonomously and personally re-elaborate learning.
Final exam and grading criteria	The final grade is awarded out of thirty. The exam is considered passed when the grade is greater than or equal to 18. The student is asked three questions for a maximum evaluation of 10 points per question. Honours are awarded to students who demonstrate a high level of technical language, as well as having correctly assimilated the concepts.
Further information	
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