



# UNIVERSITÀ DEGLI STUDI DI PALERMO

**Department: Engineering**

**A.Y. 2022/2023**

## **DEGREE COURSE IN MANAGEMENT ENGINEERING**

### **Characteristics**



Class of Bachelor's Degree  
(BSc) on Industrial  
engineering (L-9)



3 YEARS



PALERMO



PLANNED ACCESS



2094

### **Educational objectives**

The growing complexity and the dynamics of the competitive system, in the age of globalization and knowledge require a new type of professionals, capable of facing issues in an interdisciplinary, flexible and innovative way.

The course aims at the preparation of professionals (Graduates in Management Engineering) responding to the needs of the labour market, with respect, in particular to enterprises as well as to public administration and services. The educational programme provides specific skills to solve technical, economic, managerial and organisational problems in the processes of production and consumption of goods and/or services, through the use of the typical engineering methods and problem solving skills.

Management engineers, in their activity, use the quantitative tools, decision supports and methodological rigour typical of engineering sciences, aiming at optimizing solutions. The engineering vision and method, when applied to managerial and organizational problems, enable the achievement of more efficient and effective solutions, contribute to a better understanding of business phenomena, facilitate the identification and control of the most significant decisional variables in various business processes, set the bases for the continuous improvement of business outcomes based on measurable parameters and, eventually, are suitable to build well-structured relations among the various business functions and among companies.

The educational programme provides sound groundings in disciplines such as mathematics, physics, economics, statistics, operations research, computer science as well as upon the planning capabilities typical of the most important engineering disciplines. Among these latter, particularly important are the disciplines related to the sectors of processing technologies and systems, of industrial plants and economics engineering.

The Degree Course focuses on the principles of operation, design and modelling of production and logistics systems, on their technological foundations, taking due account of the related economic aspects. The degree course lays the foundations for the quantitative and economic analysis of the production processes of goods and services, providing knowledge and professional skills for the management, implementation and improvement of these processes.

The Degree Course in Management Engineering is not divided into curricula.

However, since the function of the management engineer is that of a "navigator" who can guide the companies in their transformation paths towards digital, towards sustainability, towards the capitalization of data, and towards internationalization, the course has a strong matrix based on the production and logistics management, but also of data analysis and digital transformation in every business area. Last but not least, with the specific aim of training professionals aware of the strong acceleration of the globalization process and ready to accompany companies (including local ones) towards the internationalization process, the training course includes the teaching of English language in the first year which can, on the one hand, favour the participation of students in the ERASMUS program and any experiences abroad, and on the other allow the students themselves to attend some classes, delivered in English in the second and third year precisely in order to develop this type of soft skill.

The degree course is divided into 4 blocks of teachings:

Basic engineering teachings: calculus, geometry, physics, chemistry, computer science;

Basic management engineering teachings: economics, business economics, statistics, operations research, company information systems;

Specific industrial engineering teachings: industrial design, electrical engineering, technical physics and construction theory;

Specific management engineering teachings: technologies of materials and manufacturing processes, industrial production

Legenda: Per. = periodo o semestre, Val. = Valutazione (V=voto, G=giudizio), TAF= Tipologia Attività Formativa (A=base, B=caratterizzante, C=Affine, S=stages, D=a scelta, F=altre)

management, quality management, product engineering, industrial plants.

The Course Educational Regulations and the educational offer will be such as to allow students who wish it, to choose training paths in which there is an adequate amount of credits in related and integrative sectors, not included in class-specific ones.

### Professional opportunities

Junior management engineers may find employment in manufacturing companies, consulting, public services and utilities, healthcare, banks and in various job positions and different business functions.

### Final examination features

Students must prepare and discuss a degree dissertation, awarded with 3 credits. The final dissertation is given in front of a nominated Commission with a short presentation on a theme chosen by the students among the ones provided from the Board of the Degree Course.

Subjects 1 ° year	CFU	Sem.	Val.	SSD	TAF
01238 - CALCULUS <i>Pavone(PA)</i>	12	1	V	MAT/05	A
02605 - COMPUTER AIDED DESIGN <i>Mancuso(PO)</i>	6	1	V	ING-IND/15	B
03675 - GEOMETRY <i>Favacchio(RD)</i>	6	1	V	MAT/03	A
04677 - ENGLISH LANGUAGE	3	1	G		E
01788 - CHEMISTRY <i>Alessi(PA)</i>	6	2	V	CHIM/07	A
15540 - PHYSICS I <i>Raso(PO)</i>	9	2	V	FIS/03	A
13821 - PRINCIPLES OF COMPUTER SCIENCE <i>Agate(RD)</i>	9	2	V	ING-INF/05	A

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Subjects 2 ° year	CFU	Sem.	Val.	SSD	TAF
06313 - MECHANICS OF MATERIALS AND THEORY OF STRUCTURES <i>Fileccia Scimemi(RU)</i>	6	1	V	ICAR/08	B
22427 - OPERATIONS RESEARCH AND COMPANY DATA BASES - INTEGRATED COURSE	12	Ann.	V		
- OPERATIONS RESEARCH <i>Mancini(PA)</i>	6	1		MAT/09	A
- COMPANY DATA BASES <i>Impastato(PC)</i>	6	2		ING-INF/05	C
07870 - PHYSICS II <i>Abbene(PA)</i>	6	1	V	FIS/01	A
03318 - TECHNICAL PHYSICS <i>Cardona(RD)</i>	6	1	V	ING-IND/10	C
02795 - ECONOMICS FOR ENGINEERS <i>Abbate(RU)</i>	9	2	V	ING-IND/35	B
02965 - ELECTRICAL DEVICES AND CIRCUITS <i>Viola(PA)</i>	6	2	V	ING-IND/31	C
06644 - STATISTICS <i>Lombardo(PO)</i>	12	2	V	SECS-S/02	A
Free subjects	12				D

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Subjects 3 ° year	CFU	Sem.	Val.	SSD	TAF
02779 - BUSINESS ECONOMICS AND ORGANISATION <i>Abbate(RU)</i>	9	1	V	ING-IND/35	B
03867 - INDUSTRIAL PLANTS <i>La Fata(PA)</i>	9	1	V	ING-IND/17	B

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Subjects 3 <sup>o</sup> year	CFU	Sem.	Val.	SSD	TAF
19033 - MATERIALS AND MANUFACTURING TECHNOLOGIES	12	1	V		
- MANUFACTURING TECHNOLOGIES <i>Di Lorenzo(PO)</i>	6	1		ING-IND/16	B
- MATERIALS TECHNOLOGIES <i>Barcellona(PA)</i>	6	1		ING-IND/16	B
03732 - INDUSTRIAL QUALITY MANAGEMENT <i>Lupo(PA)</i>	6	2	V	ING-IND/16	B
19036 - PRODUCT DESIGN AND DEVELOPMENT <i>Di Lorenzo(PO)</i>	9	2	V	ING-IND/16	B
03724 - PRODUCTION & OPERATIONS MANAGEMENT <i>La Scalia(PO)</i>	9	2	V	ING-IND/17	B
05917 - FINAL EXAMINATION	3	2	V		E
Stage and others	3				F
	<b>60</b>				

### OPTIONAL SUBJECTS

Stage and others	CFU	Sem.	Val.	SSD	TAF
22200 - BUSINESS PLAN AND BUSINESS GAME <i>Perrone(PO)</i>	3	2	G		F
21167 - INTERNSHIP 2 CREDITS	2	1	G		F
11033 - INTERNSHIP 3 CREDITS	3	1	G		F
11034 - OTHER EDUCATIONAL ACTIVITIES - 1 CREDIT	1	1	G		F
11035 - OTHER EDUCATIONAL ACTIVITIES - 2 CREDITS	2	1	G		F
11036 - OTHER EDUCATIONAL ACTIVITIES - 3 CREDITS	3	1	G		F

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