



# UNIVERSITÀ DEGLI STUDI DI PALERMO

**Department: Engineering**

**A.Y. 2019/2020**

## **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.

Management engineers are an answer to the needs of new markets, and they are always more appreciated and required both by companies and by public administrations.

Management engineering finds proper solutions to technical, economical, operational and organizational problems in production processes and delivery of goods and services, through the scientific methods and capabilities which are typical of engineers.

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 efficient and effective solutions, contribute to a better understanding of business phenomena, facilitate the identification and control of the most significant decisional variables, set the bases for the continuous improvement of business based on measurable parameters and, eventually, are suitable to build well-structured relations among the various business functions and among companies.

The education of a management engineer is based upon a sound grounding 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 education is completed by the acquisition of ECTS from other educational and training activities such as internships, seminars, foreign language courses, industry visits.

The degree course in Management Engineering of the University of Palermo has got a well-established tradition; actually, it started in Palermo in 1980.

The bachelor program is based on production and logistics management, in accordance with the history and tradition of industrial Engineering in Palermo.

It is focused on the principles of design and modelling and operation of production and logistic systems, on their technological groundings, with particular attention to the relevant economical aspects.

The students get the bases for the quantitative and economical analysis of production and operational systems, providing knowledge and professional know how for the management, implementation and improvement of these systems.

Four blocks of subjects compose the program:

- Base engineering disciplines: calculus and geometry, physics and chemistry;
- Industrial engineering disciplines: CAD, electrical engineering, thermodynamics, mechanics of materials;
- Managements engineering: Economics, Business economics, Statistics, Operations research, information systems;
- Characterizing disciplines: manufacturing technology, technology, production and operations management, quality management and product development, industrial plants.

### **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 ECTS. The final dissertation is given in front of a

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nominated Commission with a short presentation on a theme chosen by the students among the ones provided from the Degree Council.

| Subjects 1 ° year  | CFU | Sem. | Val. | SSD        | TAF |
|--|-----|------|------|------------|-----|
| 01238 - CALCULUS<br><i>Pavone(PA)</i>                        | 12  | 1    | V    | MAT/05     | A   |
| 03675 - GEOMETRY<br><i>Lattuca(PC)</i>                       | 6   | 1    | V    | MAT/03     | A   |
| 06502 - MANAGEMENT INFORMATION SYSTEMS<br><i>Gambino(RU)</i> | 6   | 1    | V    | ING-INF/05 | C   |
| 04677 - ENGLISH LANGUAGE                                     | 3   | 1    | G    |            | E   |
| 01788 - CHEMISTRY<br><i>Alessi(PA)</i>                       | 9   | 2    | V    | CHIM/07    | A   |
| 02605 - COMPUTER AIDED DESIGN<br><i>Mancuso(PO)</i>          | 9   | 2    | V    | ING-IND/15 | B   |
| 15540 - PHYSICS I<br><i>Raso(PO)</i>                         | 9   | 2    | V    | FIS/03     | A   |

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| Subjects 2 ° year  | CFU | Sem. | Val. | SSD        | TAF |
|--|-----|------|------|------------|-----|
| 06313 - MECHANICS OF MATERIALS AND THEORY OF STRUCTURES<br><i>Fileccia Scimemi(RU)</i> | 9   | 1    | V    | ICAR/08    | B   |
| 07870 - PHYSICS II<br><i>Abbene(PA)</i>  | 6   | 1    | V    | FIS/01     | A   |
| 03318 - TECHNICAL PHYSICS<br><i>La Rocca(CU)</i>                                       | 6   | 1    | V    | ING-IND/10 | C   |
| 02795 - ECONOMICS FOR ENGINEERS<br><i>Abbate(RU)</i>                                   | 9   | 2    | V    | ING-IND/35 | B   |
| 02965 - ELECTRICAL DEVICES AND CIRCUITS<br><i>Viola(PA)</i>                            | 6   | 2    | V    | ING-IND/31 | C   |
| 06263 - OPERATIONS RESEARCH<br><i>Bauso(PA)</i>  | 6   | 2    | V    | MAT/09     | A   |
| 06644 - STATISTICS<br><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 |
|---|-----|------|------|------------|-----|
| 02704 - BUSINESS ECONOMICS<br><i>Abbate(RU)</i>                     | 9   | 1    | V    | ING-IND/35 | B   |
| 03867 - INDUSTRIAL PLANTS<br><i>La Fata(PA)</i>                     | 9   | 1    | V    | ING-IND/17 | B   |
| 19033 - MATERIALS AND MANUFACTURING TECHNOLOGIES                    | 12  | 1    | V    |            |     |
| - MANUFACTURING TECHNOLOGIES<br><i>Di Lorenzo(PO)</i>               | 6   | 1    |      | ING-IND/16 | B   |
| - MATERIALS TECHNOLOGIES<br><i>Barcellona(PA)</i>                   | 6   | 1    |      | ING-IND/16 | B   |
| 03732 - INDUSTRIAL QUALITY MANAGEMENT<br><i>Lupo(PA)</i>            | 6   | 2    | V    | ING-IND/16 | B   |
| 19036 - PRODUCT DESIGN AND DEVELOPMENT<br><i>Di Lorenzo(PO)</i>     | 9   | 2    | V    | ING-IND/16 | B   |
| 03724 - PRODUCTION & OPERATIONS MANAGEMENT<br><i>La Commare(PO)</i> | 9   | 2    | V    | ING-IND/17 | B   |
| 05917 - FINAL EXAMINATION   | 3   | 2    | V    |            | E   |

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| Subjects 3 ° year | CFU | Sem. | Val. | SSD | TAF |
|-------------------|-----|------|------|-----|-----|
| Stage and others  | 3   |      |      |     | F   |

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### OPTIONAL SUBJECTS

| Stage and others                                 | CFU | Sem. | Val. | SSD | TAF |
|--|-----|------|------|-----|-----|
| 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   |
| 07899 - PROFESSIONAL PRACTICE                    | 3   | 1    | G    |     | F   |

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