

## University of Pavia

## Study Course: INDUSTRIAL AUTOMATION ENGINEERING - 06417

## Classe LM-25 Ingegneria dell'automazione

## Regulations 2015/2016 - Course Regulations a.y. 2021/2022

## Study Plan academic year 2022/2023

To be submitted online from November 2nd to 30th 2022 (enrolled student only)

STUDENT NUMBER N. .... SURNAME- NAME .....

## TRACK 01 - ROBOTICS AND MECHATRONICS

## 1° Year - academic year 2021/2022

| Learning Activity   | CFU | N° | N° (ind.) | Compulsory | Scientific Area | Type of learning activity | Period          |
|---|-----|----|-----------|------------|-----------------|---------------------------|-----------------|
| 500543 - IDENTIFICAZIONE DEI MODELLI E ANALISI DEI DATI       | 12  | 1  |           |            |                 |                           | All Year        |
| Teaching Units IDENTIFICAZIONE DEI MODELLI E ANALISI DEI DATI |     |    |           |            |                 |                           |                 |
| 502522 - IDENTIFICAZIONE DEI MODELLI E ANALISI DEI DATI A     | 6   |    |           |            | ING-INF/04      | Distinctive               | First Semester  |
| 502594 - IDENTIFICAZIONE DEI MODELLI E ANALISI DEI DATI B     | 6   |    |           |            | ING-INF/04      | Distinctive               | Second Semester |
| 504714 - PROCESS CONTROL AND ROBOTICS                         | 12  | 1  |           |            |                 |                           | All Year        |
| Teaching Units PROCESS CONTROL AND ROBOTICS                   |     |    |           |            |                 |                           |                 |
| 504462 - PROCESS CONTROL                                      | 6   |    |           |            | ING-INF/04      | Distinctive               | First Semester  |
| 504463 - ROBOT CONTROL  | 6   |    |           |            | ING-INF/04      | Distinctive               | Second Semester |
| 507218 - ELECTRONICS FOR INDUSTRIAL MEASUREMENTS              | 6   | 2  |           | X          | ING-INF/01      | Related/Supplementary     | First Semester  |
| 504715 - ADVANCED AUTOMATION AND CONTROL                      | 9   | 3  |           | X          | ING-INF/04      | Distinctive               | First Semester  |
| FREE CHOICE FROM THE UNIVERSITY COURSE OFFER                  | 6   | 4  |           |            |                 | Optional                  |                 |
| 500544 - ELETTRONICA  | 6   | 4  |           |            | ING-INF/01      | Optional                  | First Semester  |
| 504710 - NUMERICAL METHODS IN ENGINEERING SCIENCES            | 6   | 4  |           |            | MAT/08          | Optional                  | First Semester  |
| 504707 - ARTIFICIAL INTELLIGENCE                              | 6   | 4  |           |            | ING-INF/05      | Optional                  | First Semester  |
| 505012 - LASER SAFETY   | 6   | 4  |           |            | FIS/03          | Optional                  | Second Semester |
| 507219 - LOGISTICS MANAGEMENT                                 | 6   | 4  |           |            | ING-IND/17      | Optional                  | First Semester  |
| 507215 - STRATEGIC MANAGEMENT AND BUSINESS PLANNING           | 6   | 4  |           |            | SECS-P/08       | Optional                  | First Semester  |
| 502522 - IDENTIFICAZIONE DEI MODELLI E ANALISI DEI DATI A**   | 6   | 4  |           |            | ING-INF/04      | Optional                  | First Semester  |
| 504462 - PROCESS CONTROL*                                     | 6   | 4  |           |            | ING-INF/04      | Optional                  | First Semester  |
| 504703 - COMPUTER VISION                                      | 6   | 5  |           |            | ING-INF/05      | Related/Supplementary     | First Semester  |

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|   |   |   |  |   |            |                       |                 |
|---|---|---|--|---|------------|-----------------------|-----------------|
| 507282 - MECCATRONICA                                       | 6 | 5 |  |   | ING-INF/05 | Related/Supplementary | First Semester  |
| 508100 - AUTOMATED MECHANICAL SYSTEM DESIGN                 | 6 | 6 |  | X | ING-IND/13 | Distinctive           | Second Semester |
| 504717 - INDUSTRIAL CONTROL                                 | 6 | 7 |  | X | ING-INF/04 | Distinctive           | Second Semester |
| FREE CHOICE FROM THE UNIVERSITY COURSE OFFER                | 6 | 8 |  |   |            | Optional              |                 |
| 504062 - CONVERSIONE STATICA DELL'ENERGIA                   | 6 | 8 |  |   | ING-IND/32 | Optional              | Second Semester |
| 509074 - DATA SCIENCE AND BIG DATA ANALYTICS                | 6 | 8 |  |   | ING-INF/05 | Optional              | Second Semester |
| 509071 - MACHINE LEARNING                                   | 6 | 8 |  |   | ING-INF/05 | Optional              | Second Semester |
| 504708 - ECONOMICS FOR THE DIGITAL SOCIETY                  | 6 | 8 |  |   | SECS-P/06  | Optional              | Second Semester |
| 504464 - ORGANIZATION THEORY AND DESIGN                     | 6 | 8 |  |   | SECS-P/06  | Optional              | Second Semester |
| 502594 - IDENTIFICAZIONE DEI MODELLI E ANALISI DEI DATI B** | 6 | 8 |  |   | ING-INF/04 | Optional              | Second Semester |
| 504463 - ROBOT CONTROL*                                     | 6 | 8 |  |   | ING-INF/04 | Optional              | Second Semester |
|   |   |   |  |   |            |                       |                 |
|   |   |   |  |   |            |                       |                 |
| <b>TOT. 57 CFU</b>  |   |   |  |   |            |                       |                 |

\* Do not choose this exam if you have already chosen "PROCESS CONTROL AND ROBOTICS" as choice n°1

\*\* Do not choose this exam if you have already chosen "IDENTIFICAZIONE DEI MODELLI E ANALISI DEI DATI" as choice n°1

**2° Year - academic year 2022/2023**

| Learning Activity  | CFU | N° | N° (ind.) | Compulsory | Scientific Area | Type of learning activity | Period          |
|--|-----|----|-----------|------------|-----------------|---------------------------|-----------------|
| 504719 - ROBOTICS  | 6   | 9  |           | X          | ING-INF/05      | Related/Supplementary     | First Semester  |
| 504723 - ELECTRICAL DRIVES FOR INDUSTRIAL APPLICATIONS         | 9   | 10 |           | X          | ING-IND/32      | Distinctive               | First Semester  |
| 507214 - WIRED AND WIRELESS COMMUNICATION SYSTEMS              | 6   | 11 |           | X          | ING-INF/03      | Related/Supplementary     | First Semester  |
| 509684 - APPLIED ROBOTICS TECHNOLOGIES                         | 9   | 12 |           | X          | ING-IND/13      | Distinctive               | First Semester  |
| 507216 - LEAN PRODUCTION                                       | 6   | 13 |           |            | ING-IND/17      | Related/Supplementary     | First Semester  |
| 507219 - LOGISTICS MANAGEMENT                                  | 6   | 13 |           |            | ING-IND/17      | Related/Supplementary     | First Semester  |
| 507220 - PLANNING, MANAGEMENT AND SUPPLY OF GOODS AND SERVICES | 3   | 14 |           |            | ING-IND/35      | Other                     | Second Semester |
| 509683 - SAFETY IN ENGINEERING AND TECHNOLOGY                  | 3   | 14 |           |            | ING-IND/31      | Other                     | Second Semester |
| 503327 - MASTER THESIS   | 24  |    |           |            | PROFIN_S        | Final Exam                |                 |
|  |     |    |           |            |                 |                           |                 |
|  |     |    |           |            |                 |                           |                 |
| <b>TOT. 63 CFU</b>   |     |    |           |            |                 |                           |                 |

**TRACK 02 - INDUSTRIAL TECHNOLOGIES AND MANAGEMENT**

## 1° Year - academic year 2021/2022

| Learning Activity   | CFU | N° | N° (ind.) | Compulsory | Scientific Area | Type of learning activity | Period          |
|---|-----|----|-----------|------------|-----------------|---------------------------|-----------------|
| 500543 - IDENTIFICAZIONE DEI MODELLI E ANALISI DEI DATI       | 12  | 1  |           |            |                 |                           | All Year        |
| Teaching Units IDENTIFICAZIONE DEI MODELLI E ANALISI DEI DATI |     |    |           |            |                 |                           |                 |
| 502522 - IDENTIFICAZIONE DEI MODELLI E ANALISI DEI DATI A     | 6   |    |           |            | ING-INF/04      | Distinctive               | First Semester  |
| 502594 - IDENTIFICAZIONE DEI MODELLI E ANALISI DEI DATI B     | 6   |    |           |            | ING-INF/04      | Distinctive               | Second Semester |
| 504714 - PROCESS CONTROL AND ROBOTICS                         | 12  | 1  |           |            |                 |                           | All Year        |
| Teaching Units PROCESS CONTROL AND ROBOTICS                   |     |    |           |            |                 |                           |                 |
| 504462 - PROCESS CONTROL                                      | 6   |    |           |            | ING-INF/04      | Distinctive               | First Semester  |
| 504463 - ROBOT CONTROL  | 6   |    |           |            | ING-INF/04      | Distinctive               | Second Semester |
| 507218 - ELECTRONICS FOR INDUSTRIAL MEASUREMENTS              | 6   | 2  |           | X          | ING-INF/01      | Related/Supplementary     | First Semester  |
| 504715 - ADVANCED AUTOMATION AND CONTROL                      | 9   | 3  |           | X          | ING-INF/04      | Distinctive               | First Semester  |
| FREE CHOICE FROM THE UNIVERSITY COURSE OFFER                  | 6   | 4  |           |            |                 | Optional                  |                 |
| 500544 - ELETTRONICA  | 6   | 4  |           |            | ING-INF/01      | Optional                  | First Semester  |
| 504710 - NUMERICAL METHODS IN ENGINEERING SCIENCES            | 6   | 4  |           |            | MAT/08          | Optional                  | First Semester  |
| 504707 - ARTIFICIAL INTELLIGENCE                              | 6   | 4  |           |            | ING-INF/05      | Optional                  | First Semester  |
| 505012 - LASER SAFETY   | 6   | 4  |           |            | FIS/03          | Optional                  | Second Semester |
| 507214 - WIRED AND WIRELESS COMMUNICATION SYSTEMS             | 6   | 4  |           |            | ING-INF/03      | Optional                  | First Semester  |
| 509079 - ENERGY MARKETS AND SUPPLY STRUCTURE                  | 6   | 4  |           |            | ING-IND/32      | Optional                  | First Semester  |
| 502522 - IDENTIFICAZIONE DEI MODELLI E ANALISI DEI DATI A**   | 6   | 4  |           |            | ING-INF/04      | Optional                  | First Semester  |
| 504462 - PROCESS CONTROL*                                     | 6   | 4  |           |            | ING-INF/04      | Optional                  | First Semester  |
| 507215 - STRATEGIC MANAGEMENT AND BUSINESS PLANNING           | 6   | 5  |           | X          | SECS-P/08       | Related/Supplementary     | First Semester  |
| 508100 - AUTOMATED MECHANICAL SYSTEM DESIGN                   | 6   | 6  |           | X          | ING-IND/13      | Distinctive               | Second Semester |
| 504708 - ECONOMICS FOR THE DIGITAL SOCIETY                    | 6   | 7  |           |            | SECS-P/06       | Related/Supplementary     | Second Semester |
| 504464 - ORGANIZATION THEORY AND DESIGN                       | 6   | 7  |           |            | SECS-P/06       | Related/Supplementary     | Second Semester |
| FREE CHOICE FROM THE UNIVERSITY COURSE OFFER                  | 6   | 8  |           |            |                 | Optional                  |                 |
| 504062 - CONVERSIONE STATICA DELL'ENERGIA                     | 6   | 8  |           |            | ING-IND/32      | Optional                  | Second Semester |
| 509074 - DATA SCIENCE AND BIG DATA ANALYTICS                  | 6   | 8  |           |            | ING-INF/05      | Optional                  | Second Semester |
| 509071 - MACHINE LEARNING                                     | 6   | 8  |           |            | ING-INF/05      | Optional                  | Second Semester |
| 504464 - ORGANIZATION THEORY AND DESIGN                       | 6   | 8  |           |            | SECS-P/06       | Optional                  | Second Semester |
| 504717 - INDUSTRIAL CONTROL                                   | 6   | 8  |           |            | ING-INF/04      | Optional                  | Second Semester |

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|   |   |   |  |  |            |          |                 |
|---|---|---|--|--|------------|----------|-----------------|
| 502594 - IDENTIFICAZIONE DEI MODELLI E ANALISI DEI DATI B** | 6 | 8 |  |  | ING-INF/04 | Optional | Second Semester |
| 504463 - ROBOT CONTROL*                                     | 6 | 8 |  |  | ING-INF/04 | Optional | Second Semester |
|   |   |   |  |  |            |          |                 |
|   |   |   |  |  |            |          |                 |
| <b>TOT. 57 CFU</b>  |   |   |  |  |            |          |                 |

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\*\* Do not choose this exam if you have already chosen "IDENTIFICAZIONE DEI MODELLI E ANALISI DEI DATI" as choice n°1

**2° Year - academic year 2022/2023**

| Learning Activity  | CFU | N° | N° (ind.) | Compulsory | Scientific Area | Type of learning activity | Period          |
|--|-----|----|-----------|------------|-----------------|---------------------------|-----------------|
| 504719 - ROBOTICS  | 6   | 9  |           | X          | ING-INF/05      | Related/Supplementary     | First Semester  |
| 504723 - ELECTRICAL DRIVES FOR INDUSTRIAL APPLICATIONS         | 9   | 10 |           | X          | ING-IND/32      | Distinctive               | First Semester  |
| 507216 - LEAN PRODUCTION                                       | 6   | 11 |           | X          | ING-IND/17      | Related/Supplementary     | First Semester  |
| 509684 - APPLIED ROBOTICS TECHNOLOGIES                         | 9   | 12 |           | X          | ING-IND/13      | Distinctive               | First Semester  |
| 507219 - LOGISTICS MANAGEMENT                                  | 6   | 13 |           | X          | ING-IND/17      | Related/Supplementary     | First Semester  |
| 507220 - PLANNING, MANAGEMENT AND SUPPLY OF GOODS AND SERVICES | 3   | 14 |           |            | ING-IND/35      | Other                     | Second Semester |
| 509683 - SAFETY IN ENGINEERING AND TECHNOLOGY                  | 3   | 14 |           |            | ING-IND/31      | Other                     | Second Semester |
| 503327 - MASTER THESIS   | 24  |    |           |            | PROFIN_S        | Final Exam                |                 |
|  |     |    |           |            |                 |                           |                 |
|  |     |    |           |            |                 |                           |                 |
| <b>TOT. 63 CFU</b>   |     |    |           |            |                 |                           |                 |

- [The semester assigned to each learning activity may change. Refer to the time schedule published in the faculty website for confirmation.](#)
- [For more information please refer to the course catalogue.](#)

Date .....

Signature .....

**The study plan is not to be modified. Students can apply for an exception but they have to submit a valid motive. When a student submit a change which is not proposed in a standard study plan, the study plan became an individual study plan.**

**In order to do so, draw a line on the subject you wish to change, add the new subject in the orange boxes at the end of the study plan.**

**Insert the progressive number assigned to the subject you wish to change.**

**Please note that a revenue stamp of 16€ is due to apply for an individual study plan. This new plan will have to be approved**

**by the committee designated by the competent Teaching Council.**