

# University of Pavia

## Study Course: COMPUTER ENGINEERING - 06415

### Classe LM-32 Ingegneria informatica

### Regulations 2012/2013 - Course Regulations a.y. 2019/2020

### Study Plan academic year 2020/2021

To be submitted online from 1st October 2020 to 30th October 2020 (enrolled student only)

STUDENT NUMBER N. ....	SURNAME- NAME .....
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### TRACK 07 - EMBEDDED AND CONTROL SYSTEMS

#### 1° Year - academic year 2019/2020

Learning Activity	CFU	N°	N° (ind.)	Compulsory	Scientific Area	Type of learning activity	Period
504714 - PROCESS CONTROL AND ROBOTICS	12	1		X			All Year
Teaching Unit of PROCESS CONTROL AND ROBOTICS							
504462 - PROCESS CONTROL	6				ING-INF/04	Distinctive	First Semester
504463 - ROBOT CONTROL	6				ING-INF/04	Distinctive	Second Semester
504710 - NUMERICAL METHODS IN ENGINEERING SCIENCES	6	2		X	MAT/08	Related/Supplementary	First Semester
504712 - ADVANCED COMPUTER ARCHITECTURE	6	3		X	ING-INF/05	Distinctive	First Semester
504715 - ADVANCED AUTOMATION AND CONTROL	9	4		X	ING-INF/04	Distinctive	All Year
504707 - ARTIFICIAL INTELLIGENCE	6	5*			ING-INF/05	Distinctive	First Semester
504703 - COMPUTER VISION	6	5*			ING-INF/05	Distinctive	First Semester
504718 - INFORMATION SECURITY	6	5*			ING-INF/05	Distinctive	First Semester
509072 - WEB AND MULTIMEDIA TECHNOLOGIES	6	5*			ING-INF/05	Distinctive	First Semester
502975 - PROGETTO DI SISTEMI DIGITALI	6	5*			ING-INF/05	Distinctive	First Semester
509037 - HARDWARE SOFTWARE CODESIGN	6	5*			ING-INF/05	Distinctive	Second Semester
504705 - SOFTWARE ENGINEERING	6	5*			ING-INF/05	Distinctive	First Semester
507320 - DIGITAL CONTENT RETRIEVAL	12	5*-9*					All Year
Teaching Unit of DIGITAL CONTENT RETRIEVAL							
507320 - DIGITAL CONTENT RETRIEVAL	6	5*			ING-INF/05	Distinctive	First Semester
507320 - DIGITAL CONTENT RETRIEVAL	6	9*			ING-INF/05	Optional	Second Semester
504709 - HUMAN COMPUTER INTERACTION	6	5*			ING-INF/05	Distinctive	Second Semester
504708 - ECONOMICS FOR THE DIGITAL SOCIETY	6	6			SECS-P/06	Related/Supplementary	Second Semester

**06415 - LM Computer Engineering Coorte 2019**

504464 - ORGANIZATION THEORY AND DESIGN	6	6			SECS-P/06	Related/Supplementary	Second Semester
504716 - INDUSTRIAL INFORMATICS AND EMBEDDED SYSTEMS	6	7		X	ING-INF/05	Distinctive	Second Semester
504717 - INDUSTRIAL CONTROL	6	8		X	ING-INF/04	Distinctive	Second Semester
FREE CHOICE FROM THE UNIVERSITY COURSE OFFER	6	9*				Optional	
504709 - HUMAN COMPUTER INTERACTION	6	9*			ING-INF/05	Optional	Second Semester
509037 - HARDWARE SOFTWARE CODESIGN	6	9*			ING-INF/05	Optional	Second Semester
509071 - MACHINE LEARNING	6	9*			ING-INF/05	Optional	Second Semester
<b>TOT. 63 CFU</b>							

\*Choose 6 CFU for choice n° 5; Choose 6 CFU for choice n° 9; "DIGITAL CONTENT RETRIEVAL" can be included as 12 CFU for choice n° 5 (if so you cannot choose any exam for choice n°9 because you already fulfilled all your optional 12 CFU)

**2° Year - academic year 2020/2021**

Learning Activity	CFU	N°	N° (ind.)	Compulsory	Scientific Area	Type of learning activity	Period
504719 - ROBOTICS	6	10		X	ING-INF/05	Distinctive	First Semester
504723 - ELECTRICAL DRIVES FOR INDUSTRIAL APPLICATIONS	9	11		X	ING-IND/32	Related/Supplementary	First Semester
504707 - ARTIFICIAL INTELLIGENCE	6	12*			ING-INF/05	Distinctive	First Semester
504703 - COMPUTER VISION	6	12*			ING-INF/05	Distinctive	First Semester
507320 - DIGITAL CONTENT RETRIEVAL	12	12-13*					All Year
Teaching Unit of DIGITAL CONTENT RETRIEVAL							
507320 - DIGITAL CONTENT RETRIEVAL	6	12*			ING-INF/05	Distinctive	First Semester
507320 - DIGITAL CONTENT RETRIEVAL	6	13*			ING-INF/05	Optional	Second Semester
504718 - INFORMATION SECURITY	6	12*			ING-INF/05	Distinctive	First Semester
509072 - WEB AND MULTIMEDIA TECHNOLOGIES	6	12*			ING-INF/05	Distinctive	First Semester
502975 - PROGETTO DI SISTEMI DIGITALI	6	12*			ING-INF/05	Distinctive	First Semester
504705 - SOFTWARE ENGINEERING	6	12*			ING-INF/05	Distinctive	First Semester
509073 - DEEP LEARNING	6	12*			ING-INF/05	Distinctive	Second semester
FREE CHOICE FROM THE UNIVERSITY COURSE OFFER	6	13*				Optional	
509073 - DEEP LEARNING	6	13*			ING-INF/05	Optional	Second semester
508734 - ADVANCED BIOMEDICAL MACHINE LEARNING	6	13*			ING-INF/06	Optional	Second Semester
504703 - COMPUTER VISION	6	13*			ING-INF/05	Optional	First Semester
507218 - ELECTRONICS FOR INDUSTRIAL MEASUREMENTS	6	13*			ING-INF/01	Optional	First Semester

**06415 - LM Computer Engineering Coorte 2019**

504718 - INFORMATION SECURITY	6	13*			ING-INF/05	Optional	First Semester
502993 - MICROSENSORI, MICROSISTEMI INTEGRATI E MEMS	6	13*			ING-INF/01	Optional	First Semester
509072 - WEB AND MULTIMEDIA TECHNOLOGIES	6	13*			ING-INF/05	Optional	First Semester
502975 - PROGETTO DI SISTEMI DIGITALI	6	13*			ING-INF/05	Optional	First Semester
504705 - SOFTWARE ENGINEERING	6	13*			ING-INF/05	Optional	First Semester
507219 - LOGISTICS MANAGEMENT	6	13*			ING-IND/17	Optional	First Semester
509033 - SOFTWARE PROJECT FOR DIGITAL TRANSFORMATION	6	13*			ING-INF/05	Optional	First Semester
501246 - ETICA AMBIENTALE	3	14*			SECS-P/13	Other	Second Semester
507220 - PLANNING, MANAGEMENT AND SUPPLY OF GOODS AND SERVICES	3	14*			ING-IND/35	Other	Second Semester
504860 - REGULATORY AFFAIRS NELLA PROGETTAZIONE, SVILUPPO E CERTIFICAZIONE DI DISPOSITIVI MEDICI	3	14*			ING-INF/06	Other	Second Semester
504722 - PROJECT WORK IN COMPUTER ENGINEERING	6	14*			NN	Other	
503327 - MASTER THESIS	24			X	PROFIN_S	Final Exam	
<b>TOT. 57 CFU</b>							

\*Choose 6 CFU for n°12, Choose 6 CFU for n° 13 and Choose 6 CFU for n° 14.

**TRACK 02 - COMPUTER SCIENCE AND MULTIMEDIA**

**1° Year - academic year 2019/2020**

Attività Formativa	CFU	N°	N° (ind.)	Obbl.	Settore	Tipo di attività formativa	Periodo
507320 - DIGITAL CONTENT RETRIEVAL	12	1		X	ING-INF/05	Distinctive	All Year
504710 - NUMERICAL METHODS IN ENGINEERING SCIENCES	6	2		X	MAT/08	Related/Supplementary	First Semester
504712 - ADVANCED COMPUTER ARCHITECTURE	6	3		X	ING-INF/05	Distinctive	First Semester
504703 - COMPUTER VISION	6	4		X	ING-INF/05	Distinctive	First Semester
509072 - WEB AND MULTIMEDIA TECHNOLOGIES	6	5		X	ING-INF/05	Distinctive	First Semester
505000 - RADAR REMOTE SENSING	6	6*			ING-INF/03	Related/Supplementary	Second Semester
504464 - ORGANIZATION THEORY AND DESIGN	6	6*			SECS-P/06	Related/Supplementary	Second Semester
504708 - ECONOMICS FOR THE DIGITAL SOCIETY	6	6*			SECS-P/06	Related/Supplementary	Second Semester
504713 - ENTERPRISE DIGITAL INFRASTRUCTURE	12	7		X	ING-INF/05	Distinctive	Second Semester
504709 - HUMAN COMPUTER INTERACTION	6	8		X	ING-INF/05	Distinctive	Second Semester
<b>TOT. 60 CFU</b>							

\*Choose 6 CFU for choice n°6.

## 2° Year - academic year 2020/2021

Learning Activity	CFU	N°	N° (ind.)	Compulsory	Scientific Area	Type of learning activity	Period
504462 - PROCESS CONTROL	6	9			ING-INF/04	Related/Supplementary	First Semester
504463 - ROBOT CONTROL	6	9			ING-INF/04	Related/Supplementary	Second Semester
504717 - INDUSTRIAL CONTROL	6	9			ING-INF/04	Related/Supplementary	Second Semester
504718 - INFORMATION SECURITY	6	10		X	ING-INF/05	Distinctive	First Semester
504707 - ARTIFICIAL INTELLIGENCE	6	11*			ING-INF/05	Distinctive	First Semester
502975 - PROGETTO DI SISTEMI DIGITALI	6	11*			ING-INF/05	Distinctive	First Semester
504719 - ROBOTICS	6	11*			ING-INF/05	Distinctive	First Semester
504705 - SOFTWARE ENGINEERING	6	11*			ING-INF/05	Distinctive	First Semester
FREE CHOICE FROM THE UNIVERSITY COURSE OFFER	12	12*-13*				Optional	
509070 - STATISTICAL LEARNING THEORY	6	12*-13*			ING-INF/04	Optional	First Semester
504707 - ARTIFICIAL INTELLIGENCE	6	12*-13*			ING-INF/05	Optional	First Semester
507288 - INTERNET AND MULTIMEDIA	6	12*-13*			ING-INF/03	Optional	First Semester
504462 - PROCESS CONTROL	6	12*-13*			ING-INF/04	Optional	First Semester
502975 - PROGETTO DI SISTEMI DIGITALI	6	12*-13*			ING-INF/05	Optional	First Semester
504719 - ROBOTICS	6	12*-13*			ING-INF/05	Optional	First Semester
504705 - SOFTWARE ENGINEERING	6	12*-13*			ING-INF/05	Optional	First Semester
505018 - SATELLITE DATA ANALYSIS	6	12*-13*			ING-INF/03	Optional	First Semester
509033 - SOFTWARE PROJECT FOR DIGITAL TRANSFORMATION	6	12*-13*			ING-INF/05	Optional	First Semester
509073 - DEEP LEARNING	6	12-13*			ING-INF/05	Optional	Second semester
504463 - ROBOT CONTROL	6	12*-13*			ING-INF/04	Optional	Second Semester
504464 - ORGANIZATION THEORY AND DESIGN	6	12*-13*			SECS-P/06	Optional	Second Semester
501246 - ETICA AMBIENTALE	3	14*			SECS-P/13	Other	Second Semester
507220 - PLANNING, MANAGEMENT AND SUPPLY OF GOODS AND SERVICES	3	14*			ING-IND/35	Other	Second Semester
504860 - REGULATORY AFFAIRS NELLA PROGETTAZIONE, SVILUPPO E CERTIFICAZIONE DI DISPOSITIVI MEDICI	3	14*			ING-INF/06	Other	Second Semester
504722 - PROJECT WORK IN COMPUTER ENGINEERING	6	14*			NN	Other	
503327 - MASTER THESIS	24			X	PROFIN_S	Final Exam	

TOT. 60 CFU							

\*Choose 6 CFU for choice n°9; choose 6 CFU for choice n° 11; choose 12 CFU for choices n°12-13; choose 6 CFU for choice n°14

## TRACK 08 - DATA SCIENCE

## 1° Year - academic year 2019/2020

Attività Formativa	CFU	N°	N° (ind.)	Obbl.	Settore	Tipo di attività formativa	Periodo
507320 - DIGITAL CONTENT RETRIEVAL	12	1		X	ING-INF/05	Distinctive	All Year
504710 - NUMERICAL METHODS IN ENGINEERING SCIENCES	6	2		X	MAT/08	Related/Supplementary	First Semester
504712 - ADVANCED COMPUTER ARCHITECTURE	6	3		X	ING-INF/05	Distinctive	First Semester
509072 - WEB AND MULTIMEDIA TECHNOLOGIES	6	4		X	ING-INF/05	Distinctive	First Semester
509070 - STATISTICAL LEARNING THEORY	6	5		X	ING-INF/04	Distinctive	First Semester
509074 - DATA SCIENCE AND BIG DATA ANALYTICS	6	6		X	ING-INF/05	Distinctive	Second Semester
504713 - ENTERPRISE DIGITAL INFRASTRUCTURE	12	7		X	ING-INF/05	Distinctive	Second Semester
509071 - MACHINE LEARNING	6	8		X	ING-INF/05	Distinctive	Second Semester
<b>TOT. 60 CFU</b>							

## 2° Year - academic year 2020/2021

Learning Activity	CFU	N°	N° (ind.)	Compulsory	Scientific Area	Type of learning activity	Period
509075 - GEOSPATIAL DATA PROCESSING	6	9		X	ING-INF/03	Related/Supplementary	First Semester
504718 - INFORMATION SECURITY	6	10		X	ING-INF/05	Distinctive	First Semester
509076 - FINANCIAL DATA SCIENCE	6	11		X	SECS-P/06	Related/Supplementary	First Semester
FREE CHOICE FROM THE UNIVERSITY COURSE OFFER	12					Optional	
504705 - SOFTWARE ENGINEERING	6	12-13*			ING-INF/05	Optional	First Semester
509073 - DEEP LEARNING	6	12-13*			ING-INF/05	Optional	Second semester
508734 - ADVANCED BIOMEDICAL MACHINE LEARNING	6	12-13*			ING-INF/06	Optional	Second semester
509005 - OPTIMIZATION MODELS AND ALGORITHMS FOR DATA SCIENCE	6	12-13*			MAT/09	Optional	Second Semester
509033 - SOFTWARE PROJECT FOR DIGITAL TRANSFORMATION	6	12*-13*			ING-INF/05	Optional	First Semester
501246 - ETICA AMBIENTALE	3	14*			SECS-P/13	Other	Second Semester
507220 - PLANNING, MANAGEMENT AND SUPPLY OF GOODS AND SERVICES	3	14*			ING-IND/35	Other	Second Semester
504860 - REGULATORY AFFAIRS NELLA PROGETTAZIONE, SVILUPPO E CERTIFICAZIONE DI DISPOSITIVI MEDICI	3	14*			ING-INF/06	Other	Second Semester
504722 - PROJECT WORK IN COMPUTER ENGINEERING	6	14*			NN	Other	
503327 - MASTER THESIS	24			X	PROFIN_S	Final Exam	

\*Choose 12 CFU for choices n°12-13; choose 6 CFU for choice n°14

Date ..... Signature .....

Variations on the study plan will not be approved unless they are justified by important reasons. If you wish to make different choices from the one provided, the study plan is individual. (WRITE THE NEW NAME OF EXAM IN THE COLORED BOX AND DRAW A LINE ON THE EXAM YOU WISH TO CHANGE. WRITE THE NUMBER OF CHOICE THE EXAM REFERS TO IN THE COLORED BOX)

It is required to add a revenue stamo of 16€ to the form and the study plan will be submitted to the qualified Teaching Council

Approved by the Teaching Council of .....

THIS STUDY PLAN IS WRITTEN IN COMPLIANCE TO THE STUDY COURSE REGULATIONS AND TO THE STUDENT ENROLLMENT CLASS ("SCHEDA RAD")

HEAD OF THE TEACHING COUNCIL SIGNATURE .....