



POLIMI AMBASSADOR in SMART INFRASTRUCTURES

Postgraduate Programme in
Mechanical Engineering

130 CFU

Informazioni generali

OBIETTIVO: Creare nuovi profili professionali, che siano Ambassador in Smart Infrastructures, ovvero laureati magistrali altamente qualificati che possiedano competenze avanzate e specialistiche in ambito applicativo (infrastrutture) e/o nelle tecnologie abilitanti (smart). Inoltre, gli Ambassador possiedono competenze trasversali, complementari a quelle specialistiche, che gli consentono di ampliare le loro conoscenze nel dominio delle infrastrutture smart e di adottare un approccio sistemico alla progettazione, alla gestione, all'innovazione e allo studio del ciclo di vita delle infrastrutture.

CFU: 130

PRESENTAZIONE DOMANDA: Servizi online

SCADENZA: 16/09/2021 ore 12:00 (CET)

PIANO DI STUDIO: Gli studenti dovranno acquisire almeno 30 CFU in attività formative funzionali al profilo di Ambassador in Smart Infrastructures. Tali CFU devono essere acquisiti ottenendo almeno 10 CFU superando corsi obbligatori e/o a scelta coerenti con il PSPA selezionato (inclusi nella Tabella A) e almeno 20 CFU dalla Tabella B.

Per maggiori informazioni sui corsi per ogni PSPA, clicca [qui](#). Di seguito la lista completa dei corsi.

NB. Il mancato superamento dei 10 CFU extra non sarà motivo del mancato conseguimento della Laurea Magistrale (salvo mancata acquisizione dei 120 CFU richiesti), solo del mancato riconoscimento come *Ambassador in Smart Infrastructures*.

General information

OBJECTIVE: create new professional profiles to be Ambassador in Smart Infrastructures, meaning highly-qualified postgraduates with advanced and specialised skills in relevant application (infrastructures) and/or enabling technologies (Smart). Moreover, the Ambassadors also have transversal skills, complementary with their specialisation, allowing students to broaden their knowledge in the field of Smart Infrastructures and to adopt a systemic approach to design, management, innovation, and study of life-cycle of infrastructures.

ECTS: 130

APPLICATION: Online Services

DEADLINE: 16/09/2021 h. 12:00 pm (CET)

COURSES SELECTION: Student must be awarded at least 30 ECTS credits by passing educational activities that meet the requirements for the new Ambassador profile in Smart Infrastructures. Of those mentioned ECTS, 10 must be awarded through mandatory or elective courses according to the selected track (included in table A) and 20 - at least - by selecting courses from table B.

For further details on the courses of each track, click [here](#). Scroll to check the complete list of courses.

NB. Students who fail to get the extra 10 ECTS credits will not identify as Ambassador in Smart Infrastructures. However, they will still get a Master's Degree in Mechanical Engineering, given they acquired all the required 120 ECTS credits.

TABLE A

COURSE TITLE	ECTS	LANGUAGE	SEMESTER	CAMPUS	CODE
ADDITIVE MANUFACTURING B	6	EN	1	BOVISA	055862
ADVANCED MEASUREMENT TECHNIQUES	6	EN	1	BOVISA	097525
AUTOMATIC CONTROL B	6	EN	1	BOVISA	097559
COMPUTER VISION AND REVERSE ENGINEERING	6	EN	2	BOVISA	097454
DESIGN METHODS	6	EN	2	BOVISA	097450
ELECTRIC SYSTEM FOR TRANSPORTATION C	6	EN	1	BOVISA	097671
ELECTRICAL DRIVES FOR INDUSTRY AND TRANSPORT APPLICATIONS	6	EN	2	BOVISA	097523
HAPTICS	6	EN	1	BOVISA	097617
HUMAN MODELLING IN ENGINEERING	6	EN	1	BOVISA	097451
HYBRID AND ELECTRIC VEHICLE	6	EN	1	BOVISA	054362
INNOVATIONS IN METALLURGICAL PLANTS AND PROCESSES B	6	EN	1	BOVISA	055860
INTEGRATED MANUFACTURING SYSTEMS	8	EN	1	BOVISA	051130
LOGISTICS MANAGEMENT	10	EN	2	BOVISA	096089
MANUFACTURING SYSTEMS ENGINEERING	10	EN	1	BOVISA	054201
MECHANICAL SYSTEMS RELIABILITY	6	EN	1	BOVISA	097502
MECHATRONIC SYSTEMS AND LABORATORY A	10	EN	1	BOVISA	097519

COURSE TITLE	ECTS	LANGUAGE	SEMESTER	CAMPUS	CODE
MECHATRONIC SYSTEMS AND LABORATORY B	6	EN	1	BOVISA	097550
METHODS AND TOOLS FOR SYSTEMATIC INNOVATION B – PROBLEM SOLVING AND INVENTIVE DESIGN	6	EN	1	BOVISA	054829
METHODS AND TOOLS FOR SYSTEMATIC INNOVATION C – PROBLEM SOLVING AND INVENTIVE DESIGN	6	EN	1	BOVISA	054831
METHODS FOR VIRTUAL PROTOTYPING	6	EN	1	BOVISA	095890
MOBILITY: INFRASTRUCTURES AND SERVICES	8	EN	2	BOVISA	052079
QUALITY ENGINEERING ME	8	EN	2	BOVISA	051131
ROBOTIC SYSTEMS DESIGN	6	EN	1	BOVISA	053419
SMART STRUCTURES AND DEVICES	6	EN	2	BOVISA	094910
VISION BASED 3D MEASUREMENTS	6	EN	1	BOVISA	097457

TABLE B

COURSE TITLE	ECTS	LANGUAGE	SEMESTER	CAMPUS	CODE
ADVANCED MEASUREMENT SYSTEMS FOR CONTROL APPLICATIONS	5	EN	2	BOVISA	055513
AUTOMATION AND CONTROL IN AUTONOMOUS VEHICLES	5	EN	1	LEONARDO	056807
CONTROL OF INDUSTRIAL ROBOTS	5	EN	1	LEONARDO	090914

COURSE TITLE	ECTS	LANGUAGE	SEMESTER	CAMPUS	CODE
CONTROL OF MOBILE ROBOTS	5	EN	1	LEONARDO	052366
PRODUCTION SYSTEMS CONTROL	5	EN	2	LEONARDO	090915
SAFETY IN AUTOMATION SYSTEMS	5	EN	1	LEONARDO	093060
E-HEALTH APPLICATIONS	5	EN	1	LEONARDO	056453
TECHNOLOGIES FOR SENSORS AND CLINICAL INSTRUMENTATION - BIOE430	5	EN	2	LEONARDO	050493
ELECTRIC POWER SYSTEMS	10	EN	2	BOVISA	055681
ELECTROMAGNETIC COMPATIBILITY B	10	EN	2	LEONARDO	054165
RELIABILITY ENGINEERING AND QUALITY CONTROL	10	EN	1	LEONARDO	055683
SISTEMI PER L'AUTOMAZIONE E LA COMUNICAZIONE INDUSTRIALE	5	IT	1	LEONARDO	052577
SMART MEASUREMENT ARCHITECTURES FOR ELECTRIC SYSTEMS	10	EN	1	LEONARDO	052570
DIGITAL FACTORY	5	EN	1	BOVISA	056954
DIGITAL MANUFACTURING	5	EN	1	BOVISA	056949
DIGITAL SECURITY MANAGEMENT	5	EN	1	BOVISA	055892
INDUSTRIAL AUTOMATION AND ROBOTICS	5	EN	1	BOVISA	056950
KNOWLEDGE MANAGEMENT IN INFRASTRUCTURE PROJECTS	5	ENG	2	BOVISA	057051

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KNOWLEDGE MANAGEMENT IN INFRASTRUCTURE PROJECTS	5	EN	2	BOVISA	057051

COURSE TITLE	ECTS	LANGUAGE	SEMESTER	CAMPUS	CODE
TECHNOLOGY RISK GOVERNANCE	5	EN	1	BOVISA	057252
SMART MAINTENANCE MANAGEMENT	5	EN	1	BOVISA	056985
COMPUTING INFRASTRUCTURES	5	EN	2	LEONARDO	095898
MACHINE LEARNING	5	EN	2	LEONARDO	097683
ROBOTICS	5	EN	2	LEONARDO	089013
SYSTEMS AND METHODS FOR BIG AND UNSTRUCTURED DATA	5	EN	1	LEONARDO	056901
DIGITAL TWIN FOR ENERGY SYSTEMS MANAGEMENT	5	EN	2	BOVISA	057554
SMART CITIES AND URBAN INNOVATION	5	EN	2	BOVISA	057555
GEOGRAPHIC INFORMATION SYSTEMS	10	EN	1	LEONARDO	052422
FUNDAMENTALS OF COMMUNICATION NETWORKS	5	EN	1	LEONARDO	094783
FUNDAMENTALS OF ELECTROMAGNETIC FIELDS	5	EN	1	LEONARDO	094784
INTERNET OF THINGS	5	EN	2	LEONARDO	054323
LOCALIZATION, NAVIGATION AND SMART MOBILITY	5	EN	2	LEONARDO	054309
WIRELESS AND MOBILE PROPAGATION	5	EN	2	LEONARDO	054330
INFORMATION SYSTEMS FOR THE MAINTENANCE AND MANAGEMENT	9	EN	1	LEONARDO	053116
GLOBAL SUPPLY CHAIN PLANNING	6	EN	1	BOVISA	057057

COURSE TITLE	ECTS	LANGUAGE	SEMESTER	CAMPUS	CODE
BRIDGE THEORY AND DESIGN	10	EN	1	LEONARDO	095879
CIRCOLAZIONE E SICUREZZA STRADALE	8	IT	1	LEONARDO	088637
NEW SENSORS AND MEASUREMENT SYSTEMS FOR CIVIL ENGINEERING	6	EN	1	LEONARDO	099234
STRUCTURAL RELIABILITY AND RISK ANALYSIS	6	EN	2	LEONARDO	051115
TECNICA ED ECONOMIA DEI TRASPORTI	10	IT	2	LEONARDO	088641
TRASPORTI MARITTIMI E INTERMODALI	6	EN	2	LEONARDO	090871
SMART HOSPITAL	5	EN	2	LEONARDO	057492
SMART BUILDINGS, NEIGHBORHOODS, AND CITIES	5	EN	2	LEONARDO	057501
RISK-BASED MANAGEMENT AND MONITORING OF INFRASTRUCTURE NETWORKS	5	EN	1	LEONARDO	057527
DATA MODELLING FOR URBAN PERFORMANCE	5	EN	2	LEONARDO	057530
SMART SPORT INFRASTRUCTURES	5	EN	1	BOVISA	057536
METHODS FOR SYSTEM HEALTH MONITORING AND PROGNOSIS	5	EN	1	BOVISA	057539
SMART MATERIALS AND METAMATERIALS	5	EN	1	LEONARDO /BOVISA	057542
DATA ANALYTICS FOR SMART AGRICULTURE	5	EN	1	LEONARDO	057498

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Good luck!