Allegato A

Insegnamenti banditi

SSI **Insegnamento n. 1**

Course title	**Nuclear Techniques and Innovative Sensors for Medical Applications**
Scientific Discipline Sector	FIS/01 – FIS/07
Hours of instruction	10 hours
CFU	1
Year	First
Goal	The course introduces basic concepts of nuclear physics applied in medicine, reaching advanced radiotherapies and modern tools of particle simulation studies. The additional goal is to provide a deep understanding of sensor technologies and contribute to the field by developing and implementing innovative dosimetry sensors. Graduates should be capable of conducting cutting-edge research, advancing the field, and addressing challenges in areas such as medical, environmental, and industrial applications of radiation. The program aims to foster critical thinking, research skills, and a strong sense of ethical responsibility in the domain of dosimetry.
Syllabus	• Introduction to the interaction of radiation with matter and dosimetry • Radio isotopes in medical diagnosis • Gamma Camara, Computational tomography basics • PET/SPECT imaging techniques • Innovative radiation therapy with hadrons: HT and BNCT • Monte Carlo on medical physics, Tool for Particle Simulation (TOPAS) • **Introduction to Dosimetry** • **Sensor Technologies** • **Radiation Detection Techniques** • Use of innovative sensors in medical radiation therapy
Bibliography	- Physics in Nuclear Medicine, 4th Edition 2012, Simon R. Cherry, James A. Sorenson, Michael E. Phelps. - Radiation Detection and Measurements, 4th Edition 2010, Glenn F. Knoll. - TOPAS User Guide (http://topas.readthedocs.org/) - Ciofani, G., Genchi, G. G., Liakos, I., & Athanassiou, A. (2018). "Innovative materials for sensors in radiation dosimetry." Journal of Materials Chemistry C, 6(16), 4374-4396. - Attix, F. H. (1986). "Introduction to Radiological Physics and Radiation Dosimetry." John Wiley & Sons.
Examination method	Oral exam by seminary (PP presentation)

Insegnamento n. 4

SSI

Course title	**Microgrid structures and operation**
Scientific Discipline Sector	ING-IND/33
Hours of instruction	20 hours
CFU	2
Year	Second
Goal	The aim of the course is to describe the methodologies and procedures for planning, managing and controlling multi-energy microgrids, in AC or DC configurations, in grid-connected and islanded modes. Control and supervision of an MG is carried out by a SCADA system that, through proper Energy Management System (EMS), can optimize operation and reliability.
Syllabus	Smart grids and microgrids Planning, management and operation of microgrids in the presence of electric and thermal demand The role of microgrids in markets and enhanced grid integration through ancillary services Design, programming and control of DC microgrid for supplying electric vehicles Experiences on experimental microgrid management and operation.
Bibliography	Scientific papers and books on the selected arguments.
Examination method	A synthetic report on a chosen topic.

Insegnamento n. 6

SSI

Course title	**Time-series databases for sensor data analysis**
Scientific Discipline Sector	ING-INF/05
Hours of instruction	20 hours
CFU	2
Year	Second
Goal	Despite significant advances in sensor data modeling, most of the space-time data models proposed in the past decade rely on time-stamping of collected data values, simply reusing solutions available in relational databases. The main purpose of the course is to introduce basic notions about modeling time-series information, highlighting the complexity of managing spatiotemporal data and state-of-the-art tools in this field. The course also provides theory, models and methods related to time series analysis detailing the main techniques used to extract value from raw data and to identify new useful information. Predictive analytics approaches, suitable for sensor data analysis, are described and applied to real-world case studies by means of hands-on practical exercises.
Syllabus	• Time-series database: features of time-series data - variability, seasonality, stationarity, autocorrelation; time-series modeling approach - structured data, data stream; basic geospatial data types; time-series DBMS • Processing time-series data: data visualization and monitoring solutions; predictive analytics for sensor data • Using a time-series database: collect data from sensors and systems; query time series data; visualize and manage time series data; processing, analyzing and acting on time series data in real time.
Bibliography	A. Nielsen. Practical Time Series Analysis. O'Reilly Media, Inc. (2019) - ISBN: 9781492041658
Examination method	Online evaluation form composed of 15 multiple choice questions

Insegnamento n. 36

DRISS

Course title	Construction safety: legal and administrative aspects, technical standards
Scientific Discipline Sector	ICAR/08 – IUS/17
CFU	3 (Modulo A: STRUCTURAL ENGINEERING 1 ICAR/08, + Modulo B : TECHNICAL STANDARDS 1 cfu ICAR/08 + Modulo C : LEGAL ASPECTS 1 IUS/17)
Year	First
SUMMARY /GOAL	Nowadays, the structural safety of constructions is a key problem, especially for critical infrastructures like bridges, industrial and energy production plants, etc.. Indeed, eventual collapses may involve risks not only for human lives but also for the preservation of the environment. This course proposes a multidisciplinary approach for giving effective answers to the safety of construction problems, involving different points of view, coming from the fields of structural engineering, technical standards, and legal aspects.

Insegnamento n. 39

DRISS

Course title	Mechanical models for masonry structures
Scientific Discipline Sector	ICAR/08
CFU	2
Year	Second
SUMMARY /GOAL	Although masonry constructions represent the vast majority of the architectural heritage, to date the scientific community is still wondering about the definition of the most appropriate structural models, especially for the analysis of complex structures (arches, vaults, domes) and for the study of the effects of seismic actions. This course will offer to the Ph.D. students a state-of-the-art review of mechanical models for masonry structures, also giving suggestions for new research directions to be followed.

Insegnamento n. 40

DRISS

Course title	Seismic risk of reinforced concrete buildings: innovative modeling, analysis, and mitigation strategies
Scientific Discipline Sector	ICAR/09
CFU	2
Year	Second
SUMMARY /GOAL	This course aims to investigate the reinforced concrete response of some cases study. The structural response of reinforced concrete buildings will predict through Machine Learning applications. In particular, Matlab algorithms and Straus software will be used and discussed in this course. This approach will be discussed.

DRISS **Insegnamento n. 41**

Course title	Dynamic identification and structural monitoring: fundamentals and applications to wind turbines
Scientific Discipline Sector	ICAR/08
CFU	1
Year	Second
SUMMARY /GOAL	This course concerns experimental investigations of the structural response of wind turbines, in order to calibrate models for structural analysis under dynamic loads, like wind and seismic actions, and to investigate the structural health of those structures. Applicative issues will be introduced by theoretical and experimental fundamentals.

Insegnamento n. 43

DRISS

Course title	Characterization and modeling of light alloys
Scientific Discipline Sector	ING-IND/16
CFU	2
Year	Second
SUMMARY /GOAL	This course will be focused on the main experimental methodologies for the technological characterization of light alloys for automotive/aerospace/biomedical applications.

Insegnamento n. 47

DRISS

Course title	Analysis and management of heritage buildings: efficiency and innovative technologies
Scientific Discipline Sector	ICAR/10 – ICAR/12
CFU	2 (Modulo A: 1 ICAR/10 + Modulo B: 1 ICAR/12)
Year	Second
SUMMARY /GOAL	This course will explore the concepts of efficiency in historic buildings, highlighting the role of innovative technologies in improving building performance from building decarbonization perspective. Furthermore the module provides a general overview of the methodological workflow supporting the assessment and control of performances, risk vulnerabilities and pathologies in traditional and modern heritage buildings, with specific focus toward onsite non-destructive survey, diagnostics and monitoring techniques, as well as emerging solutions for data processing and management. In detail, theoretical contents, experimental applications and international research experiences and studies will address the following specific topics: ▪ The diagnostic process: conceptual, operational and normative framework; ▪ Onsite investigation of masonry, reinforced concrete and timber building components: methods, techniques and operation protocols; ▪ Digital 2D/3D reality-based models for decay mapping and monitoring, multi-spectral imaging and multi-sensory data collection: research trends and relevant application. Collaborative virtual platforms for data collection, analysis and management: WebGIS, BIM, VR/AR.

Insegnamento n. 51

DAUSY

Course title	Deep Reinforcement Learning for Control of Autonomous Systems
Scientific Discipline Sector	ING-INF/04
CFU	1
Year	First
SUMMARY /GOAL	Reinforcement learning deals with solving sequential decision problems when minima prior information is available. Solving sequential decision problems means finding their optimal control policies. Using reinforcement learning algorithms, the optimal policy is learned through the cooperation between the agent (or controller) and the system to be controlled. Deep Reinforcement Learning (DRL) is a subfield of machine learning that combines reinforcement learning (RL) and deep learning. The course will propose the main modeling frameworks, investigate the most relevant deep reinforcement learning techniques and show some interesting applications.

Insegnamento n. 52

DAUSY

Course title	Control and Security of Cyber Physical Systems
Scientific Discipline Sector	ING-INF/04
CFU	1
Year	Second
SUMMARY /GOAL	The aim of the course is to show the importance of control and security in Cyber Physical Systems (CPSs). CPSs are systems where a decision making(cyber/control)component is tightly integrated with a physical system(with sensing/actuation) to enable real-time monitoring and control. Therefore, control and security are crucial issues for commissioning these systems and for improving competitiveness of companies. In this context, the study of opacity is a fundamental notion to determine if an industrial "secret" can be discovered by a malicious observer (intruder).

Insegnamento n. 73

DRIG

Course title	Advanced Additive Manufacturing and Reverse Engineering design and processes for the twin transition
Scientific Discipline Sector	ING-IND/16
CFU	2
Year	First
SUMMARY /GOAL	The course aim to provides PhD students with the knowledge about advanced Additive Manufacturing (AM) and Reverse Engineering (RE) processes mainly for new Repairing/Remanufacturing more sustainable solutions in circular industrial economy. In fact, the new Additive Manufacturing methods offer the best value-added, resource-efficient approach to end-of-life product recovery. The course project will be articulated in different topics: 1. Direct Energy Deposition (DED) solutions for repair and life extension. Among DED processes, Laser Powder Metal Deposition will be analysed in more detail because of its enormous capabilities, flexibility and efficiency.

Insegnamento n. 81

DRIG

Course title	From qualitative to quantitative methods in business research
Scientific Discipline Sector	ING-IND/35
CFU	2
Year	Second
SUMMARY /GOAL	The aim of the course is to provide PhD students with a set of building blocks for conducting, at the academic level, both quantitative and qualitative research in the areas of management, economics, and policy. As quantitative research, the course addresses three main issues of qualitative research. First, the course provides theoretical insights into different quantitative research methodologies and designs. Second, the course introduces PhD students to various methodologies for gathering data, observations, and evidence and for organising them in ways that can be used for quantitative analysis. Third, the course introduces PhD students to various quantitative methodologies – from regression analysis to text mining –to support PhD students in the development of practical skills as well as critical thinking for interpretation purposes. As to the qualitative research, PhD students will be introduced to the basic ideas behind the qualitative research in social science. Students will learn about data collection, description, analysis and interpretation in qualitative research. Qualitative research often involves an iterative process. The course will focus on the ingredients required for this process: data collection and analysis.

Insegnamento n. 92

DRIEI

Course title	Introduction to the Simplex Method
Scientific Discipline Sector	ING-INF/04
CFU	1
Year	First
SUMMARY /GOAL	Introduce students to modeling, solving, and interpreting real problems that can be reduced to linear optimization. To get familiarize with the mathematical formulation of a real world problem. To process and analyze known numerical methods for solving linear optimization problems as well as present appropriate geometric interpretations. To make aware the students about the applications of various forms of Linear Programming.

DRIEI

Course title	Rehabilitation Engineering
Scientific Discipline Sector	ING-INF/06
CFU	2
Year	First
SUMMARY /GOAL	The course aims to provide students with basic knowledge on design principles and methodologies, grounded in the scientific studies, on technologies for rehabilitation bioengineering, including wearable sensors, rehabilitation and assistive robotic systems, e-health applications.

Course title	Matlab recipes for measurement signal processing
Scientific Discipline Sector	ING-INF/07
CFU	2
Year	Second
SUMMARY /GOAL	The aim of the course is to present, with a "hands on" approach, a number of useful techniques to acquire and process measurement data, with actual implementation in Matlab. The programme of the course is intended to be adjusted on-the-fly, according to the actual background of the students (in order to avoid too simple or too advanced topics), and to meet actual topics of interest for their Ph.D. work.

DCMCEI

Course title	Low carbon structural design and retrofitting of concrete infrastructures using advanced composites
Scientific Discipline Sector	ICAR/09
CFU	2
Year	Second
SUMMARY /GOAL	The main contents of the course are: – Introduction to low-carbon structural design. – Fibre-Reinforced Materials in civil engineering construction. – Innovative reinforcement for resilient concrete structures. – Retrofitting concrete structures using advanced composites.

DCMCEI

Course title	Innovative evaluation techniques to support the implementation and management of civil constructions
Scientific Discipline Sector	ICAR/22
CFU	2
Year	Second
SUMMARY /GOAL	The course aims to provide an essential overview of the main evaluation techniques to support decisions in local interventions, also with reference to public-private partnership models. Contents in summary form: – Estimate and innovative tools for the construction of civil works; – Financial analysis and economic analysis (ACB) for the evaluation of investments and the estimate of the impact on the community; – Multi-Criteria Decision Analysis (MCDA) to support decisions in complex contexts: the construction of multidimensional indicators for the implementation and management of civil works.

Insegnamento n. 108

DCMCEI

Course title	Practical Course in physical modelling for coastal engineering
Scientific Discipline Sector	ICAR/02
CFU	2
Year	Second
SUMMARY /GOAL	The Practical Course in Coastal Engineering gives Ph.D. students an insight into physical experiments related to coastal engineering research. The focus is on the planning, implementation and evaluation of physical experiments in maritime laboratories on both 2d and 3d small scale models. Scaling criteria of both hydrodynamic and morpho dynamic quantities, measurement techniques, data acquisition, analysis and post processing will be the main contents of the course. Topics: – Introduction to measurement and experimental techniques in coastal engineering. – Planning and execution of model tests - Scaling criteria. – Acquisition and analysis of measurement data using ultrasonic and resistive wave gauges, pressure transducers, ADV, bed profiler, load cells, laser scanner, lidar, photogrammetry, etc.; – Statistical description of the generated waves in time domain. – Parameterization using characteristic wave parameters and analysis of sediment transport processes in scaled physical models.

DCMCEI

Course title	Meteomarine forcing and design of maritime constructions
Scientific Discipline Sector	ICAR/02
CFU	2
Year	Second
SUMMARY /GOAL	The course aims to provide the first basic preparatory knowledge of the marine environment (study of waves, currents, transport, sediments, etc.) and the elements necessary for the design of maritime works, both port and coastal defense against erosion. The digital contribution is given by the following elements: – application of AI algorithms for the analysis and modelling of wave motion data; – integration of multiple data sources (in situ, remote sensing, etc.) to improve the modelling of the Adriatic Sea; – use of AI for the prediction of marine dynamics, including extreme events such as hurricanes and tsunamis and their impact on morpho dynamics.

Insegnamento n. 119

CTI

Course title	Theories and methods in structural design: modeling and experimental issues
Scientific Discipline Sector	SSD: ICAR/08
CFU	2
Year	First
SUMMARY /GOAL	The shape of masonry constructions and the influence of the curvature in the load bearing capacity of arches, domes and vaults. Seismic actions and masonry constructions. Mechanical behavior of masonry: heterogeneity, different behavior in tension / compression, non-linear mechanical response, anisotropy, failure modes, damage. Modeling strategies: micromechanical models, FEM and DEM implementation of micromechanical models, macro-mechanical models, multiscale models, NT (No-Tension) and RNT (Rigid No Tension) models, macro-elements. Limit Analysis: static and kinematic approaches. From the static approach of Limit Analysis to the relation between shape and structures in masonry arches and vaults (and back to graphic statics).

Insegnamento n. 120

CTI

Course title	Generative Algorithms: digital tools for parametric design and assessment of structures
Scientific Discipline Sector	SSD: ICAR/09
CFU	2
Year	First
SUMMARY /GOAL	New technologies are changing the way engineers work within the construction sector. Newly developed software solutions have provided effective methods to explore the design space at the interface between Structural Engineering and Architecture, allowing more efficient design strategies. The course aims to explore the potentials of new digital tools based on generative algorisms. The course is organized into four main parts in which both theoretical and practical aspects will be illustrated: 1) Theoretical aspects of the Generative Scripting; 2) Introduction of the Python interpreter component for Grasshopper (Rhino 3D), which allows to execution of dynamic scripts; 3) Introduction to Structural Optimization; 4) Workshop: the students will be divided into groups, and they would be defining helpful generative algorithms in their research topic.

Insegnamento n. 124

CTI

Course title	Historical research and study of the Ancient architecture
Scientific Discipline Sector	SSD: ICAR/18 – L-ANT/07
CFU	2
Year	First
SUMMARY /GOAL	Ancient architecture is almost always in a state of ruin. His study, aimed at formulation of reliable hypotheses of reconstruction of the building, must be based on integrated survey methodologies that use the detailed analysis of the ancient ruined building as an essential knowledge base. They are taken into consideration therefore, besides to the observations derived from the results of the architectural survey, also any iconographic testimonies from other sources, such as vascular painting, frescoes, bas-reliefs, images on coins, etc. The building and its construction and morphological details, as well as, when present, his architectural sculpture must then be compared with others contemporary architectures, in order to include it in its historical-geographical context. The course therefore aims to present some completed or ongoing architectural research that can effectively illustrating the research method mentioned above. In particular, the following case studies will be addressed: - The Arch of Trajan in Leptis Magna - The reconstruction of urban planning of Kos - The Curia in Leptis Magna - Architectural sculpture in the anastylosis of ancient buildings - Urban planning in Ionia and Caria between the archaism and the Hellenistic age - Architectural and decorative models in the mausoleums of the imperial age in Libya - The Hellenistic theatre in Mytilene - The townscape in the figurative culture of Greek and Roman times - The urban planning ant the agora of Byllis (Albania) - The Cistern in the agora of Byllis, analysis of the typology and of the constructive aspects.

Insegnamento n. 131

CTI

Course title	Historical research and study of contemporary architecture and city
Scientific Discipline Sector	SSD: ICAR/18
CFU	2
Year	Second
SUMMARY /GOAL	The course is divided into an institutional part of the program and in an experimental part, implemented in the modalities of the Laboratory, within which will be provided some exercises aimed at strengthening the student's critical skills starting from a basic training about the methods and materials for historical research in the second half of the twentieth century. The course aims to provide students with a correct study methodology aimed at acquiring a historical-critical knowledge of the history of contemporary architecture, from the origins of modern architecture to current architectural trends, with particular attention to the widespread ideas of Italian tendency. and, in particular, to the figure of Aldo Rossi and the masters who revolve around the editors of the Casabella of Rogers, also and above all in relation to the worldwide resonance that they had within the architectural debate after World War II.

CTI

Course title	Theory of Formativeness
Scientific Discipline Sector	ICAR/14
CFU	2
Year	First
SUMMARY /GOAL	It seems lost today, in architecture as generally in arts, a unitary point of view on which to found a theory on. That civil conscience that has always been the basis of the art of building seems no longer part of the collective heritage. This condition is recognizable in the contradictory experience of contemporary architecture. For this reason, the class aims to try to outline a "classical" theory of architectural research; a classicism that does not renounce, rather it investigates, the culture of modernity, trying to measures itself against this alleged contradiction. All the architecture that we can include within the “classic” experience (that we can also define “rational experience”) is characterized by a peculiarity: the intelligibility of forms, along with we define a method of formativeness. According to this idea of architecture, there’s no advancement of forms without an advancement of knowledge - without an increasingly higher level of self-awareness. Hence the need for a theory of architectural research. The method of formativeness we want to investigate regards three major chapters of architecture: The relationship among architecture, city and landscape; The “construction issue”; The question of the project with the Ancient.

DRISA

Course title	DoE and Robust Design applied to setup optimization for numerical and experimental testing
Scientific Discipline Sector	ING-IND/14
CFU	2
Year	First
SUMMARY /GOAL	The aim of the course is to provide skills in the definition of statistically robust setup and analysis of experimental and/or numerical plans in order to reduce the impact of the noise.

Insegnamento n. 139

DRISA

Course title	Identification and propagation of optical photons in different media
Scientific Discipline Sector	FIS/01
CFU	2
Year	Second
SUMMARY /GOAL	The course aims to provide the student with advanced knowledge of radiation measurements and detection techniques, from classic scintillation detectors to Silicon Photomultiplier devices. Scintillator materials are widely used in particle physics for ion identification and energy measurements. Next-generation space missions will employ plastic scintillator detectors (PSDs) equipped with the new Silicon Photomultipliers (SiPMs) technology to read out the scintillator light emission. Scintillator based detectors are also widely used for radiation monitoring for environmental or industrial purposes. The course requires an elementary background in radiation measurements, radiation-matter interactions and basic electronics.

DRISA

Course title	Introduction to space flights
Scientific Discipline Sector	ING-IND/05 – ING-IND/35
CFU	2
Year	Second
SUMMARY /GOAL	The purpose of this class is to provide students with a wide range of topics relevant to specific aspects of spaceflight. The class will be integrated with on spot lectures by astronauts, industry/agency representatives who will provide an overview of their experience, functional to the class objectives.

DRISA

Course title	Space Logistics
Scientific Discipline Sector	ING- IND/35
CFU	2
Year	Second
SUMMARY /GOAL	The aim of the course is to provide comprehensive introductory knowledge about the theory, practice, and advanced ideas of implementing space system design to guarantee operability and supportability, and on the management of the flow of materials, technologies, services, and information needed throughout a space system lifecycle.

Insegnamento n. 155

DRIME

Course title	CONSERVATION LAWS IN CONTINUUM MECHANICS AND TRAFFIC MODELING
Scientific Discipline Sector	MAT/05
CFU	2
Year	First
SUMMARY /GOAL	Euler and Burgers equations. The Method of Characteristics. Shock waves. Rankine-Hugoniot conditions. Entropy weak solutions. Oleinik Estimate. Riemann Problem. Vanishing Viscosity. Viscous shock waves. Convergence and error estimate. Legendre Trasform. Lax-Oleinik Formula. Fluidodynamic models for vehicular traffic. LWR model: shock and rarefaction waves. Moving bottleneck. Nonlocal models. Aw-Rascle model. Two phase models. Multi-population models. Traffic on networks: shocks generated by the junctions. Nonlinear elasticity. Gas dynamics. The p-system. Shock waves. Riemann invariants.

Insegnamento n. 157

DRIME

Course title	Contact Mechanics
Scientific Discipline Sector	ING-IND/13
CFU	2
Year	Second
SUMMARY /GOAL	The course aims to introduce the fundamental concepts of antenna technologies for new generation telecommunication systems with a particular focus on beam steering and beam forming. The course includes the study of numerical methods and laboratory experiences for testing and characterizing antennas and antenna arrays.

Insegnamento n. 158

DRIME

Course title	Numerical Approaches to Solid and Applied Mechanics: Boundary Element Methods (BEM)
Scientific Discipline Sector	ING- IND/13
CFU	2
Year	Second
SUMMARY /GOAL	**Theory of BEM (6 hours).** Linearity and superposition principle: integral formulation of mechanical problems. Green's function. Translation Invariance. Solution schemes of the integral convolution: Fourier vs Real space. Adaptive mesh. **BEM Applications: Contact Mechanics (6 hours)**. BE methods for contact mechanics: formulation for linear elastic and viscoelastic materials, role of the geometric domain (smooth and rough contacts), meshing and solution schemes. Boundary Element (BE) vs Finite Element (FE) methodologies: advantages and drawbacks. **Coupling BEM And Other Numerical Methods (4 hours).** Numerical coupling to study finite domains: BEM and FEM; BEM and molecular dynamics (MD). The case of soft lubrication: coupling BEM and finite difference (FD). **BEM Applications: Structural Mechanics (4 hours)**. BEM for modal analysis including fluid-structure interaction: the test case of the modal analysis for a beam immersed in a viscous fluid.

DRIME

Course title	Digital Manufacturing for Biomedical Applications
Scientific Discipline Sector	ING- IND/16
CFU	2
Year	Second
SUMMARY /GOAL	The program introduces digital manufacturing with a focus on biomedical applications. It covers the basics of 3D printing technologies, materials, and processes specific to the biomedical field. The program also includes a practical component where students will work on a small project, applying what they have learned. The final assessment will concern the participation in class discussions and activities and the evaluation of the small project.

Insegnamento n. 162

DRIME

Course title	Manufacturing modeling and simulation
Scientific Discipline Sector	ING- IND/16
CFU	2
Year	Second
SUMMARY /GOAL	This program provides a comprehensive introduction to manufacturing modeling and simulation. It covers the definition and importance of modeling, various modeling techniques, the role of data, and the interpretation of simulation outputs. The course also includes case studies and a hands-on project to apply the learned concepts. The final assessment will concern the participation in class discussions and activities and the evaluation of the hands-on project.

Course title	Gender studies
Scientific Discipline Sector	ING-IND/35
CFU	2
Year	First
SUMMARY /GOAL	The course aims to provide students with the theoretical and operational tools to understand the concept of gender in its historical evolution and in its social, political and economic implications. At the end of the course the students and teachers will have acquired knowledge regarding feminist theories, women's studies, men's and masculinity studies relating to the social construction of male and female identities, and will be able to identify and critically analyse the different factors that contribute to generate any inequality and discrimination based on gender.