

SCIENCE AND TECHNOLOGY AREA

List of courses offered in English (or in another foreign language) for exchange students
A.Y. 2018/2019

Information about courses' content, texts and specific prerequisites/rules (if any) are available on

<https://www.univ.it/Guide/Pagine/accademia.do>

For further information please contact the International Mobility Office – Science and Technology Area (mobility-st@univ.it);
For specific information on the courses you can also contact the teacher (teachers' contacts are available at the link <http://www5.univ.it/People/en/Web>)

Code	Course	Teacher	Semester (1 = fall/winter term 2 = spring/summer term y = full year)	ECTS Credits	Language	Course level (B.Sc., M.Sc., PhD)	Study course	Academic Structure	Notes (Cds pres)
145730	Structure and dynamics of complex networks	Mario De Domenico	1	6	English	MSc	Physics	Department of Physics	
145129	Advanced analysis	Francesco Serra Casano	1	9	English	MSc	Mathematics	Department of Mathematics	
145395	Advanced Coding Theory and Cryptography	Massimiliano Sala (Mod.1), Edoardo Ballico (Mod.2)	y	12	English	MSc	Mathematics	Department of Mathematics	
145447	Advanced computing architectures	Roberto Passerone	1	6	English	MSc	Information and Communications Engineering, Computer Science	Department of Information Engineering and Computer Science	
145130	Advanced geometry	Roberto Pignatelli	1	9	English	MSc	Mathematics	Department of Mathematics	
145560	Advanced Group Theory	Andrea Caranti	2	6	English	MSc	Mathematics	Department of Mathematics	
140330	Advanced metals	Massimo Pelizzari	1	6	English	MSc	Materials and Production Engineering	Department of Industrial Engineering	
145296	Advanced Natural Language Processing and Information Retrieval	Alessandro Moschitti	2	6	English	MSc	Computer Science, Mathematics	Department of Information Engineering and Computer Science	
145448	Advanced network modelling and design	Fabrizio Granelli	1	9	English	MSc	Information and Communications Engineering	Department of Information Engineering and Computer Science	
145508	Advanced Programming of Cryptographic Methods	Giancarlo Rinaldo	1	6	English	MSc	Mathematics	Department of Mathematics	
145612	Advanced remote sensing systems	Lorenzo Bruzzone	1	6	English	MSc	Information and Communications Engineering, Computer Science	Department of Information Engineering and Computer Science	
145902	Advanced Statistical Methods	To be defined	2	6	English	MSc	Mathematics	Department of Mathematics	
145133	Advanced Topics in Biomathematics	To be defined	2	6	English	MSc	Mathematics	Department of Mathematics	
145520	Affective computing	Niculae Sebe	1	6	English	MSc	Computer Science, Data Science, Human-Computer Interaction	Dept. of Psychology and Cognitive Science/Department of Information Engineering and Computer Science	
145692	Affective computing	Niculae Sebe	1	6	English	MSc	Computer Science, Data Science, Human-Computer Interaction	Dept. of Psychology and Cognitive Science/Department of Information Engineering and Computer Science	
155004	Affective computing	Niculae Sebe	1	6	English	MSc	Computer Science, Data Science, Human-Computer Interaction	Dept. of Psychology and Cognitive Science/Department of Information Engineering and Computer Science	
145045	Agent-oriented software engineering	Paolo Giorgini	2	6	English	MSc	Computer Science	Department of Information Engineering and Computer Science	
140535	Air pollution modelling	Lorenzo Giovannini	2	9	English	MSc	Environmental Meteorology, Physics	Department of Civil, Environmental and Mechanical Engineering	
145734	Air pollution modelling	Lorenzo Giovannini	2	9	English	MSc	Environmental Meteorology, Physics	Department of Civil, Environmental and Mechanical Engineering	
145441	Algebraic Cryptography	Massimiliano Sala	y	12	English	MSc	Computer Science, Mathematics	Department of Mathematics	
145131	Algebraic geometry I	Gianluca Occhetta	1	6	English	MSc	Mathematics	Department of Mathematics	
145132	Algebraic geometry II	Luis Eduardo Sola Conde	2	6	English	MSc	Mathematics	Department of Mathematics	
145741	Algorithms and Data Structures	Alberto Montresor	1	12	English	MSc	Mathematics, Quantitative and Computational Biology	Department of Information Engineering and Computer Science	
145765	Algorithms for Bioinformatics	Enrico Blanzieri	2	6	English	MSc	Computer Science	Department of Information Engineering and Computer Science	
145740	Analytical Chemistry and Biochemistry	Emiliano Biasini	1	6	English	MSc	Quantitative and Computational Biology	Centre for Integrative Biology	
145655	Animal Models of Disease	Simona Casarosa	2	6	English	MSc	Cellular and Molecular Biotechnology	Centre for Integrative Biology	
145753	Applied Immunology	Guido Grandi	2	6	English	MSc	Cellular and Molecular Biotechnology	Centre for Integrative Biology	
145511	Atomic Physics	To be defined	1	6	English	MSc	Physics	Department of Physics	
140500	Automatic control	Luca Zaccarian	2	9	English	MSc	Mechatronics Engineering	Department of Industrial Engineering	
145752	Bacterial Pathogenesis	Orietta Massidda	2	6	English	MSc	Cellular and Molecular Biotechnology	Centre for Integrative Biology	
145704	Bayesian Statistics	Claudio Agostinelli	2	6	English	MSc	Data Science	Department of Mathematics	
145561	Bayesian statistics	Claudio Agostinelli	2	6	English	MSc	Computer Science, Mathematics, Quantitative and Computational Biology	Department of Mathematics	
145449	Big data and social networks	Yannis Velegrakis	1	6	English	MSc	Information and Communications Engineering, Computer Science, Mathematics	Department of Information Engineering and Computer Science	
145677	Big Data Technologies	Yannis Velegrakis	1	6	English	MSc	Data Science	Department of Mathematics	
145763	Bio-Inspired Artificial Intelligence	Giovanni Iacca		6	English	MSc	Information and Communications Engineering, Computer Science	Department of Information Engineering and Computer Science	
145338	Bio-Medical Imaging	Albrecht Haase	2	6	English	MSc	Physics, Mathematics	Department of Physics	
145544	Bioinformatics	Alessandro Romanel	2	12	English	MSc	Quantitative and Computational Biology	Centre for Integrative Biology	
145767	Bioinformatics Resources	Alessandro Romanel	2	6	English	MSc	Computer Science	Department of Information Engineering and Computer Science	
145487	Bioinspired and functional materials	Devid Maniglio	1	6	English	MSc	Materials and Production Engineering	Department of Industrial Engineering	
145545	Biological Networks	Mario Lauria (Mod.1), Ozan Kahramanogullari (Mod.2)	2	12	English	MSc	Mathematics, Quantitative and Computational Biology	Department of Mathematics	
145717	Biological Networks	Ozan Kahramanogullari	2	6	English	MSc	Data Science	Department of Mathematics	
145738	Biological Networks and Data Analysis	Mario Lauria (Mod.1), Ozan Kahramanogullari (Mod.2)	2	12	English	MSc	Quantitative and Computational Biology	Centre for Integrative Biology	
140436	Biomaterials and biomedical technologies	To be defined	2	6	English	MSc	Materials and Production Engineering	Department of Industrial Engineering	
145529	Biomechanics	Vigilio Fontanari	1	6	English	MSc	Materials and Production Engineering	Department of Industrial Engineering	

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145429	Biomedical Applications of Mathematics	To be defined	2	3	English	MSc	Mathematics	Department of Mathematics	
145539	Biostatistics	Andrea Pugliese (Mod.1), Ozan Kahramanogullari (Mod.2)	1	12	English	MSc	Quantitative and Computational Biology	Centre for Integrative Biology	
145716	Biostatistics module 2	Ozan Kahramanogullari	1	6	English	MSc	Data Science	Department of Mathematics	
145541	Biotechnology Engineering	Michael Martin Hanczyk (Mod.1), Antonella Motta (Mod.2)	2	12	English	MSc	Cellular and Molecular Biotechnology, Quantitative and Computational Biology	Centre for Integrative Biology	
145549	Biotechnology Management and Regulations	Mariacole Barro (Mod.1), Micaela Maffei (Mod.2)	1	12	English	MSc	Cellular and Molecular Biotechnology, Quantitative and Computational Biology	Centre for Integrative Biology	
145667	Biotechnology Regulations	Mariacole Barro (Mod.1), Micaela Maffei (Mod.2)	1	12	English	MSc	Cellular and Molecular Biotechnology, Quantitative and Computational Biology	Centre for Integrative Biology	
145713	Business Analytics lab	To be defined	1	6	English	MSc	Data Science	Department of Mathematics	
145288	Business Development Laboratory	To be defined	2	9	English	MSc	Information and Communications Engineering, Computer Science	Department of Information Engineering and Computer Science	
145636	Business Development Laboratory	To be defined	2	6	English	MSc	Information and Communications Engineering	Department of Information Engineering and Computer Science	
145748	Cancer Biology	Yari Ciribilli	2	6	English	MSc	Cellular and Molecular Biotechnology	Centre for Integrative Biology	
145491	Cancer Genetics	Yari Ciribilli	1	6	English	MSc	Cellular and Molecular Biotechnology	Centre for Integrative Biology	
145495	Cancer Genomics	Andrea Lunardi	1	6	English	MSc	Cellular and Molecular Biotechnology	Centre for Integrative Biology	
145755	Cancer Metabolism	Maria Caterina Mione	2	6	English	MSc	Cellular and Molecular Biotechnology	Centre for Integrative Biology	
145494	Cancer Therapy	Andrea Lunardi	y	6	English	MSc	Cellular and Molecular Biotechnology	Centre for Integrative Biology	
145745	Cell Therapy	Simona Casarosa	1	6	English	MSc	Cellular and Molecular Biotechnology	Centre for Integrative Biology	
145498	Cellular and Molecular Neurobiology	Marta Biagioli	y	6	English	MSc	Cellular and Molecular Biotechnology	Centre for Integrative Biology	
145472	Ceramic materials engineering	Vincenzo Maria Sglavo	1	9	English	MSc	Materials and Production Engineering	Department of Industrial Engineering	
145551	Chemistry and Biochemistry	Graziano Lolli (Mod.1), Emiliano Biasini (Mod.2)	1	12	English	MSc	Quantitative and Computational Biology	Centre for Integrative Biology	
145394	Coding Theory and Applications	Massimiliano Sala	1	6	English	MSc	Mathematics	Department of Mathematics	
145637	Communication systems	Claudio Sacchi	2	6	English	MSc	Information and Communications Engineering	Department of Information Engineering and Computer Science	
145766	Complexity, Cryptography and Financial Technologies	Fabio Massacci	1	12	English	MSc	Computer Science	Department of Information Engineering and Computer Science	
140425	Composite materials engineering	To be defined	2	6	English	MSc	Materials and Production Engineering	Department of Industrial Engineering	
145451	Computability and computational complexity	Mauro Bruno	1	6	English	MSc	Computer Science, Mathematics	Department of Information Engineering and Computer Science	
145135	Computational algebra	Adriaan Willem De Graaf	6		English	MSc	Mathematics	Department of Mathematics	
145546	Computational Biophysics	Gianluca Lattanzi	1	12	English	MSc	Quantitative and Computational Biology	Centre for Integrative Biology	
145428	Computational haemodynamics	To be defined	2	9	English	MSc	Mathematics	Department of Mathematics	
145656	Computational Human Genomics	Francesca Demicheli (Mod.1), Nicola Segata (Mod.2)	2	12	English	MSc	Computer Science, Mathematics, Cellular and Molecular Biotechnology, Quantitative and Computational Biology	Centre for Integrative Biology	
145697	Computational Linguistics	Raffaella Bernardi	2	9	English	MSc	Data Science	Department of Mathematics	
140466	Computational Methods for Mechatronics	Enrico Bertolazzi	1	6	English	MSc	Mechatronics Engineering	Department of Industrial Engineering	
145659	Computational methods for transport phenomena	Maurizio Dapor	2	6	English	MSc	Physics	Department of Physics	
145657	Computational Microbial Genomics	Francesca Demicheli (Mod.1), Nicola Segata (Mod.2)	2	12	English	MSc	Computer Science, Mathematics, Cellular and Molecular Biotechnology, Quantitative and Computational Biology	Centre for Integrative Biology	
145709	Computational Models of Human Behavior	To be defined	1	6	English	MSc	Data Science	Department of Mathematics	
145649	Computational physics	Francesco Pedriva	2	6	English	MSc	Physics, Quantitative and Computational Biology	Department of Physics	
145712	Computational Psychological Science Lab	Barbara Treccani	1	6	English	MSc	Data Science	Department of Mathematics	
145680	Computational social science	Alessandro Giuseppe Veltri	2	6	English	MSc	Data Science	Department of Mathematics	
145711	Computational social science Lab	To be defined	1	6	English	MSc	Data Science	Department of Mathematics	
140266	Computer vision	Nicola Conci	1	6	English	MSc	Mechatronics Engineering, Information and Communications Engineering	Department of Information Engineering and Computer Science	
140474	Computer vision	Nicola Conci	1	6	English	MSc	Mechatronics Engineering, Information and Communications Engineering	Department of Information Engineering and Computer Science	
145611	Computer Vision and Multimedia Analysis	Nicola Conci	6		English	MSc	Computer Science	Department of Information Engineering and Computer Science	
145630	Computer Vision and Multimedia Analysis	Nicola Conci	1	9	English	MSc	Information and Communications Engineering	Department of Information Engineering and Computer Science	
145300	Concurrency	Paola Quaglia	1	6	English	MSc	Computer Science	Department of Information Engineering and Computer Science	
145481	Corrosion and degradation control of materials	Flavio Defforian	1	6	English	MSc	Materials and Production Engineering	Department of Industrial Engineering	
145321	Cryptography	Massimiliano Sala	y	12	English	MSc	Computer Science, Mathematics	Department of Mathematics	
145622	Cyber Security Risk Assessment	Fabio Massacci	6		English	MSc	Computer Science, Mathematics	Department of Information Engineering and Computer Science	
145136	Data analysis and exploration	Mario Lauria	2	6	English	MSc	Mathematics	Department of Mathematics	
145707	Data analysis and exploration	Mario Lauria	2	6	English	MSc	Data Science	Department of Mathematics	
145192	Data hiding	Giulia Boato	6		English	MSc	Information and Communications Engineering, Computer Science, Mathematics	Department of Information Engineering and Computer Science	
145453	Data mining	Yannis Veltrakis	1	6	English	MSc	Information and Communications Engineering, Computer Science, Mathematics	Department of Information Engineering and Computer Science	
145547	Data Mining	Andrea Passerini, Enrico Blanzieri	1	12	English	MSc	Computer Science, Mathematics, Quantitative and Computational Biology	Department of Information Engineering and Computer Science	
145686	Data Mining	Yannis Veltrakis	1	6	English	MSc	Data Science	Department of Mathematics	

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145683	Data Visualization Lab	To be defined	2	6	English	MSc	Data Science	Department of Mathematics	
145764	Deep learning	Elisa Ricci	2	6	English	MSc	Computer Science, Mathematics, Data Science	Department of Information Engineering and Computer Science	
145903	Deep Learning	Elisa Ricci	2	6	English	MSc	Computer Science, Mathematics, Data Science	Department of Information Engineering and Computer Science	
145718	Deep learning Lab	Elisa Ricci	2	6	English	MSc	Computer Science, Mathematics, Data Science	Department of Information Engineering and Computer Science	
140471	Design and control of product and process	Paolo Bosetti	1	6	English	MSc	Mechatronics Engineering	Department of Industrial Engineering	
155000	Design experience	Antonella De Angeli	1	12	English	MSc	Computer Science, Human-Computer Interaction	Dpts. of Psychology and Cognitive Science/Department of Information Engineering and Computer Science	
145475	Design methods for industrial engineering	Ilija Cristofolini	2	6	English	MSc	Mechatronics Engineering, Materials and Production Engineering	Department of Industrial Engineering	
145400	Design of Networks and Communication Systems	Fabrizio Granelli		6	English	MSc	Information and Business Organisation Engineering, Information and Commu	Department of Information Engineering and Computer Science	
145501	Development and Plasticity of the Nervous System	Michele Baudet Marie Laure	1	6	English	MSc	Cellular and Molecular Biotechnology	Centre for Integrative Biology	
145190	Digital signal processing	Libertario Demi	1	6	English	MSc	Mathematics, Quantitative and Computational Biology	Department of Information Engineering and Computer Science	
145624	Digital signal processing	Libertario Demi	1	9	English	MSc	Information and Communications Engineering	Department of Information Engineering and Computer Science	
145699	Digital social data	Ivano Bison	1	6	English	MSc	Data Science	Department of Mathematics	
145212	Discrete Fourier analysis	Giancarlo Rinaldo	2	6	English	MSc	Mathematics	Department of Mathematics	
145617	Distributed systems 1	Gian Pietro Picco	2	6	English	MSc	Information and Communications Engineering, Computer Science	Department of Information Engineering and Computer Science	
145618	Distributed systems 2	Alberto Montresor	1	6	English	MSc	Computer Science	Department of Information Engineering and Computer Science	
140472	Distributed systems for measurement and automation	Daniele Fontanelli	1	6	English	MSc	Mechatronics Engineering	Department of Industrial Engineering	
140501	Dynamics and control of vehicles and robots	Francesco Biral	2	9	English	MSc	Mechatronics Engineering	Department of Industrial Engineering	
145702	Economic and labour sociology	Paolo Barbieri	1	6	English	MSc	Data Science	Department of Mathematics	
145666	Economics and Management	Mariacole Bannò (Mod.1), Micaela Maffei (Mod.2)	1	12	English	MSc	Cellular and Molecular Biotechnology, Quantitative and Computational Biol	Centre for Integrative Biology	
140128	Electromagnetic compatibility	To be defined	1	6	English	MSc	Information and Communications Engineering	Department of Information Engineering and Computer Science	
145531	Electronic materials and technologies	Lucio Pancheri	1	6	English	MSc	Materials and Production Engineering	Department of Industrial Engineering	
145904	Elementary Mathematics from a Higher Viewpoint	Claudio Fontanari	2	6	English	MSc	Mathematics	Department of Mathematics	
145149	Elementary Mathematics from a Higher Viewpoint 1	Claudio Fontanari	2	6	English	MSc	Mathematics	Department of Mathematics	
140502	Embedded systems	Davide Brunelli	1	9	English	MSc	Mechatronics Engineering	Department of Industrial Engineering	
145554	English - B2			3	English	MSc	Biomolecular Sciences and Technology, Cellular and Molecular Biotechnology	Centre for Integrative Biology	
145489	Enterprise information system	Luisa Mich	2	6	English	MSc	Mechatronics Engineering, Materials and Production Engineering	Department of Industrial Engineering	
140533	Environmental measurements	To be defined	1	6	English	MSc	Environmental Meteorology, Physics	Department of Civil, Environmental and Mechanical Engineering	
145733	Environmental measurements	To be defined	1	6	English	MSc	Environmental Meteorology, Physics	Department of Civil, Environmental and Mechanical Engineering	
145749	Epigenetics of Cancer	Alessio Zippo	2	6	English	MSc	Cellular and Molecular Biotechnology	Centre for Integrative Biology	
145164	Experimental Methods	Stefano Vitale	1	6	English	MSc	Physics	Department of Physics	
145648	Experimental physics	Mario Scotoni	2	6	English	MSc	Physics	Department of Physics	
145153	Experimental Physics Laboratory at High School Level I	Pasquale Onorato	1	6	English	MSc	Physics, Mathematics	Department of Physics	
145215	Experimental Physics Laboratory at High School Level II	Pasquale Onorato	2	6	English	MSc	Physics, Mathematics	Department of Physics	
145482	Finite elements modeling	Matteo Benedetti	2	6	English	MSc	Mechatronics Engineering, Materials and Production Engineering	Department of Industrial Engineering	
145141	Finite Fields and Symmetric Cryptography	Massimiliano Sala	y	12	English	MSc	Computer Science, Mathematics	Department of Mathematics	
145056	Formal methods	Roberto Sebastiani	2	12	English	MSc	Computer Science, Mathematics	Department of Information Engineering and Computer Science	
145396	Formal Techniques for Cryptographic Protocol Analysis	Roberto Zunino	2	6	English	MSc	Computer Science, Mathematics	Department of Mathematics	
145142	Foundations of Analysis	To be defined	2	6	English	MSc	Mathematics	Department of Mathematics	
145696	Foundations of Brain Imaging	Jorge Jevicich	2	6	English	MSc	Data Science	Department of Mathematics	
145662	Foundations of Data Analysis	To be defined	y	3	English	MSc	Mathematics	Department of Mathematics	
145253	Foundations of Geometry	Gianluca Occhetta	2	6	English	MSc	Mathematics	Department of Mathematics	
145675	Foundations of Social and Psychological Science	Ivano Bison	1	12	English	MSc	Data Science	Department of Mathematics	
145434	Fourier Analysis	Augusto Visintin	1	6	English	MSc	Mathematics	Department of Mathematics	
140426	Functional and smart materials	Luca Lutterotti	1	6	English	MSc	Mechatronics Engineering	Department of Industrial Engineering	
145754	Functions and Plasticity of the Central Nervous System	Marco Canossa	1	6	English	MSc	Cellular and Molecular Biotechnology	Centre for Integrative Biology	
145502	Functions of the Peripheral Nervous System	Stefano Bjressi	y	6	English	MSc	Cellular and Molecular Biotechnology	Centre for Integrative Biology	
145660	Fundamental Interactions	Roberto Iuppa	1	6	English	MSc	Physics	Department of Physics	
145746	Gene Therapy	Anna Cereseto	1	6	English	MSc	Cellular and Molecular Biotechnology	Centre for Integrative Biology	
145224	General Relativity and Cosmology	Massimiliano Rinaldi	1	6	English	MSc	Physics	Department of Physics	
145658	Genetic and Metabolic Engineering	Michael Martin Hanczyc (Mod.1), Antonella Motta (Mod. 2)	2	12	English	MSc	Cellular and Molecular Biotechnology, Quantitative and Computational Biol	Centre for Integrative Biology	

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145542	Genomics	Francesca Demichelis (Mod.1), Nicola Segata (Mod.2)	2	12	English	MSc	Computer Science, Mathematics, Cellular and Molecular Biotechnology, Quantitative and Computational Biology	Centre for Integrative Biology	
145747	Genomics and Drug Discovery	Enrico Domenici	2	6	English	MSc	Cellular and Molecular Biotechnology, Quantitative and Computational Biology	Centre for Integrative Biology	
145538	Geometric Analysis	Lorenzo Mazzieri	1	9	English	MSc	Mathematics	Department of Mathematics	
145258	Geometric Measure Theory	Francesco Serra Cassano	2	6	English	MSc	Mathematics	Department of Mathematics	
145708	Geometry and Topological Data Analysis	Claudio Fontanari	1	6	English	MSc	Data Science	Department of Mathematics	
145905	Geometry and Topology for Data Analysis	Claudio Fontanari	1	6	English	MSc	Mathematics	Department of Mathematics	
140427	Glass engineering	Vincenzo Maria Sglavo	2	6	English	MSc	Materials and Production Engineering	Department of Industrial Engineering	
145492	High-Throughput Technology	Michela Denti	2	6	English	MSc	Cellular and Molecular Biotechnology, Quantitative and Computational Biology	Centre for Integrative Biology	
145374	High Energy Astrophysics	Bruno Giacomazzo	2	6	English	MSc	Physics	Department of Physics	
145635	High Throughput Sequencing Data Analysis	Francesca Demichelis (Mod.1), Nicola Segata (Mod.2)	2	12	English	MSc	Computer Science, Mathematics, Cellular and Molecular Biotechnology, Quantitative and Computational Biology	Centre for Integrative Biology	
145681	ICT and Law Privacy and Security	To be defined	2	6	English	MSc	Data Science	Department of Mathematics	
145455	ICT Innovation	Fabio Massacci	2	9	English	MSc	Information and Communications Engineering, Computer Science	Department of Information Engineering and Computer Science	
121400	ICT Innovation - Product Design and Development	Fabio Massacci	2	8	English	MSc	Information and Communications Engineering, Computer Science	Department of Information Engineering and Computer Science	
145518	ICT Innovation - Product Design and Development	Fabio Massacci	2	8	English	MSc	Information and Communications Engineering, Computer Science	Department of Information Engineering and Computer Science	
145613	Imaging and diagnostic techniques	Paolo Rocca	1	6	English	MSc	Information and Communications Engineering	Department of Information Engineering and Computer Science	
145535	Industrial electronics and instrumentation	David Macii	2	6	English	MSc	Mechatronics Engineering	Department of Industrial Engineering	
140440	Industrial robotics	Daniele Bortoluzzi	1	6	English	MSc	Mechatronics Engineering	Department of Industrial Engineering	
145530	Industrial systems modeling	Mario Fedrizzi	1	6	English	MSc	Mechatronics Engineering, Materials and Production Engineering	Department of Industrial Engineering	
145621	Industrial Trends in Communications	Paolo Rocca	2	6	English	MSc	Information and Communications Engineering	Department of Information Engineering and Computer Science	
145682	Information, Knowledge and Service Management	Roberta Cuel	2	6	English	MSc	Data Science	Department of Mathematics	
145761	Innovation and Business in ICT	To be defined	1	6	English	MSc	Information and Communications Engineering, Computer Science	Department of Information Engineering and Computer Science	
145936	Innovation and Entrepreneurship Basic	To be defined	1	6	English	MSc	Information and Communications Engineering, Computer Science	Department of Information Engineering and Computer Science	
145623	Innovation and Entrepreneurship Studies in ICT	Maurizio Marchese	1	6	English	MSc	Information and Communications Engineering, Computer Science	Department of Information Engineering and Computer Science	
145615	Intelligent Optimization for data science	Roberto Battiti	2	6	English	MSc	Information and Communications Engineering, Computer Science	Department of Information Engineering and Computer Science	
145687	Intelligent Optimization for Data Science	Roberto Battiti	2	6	English	MSc	Data Science	Department of Mathematics	
145098	Internship or stage	Luigi Paolopoli		6	English	MSc	Computer Science	Department of Information Engineering and Computer Science	
145389	Introduction to Cell Biology	Emilio Cusanelli	1	9	English	MSc	Computer Science, Mathematics	Centre for Integrative Biology	
145937	Introduction to Computer and Network Security	To be defined	1	6	English	MSc	Information and Communications Engineering, Computer Science, Mathematics	Department of Information Engineering and Computer Science	
145684	Introduction to Machine Learning	To be defined	2	6	English	MSc	Data Science	Department of Mathematics	
145695	Introduction to ML for NLP	Aurelie Herbelot	2	9	English	MSc	Data Science	Department of Mathematics	
145388	Introduction to service design and engineering	Maurizio Marchese	1	6	English	MSc	Information and Communications Engineering, Computer Science	Department of Information Engineering and Computer Science	
145619	Inverse problems and optimization	Paolo Rocca	2	9	English	MSc	Information and Communications Engineering, Computer Science	Department of Information Engineering and Computer Science	
145689	Knowledge and Data Integration	Fausto Giunchiglia	1	6	English	MSc	Data Science	Department of Mathematics	
145919	Knowledge and Data Integration	Fausto Giunchiglia	1	6	English	MSc	Information and Communications Engineering, Computer Science, Quantitative and Computational Biology	Department of Information Engineering and Computer Science	
145053	Laboratory of biological data mining	Andrea Paserini, Enrico Bianzani	1	12	English	MSc	Computer Science, Mathematics, Quantitative and Computational Biology	Department of Information Engineering and Computer Science	
145230	Laboratory of Advanced Electronics	Leonardo Ricci	1	6	English	MSc	Physics	Department of Physics	
145283	Laboratory of Advanced Photonics	Paolo Bettotti	1	6	English	MSc	Physics	Department of Physics	
145458	Laboratory of applied of robotics	Luigi Paolopoli	1	6	English	MSc	Computer Science	Department of Information Engineering and Computer Science	
145231	Laboratory of Condensed Matter	Giacomo Baldi	1	6	English	MSc	Physics	Department of Physics	
145144	Laboratory of Didactics of Mathematics	Silvano Delladio	2	6	English	MSc	Mathematics	Department of Mathematics	
145232	Laboratory of Energy Conversion Processes	Paolo Tosi	1	6	English	MSc	Physics	Department of Physics	
145079	Laboratory of Wireless sensor networks	Gian Pietro Picco	1	6	English	MSc	Information and Communications Engineering, Computer Science	Department of Information Engineering and Computer Science	
140437	Laboratory of Wireless Sensor Networks	Gian Pietro Picco	1	6	English	MSc	Information and Communications Engineering, Computer Science	Department of Information Engineering and Computer Science	
145906	Laboratory Techniques for Mathematics Teaching	To be defined	1	6	English	MSc	Mathematics	Department of Mathematics	
145299	Language Understanding Systems	Giuseppe Riccardi	2	6	English	MSc	Computer Science	Department of Information Engineering and Computer Science	
140353	Logistica e gestione impianti industriali	Marco Minati	1	6	English	MSc	Mechatronics Engineering	Department of Industrial Engineering	
145062	Machine learning	Andrea Paserini	1	6	English	MSc	Computer Science, Mathematics, Quantitative and Computational Biology	Department of Information Engineering and Computer Science	
145688	Machine learning	Andrea Paserini	1	6	English	MSc	Data Science	Department of Mathematics	
145314	Macromolecular Biochemistry	Samir Sherif Mansy	2	6	English	MSc	Cellular and Molecular Biotechnology	Centre for Integrative Biology	
145316	Macromolecular Imaging	Michele Baudet Marie Laure	2	6	English	MSc	Cellular and Molecular Biotechnology	Centre for Integrative Biology	

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140467	Manufacturing Automation	Paolo Bosetti	1	6	English	MSc	Mechatronics Engineering	Department of Industrial Engineering	
140429	Materials for energy	Gian Domenico Soraru	1	6	English	MSc	Materials and Production Engineering	Department of Industrial Engineering	
145331	Mathematical aspects of bioelectromagnetism and imaging	Ana Maria Alonso Rodriguez	1	6	English	MSc	Mathematics	Department of Mathematics	
145145	Mathematical Biology	Andrea Pugliese	1	9	English	MSc	Mathematics	Department of Mathematics	
145146	Mathematical Logic	Stefano Baratella	1	6	English	MSc	Mathematics	Department of Mathematics	
145548	Mathematical Modelling	Andrea Pugliese	1	12	English	MSc	Quantitative and Computational Biology	Centre for Integrative Biology	
145151	Mathematical models for the Physical, Natural and Social Sciences	Stefano Bonaccorsi	1	6	English	MSc	Mathematics	Department of Mathematics	
145908	Mathematical Physics - Differential Geometric Methods	Enrico Pagani	2	9	English	MSc	Mathematics	Department of Mathematics	
145676	Mathematics for Data Science	Andrea Carami	1	6	English	MSc	Data Science	Department of Mathematics	
140475	Mechanical design and machine elements	Matteo Benedetti	1	9	English	MSc	Mechatronics Engineering, Materials and Production Engineering	Department of Industrial Engineering	
140417	Mechanical vibrations	Daniele Borluzzi	2	6	English	MSc	Mechatronics Engineering	Department of Industrial Engineering	
145916	Mechanics of transducers	Marco Fontana	2	6	English	MSc	Mechatronics Engineering, Materials and Production Engineering	Department of Industrial Engineering	
145310	Medicinal Chemistry	Ires Mancini	2	6	English	MSc	Cellular and Molecular Biotechnology	Centre for Integrative Biology	
145471	Metallic materials engineering	Giovanni Straffellini (Mod.1), Massimo Pellizzari (Mod.2)	1	12	English	MSc	Materials and Production Engineering	Department of Industrial Engineering	
145693	Mind-Brain interaction and cognitive constraints	Andrea Caria	2	6	English	MSc	Data Science	Department of Mathematics	
145627	Mobile and satellite communications	Giacomo Oliveri	1	9	English	MSc	Information and Communications Engineering	Department of Information Engineering and Computer Science	
140431	Modeling and design with finite elements	Matteo Benedetti	2	6	English	MSc	Mechatronics Engineering, Materials and Production Engineering	Department of Industrial Engineering	
140469	Modeling and simulation of mechatronic systems	Francesco Biral	2	9	English	MSc	Mechatronics Engineering	Department of Industrial Engineering	
145155	Modern Physics	Stefano Oss	1	12	English	MSc	Mathematics	Department of Mathematics	
145543	Modern Physics	Pietro Faccioli	1	12	English	MSc	Quantitative and Computational Biology	Centre for Integrative Biology	
145235	Molecular and Cellular Biophysics	Marina Scarpa	1	6	English	MSc	Physics, Mathematics	Department of Physics	
145317	Molecular Basis of Disease	Alessandro Quattrone (Mod.1), Paola Bellista (Mod.2)	1	12	English	MSc	Cellular and Molecular Biotechnology	Centre for Integrative Biology	
145550	Molecular Biology of the Cell	Luca Tiberi (Mod.1), Giovanni Piccoli (Mod.2)	1	12	English	MSc	Quantitative and Computational Biology	Centre for Integrative Biology	
145318	Molecular Pharmacology	Luciano Conti	2	6	English	MSc	Cellular and Molecular Biotechnology	Centre for Integrative Biology	
145737	Molecular Physics	Pietro Faccioli	1	12	English	MSc	Quantitative and Computational Biology	Centre for Integrative Biology	
145729	Multi-scale methods in soft matter	Raffaello Potesio	2	6	English	MSc	Physics	Department of Physics	
145614	Multimedia Data Security	Giulia Boato	6	6	English	MSc	Information and Communications Engineering, Computer Science, Mathematical	Department of Information Engineering and Computer Science	
145484	Nanomaterials and nanotechnologies	Luca Lutterotti	1	6	English	MSc	Materials and Production Engineering	Department of Industrial Engineering	
145512	Nanoscience	Marina Scarpa	1	6	English	MSc	Physics	Department of Physics	
140153	Network modelling and design	Fabrizio Granelli	1	6	English	MSc	Information and Communications Engineering, Computer Science	Department of Information Engineering and Computer Science	
145910	Network Modelling and Simulation	Mario Lauria (Mod.1), Ozan Kahramanogullari (Mod.2)	2	12	English	MSc	Mathematics, Quantitative and Computational Biology	Department of Mathematics	
145715	Network Science Lab	To be defined	1	6	English	MSc	Data Science	Department of Mathematics	
145065	Network security	Bruno Crispo	2	6	English	MSc	Information and Communications Engineering, Computer Science, Mathematical	Department of Information Engineering and Computer Science	
145431	Neurodegenerative Diseases	Manuela Basso	1	6	English	MSc	Cellular and Molecular Biotechnology	Centre for Integrative Biology	
145750	Neurogenesis and Brain Regeneration	Luciano Conti	2	6	English	MSc	Cellular and Molecular Biotechnology	Centre for Integrative Biology	
145499	Neurogenesis and Regeneration	Luciano Conti	1	6	English	MSc	Cellular and Molecular Biotechnology	Centre for Integrative Biology	
145645	Nuclear and subnuclear physics	Winfried Leidemann	2	6	English	MSc	Physics	Department of Physics	
145169	Nuclear Astrophysics	Winfried Leidemann	2	6	English	MSc	Physics	Department of Physics	
145152	Numerical methods for PDE	Ana Maria Alonso Rodriguez	2	6	English	MSc	Mathematics	Department of Mathematics	
145478	Operations research	Matteo Brunelli	2	6	English	MSc	Mechatronics Engineering, Materials and Production Engineering	Department of Industrial Engineering	
145534	Optimization models and algorithms	Michele Fedrizzi	2	6	English	MSc	Mechatronics Engineering, Materials and Production Engineering	Department of Industrial Engineering	
145171	Optoelectronics	Lorenzo Pavesi	2	6	English	MSc	Physics	Department of Physics	
145139	Partial differential equations	Alberto Valli	2	6	English	MSc	Mathematics	Department of Mathematics	
145459	Participatory design	Antonella De Angeli	1	12	English	MSc	Computer Science, Human-Computer Interaction	Dept. of Psychology and Cognitive Science/Department of Information Engineering and Computer Science	
145282	Photonics	Zeno Gaburro	1	6	English	MSc	Physics	Department of Physics	
145537	Physics Education: Theoretical and Experimental Approaches	Pasquale Onorato	2	6	English	MSc	Physics, Mathematics	Department of Physics	
145650	Physics of disordered system	Giulio Monaco	2	6	English	MSc	Physics	Department of Physics	
145652	Physics of materials	Antonio Miotello	1	6	English	MSc	Physics	Department of Physics	
145392	Physiological flow and transport in porous tissues	Alberto Bellin	2	6	English	MSc	Mathematics	Department of Mathematics	
145474	Polymeric materials engineering	Luca Fambri	2	9	English	MSc	Materials and Production Engineering	Department of Industrial Engineering	

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145532	Powder metallurgy	Alberto Molinari	2	6	English	MSc	Materials and Production Engineering	Department of Industrial Engineering	
145477	Principles of bioengineering	Antonella Motta	2	6	English	MSc	Materials and Production Engineering	Department of Industrial Engineering	
145323	Privacy and Intellectual Property Rights	Vincenzo D'Andrea	1	6	English	MSc	Computer Science	Department of Information Engineering and Computer Science	
140347	Product design	Stefano Rossi	1	6	English	MSc	Materials and Production Engineering	Department of Industrial Engineering	
145678	Professional English for Data Science		y	3	English	MSc	Data Science	Department of Mathematics	
140413	Progettazione di reti e sistemi di comunicazione	Fabrizio Granelli		6	English	MSc	Information and Business Organisation Engineering, Information and Commu	Department of Information Engineering and Computer Science	
145742	Programming	Alberto Montresor	1	12	English	MSc	Mathematics, Quantitative and Computational Biology	Department of Information Engineering and Computer Science	
145301	Project course	Nicola Conci	y	6	English	MSc	Information and Communications Engineering	Department of Information Engineering and Computer Science	
145301	Project course		y	6	English	MSc	Computer Science	Department of Information Engineering and Computer Science	
145634	Project course: on Media Retrieval	Nicola Conci	1	6	English	MSc	Information and Communications Engineering	Department of Information Engineering and Computer Science	
145939	Project course on Computer Graphics	Nicola Conci	2	3	English	MSc	Information and Communications Engineering	Department of Information Engineering and Computer Science	
145940	Project course on Service Design and Engineering	To be defined	2	3	English	MSc	Information and Communications Engineering	Department of Information Engineering and Computer Science	
145632	Project course on Software Defined Networking	Fabrizio Granelli	1	3	English	MSc	Information and Communications Engineering	Department of Information Engineering and Computer Science	
145488	Project management	Andrea Molinari	1	6	English	MSc	Mechatronics Engineering, Materials and Production Engineering	Department of Industrial Engineering	
145473	Properties and characterization of materials	Alessandro Pegoretti, Sandra Diè	2	12	English	MSc	Materials and Production Engineering	Department of Industrial Engineering	
145524	Protection of materials and structures	Stefano Rossi	2	6	English	MSc	Materials and Production Engineering	Department of Industrial Engineering	
140473	Quality and innovation engineering	Dario Petri	1	6	English	MSc	Mechatronics Engineering, Materials and Production Engineering	Department of Industrial Engineering	
145646	Quantum field theory I	Luciano Vanzo	2	6	English	MSc	Physics	Department of Physics	
145647	Quantum field theory II	Luciano Vanzo	1	6	English	MSc	Physics	Department of Physics	
145513	Quantum Gases and superfluidity	Sandro Stringari	2	6	English	MSc	Physics	Department of Physics	
145644	Quantum Mechanics, Fields and Symmetries	Winfried Leidemann	1	6	English	MSc	Physics	Department of Physics	
145175	Quantum Optics	Iacopo Carusotto	2	6	English	MSc	Physics	Department of Physics	
145651	Quantum theories for multiparticle systems	Giuseppina Orlandini	2	6	English	MSc	Physics	Department of Physics	
145938	Radar and 5G Architectures and Systems	Paolo Rocca	1	9	English	MSc	Information and Communications Engineering	Department of Information Engineering and Computer Science	
140273	Radar and radiolocalization	Luigi Bruzzone	1	6	English	MSc	Information and Communications Engineering	Department of Information Engineering and Computer Science	
145626	Radar architectures and systems	Paolo Rocca	1	6	English	MSc	Information and Communications Engineering	Department of Information Engineering and Computer Science	
145514	Radiation Biophysics	Chiara La Tessa	2	6	English	MSc	Physics	Department of Physics	
145566	Real Algebraic Geometry	Riccardo Ghiloni	2	6	English	MSc	Mathematics	Department of Mathematics	
145071	Real time operating systems and middleware	Luigi Paolopoli	1	6	English	MSc	Information and Communications Engineering, Computer Science	Department of Information Engineering and Computer Science	
145461	Recognition systems	Farid Melgani	2	9	English	MSc	Information and Communications Engineering	Department of Information Engineering and Computer Science	
145486	Recycling and sustainable materials	Alessandro Pegoretti	2	6	English	MSc	Materials and Production Engineering	Department of Industrial Engineering	
145605	Renewable Energy and Meteorology	To be defined	2	6	English	MSc	Energy Engineering, Physics	Department of Civil, Environmental and Mechanical Engineering	
145072	Requirements engineering	To be defined	1	6	English	MSc	Computer Science	Department of Information Engineering and Computer Science	
145698	Research Design	To be defined	2	9	English	MSc	Data Science	Department of Mathematics	
145694	Research Methodology: Quantitative	Luigi Lombardi	2	6	English	MSc	Data Science	Department of Mathematics	
145289	Research Project	Marco Ronchetti	y	12	English	MSc	Computer Science	Department of Information Engineering and Computer Science	
145710	Research project Lab	To be defined	2	6	English	MSc	Data Science	Department of Mathematics	
140470	Robotic Perception and Action	Mariolino De Cecco	1	9	English	MSc	Mechatronics Engineering	Department of Industrial Engineering	
140506	Robotic Perception and Action	Mariolino De Cecco	1	9	English	MSc	Mechatronics Engineering	Department of Industrial Engineering	
145691	Science Technology and Business	To be defined	2	6	English	MSc	Data Science	Department of Mathematics	
145427	Scientific computing	Michael Dumbser	2	9	English	MSc	Mathematics	Department of Mathematics	
145912	Scientific programming	Alberto Montresor	1	12	English	MSc	Mathematics, Quantitative and Computational Biology	Department of Information Engineering and Computer Science	