



**Manifesto Laurea Magistrale in Artificial Intelligence System /Master's Degree in Artificial Intelligence Systems - a.a. 2024-25**

AD Code ESSE3	CORSO	COURSES	SSD ACADEMIC DISCIPLINE	CFU CREDITS	TAF TRAINING ACTIVITY	ANNO YEAR	SEMESTRE SEMESTER	CREDITI DA SCEGLIERE CREDITS TO CHOOSE	TE NOTES	Docente TITOLARE COGNOME PROFESSOR	Docente TITOLARE NOME	
<b>Curricula: Methodologies and Applications, AI and Innovation, Systems, Neurocognitive Architectures</b>												
<b>Corsi obbligatori/Mandatory courses</b>								<b>48</b>				
145856	Fundamentals of Artificial Intelligence		ING-INF/05	12	Car.	1	1			Sebastiani	Roberto	
145857	Machine Learning - Module I		ING-INF/05	12	Car.	1	1			Melgani	Farid	
	Machine Learning - Module II					1	2			Ricci	Elisa	
145858	Signal, Image and Video		ING-INF/03	6	Aff.	1	1			Rosani	Andrea	
145860	Law and Ethics in Artificial Intelligence		IUS/21	6	Aff.	1	1			Casonato Penasa	Carlo Simone	
145861	Artificial and biological neural systems		ING-INF/05	6	Car.	1	2			Hasson	Uri	
145859	Natural Language Understanding		ING-INF/05	6	Car.	1	2			Riccardi	Giuseppe	
<b>Depth requirement (for all Curricula except Neurocognitive)</b>								<b>12</b>				
145863	Automated Reasoning		ING-INF/05	6	Car.	1	2			Sebastiani	Roberto	
145866	Introduction to Robotics		ING-INF/04	6	Car.	1	2			Saveriano	Matteo	
145867	Autonomous Software Agents		ING-INF/05	6	Car.	1	2			Giorgini	Paolo	
145763	Bio-Inspired Artificial Intelligence		ING-INF/05	6	Car.	2	1			Iacca	Giovanni	
145862	Automated Planning: Theory and Practice		ING-INF/05	6	Car.	2	1			Roveri	Marco	
145864	Human-Machine Dialogue		ING-INF/05	6	Car.	2	1			Riccardi	Giuseppe	
<b>A - Curriculum Methodologies and Applications</b>												
Choose one among the following paths: Computer Vision, Methodologies, Intelligent Robots or Humans and AI (the latest is available only for 2024-25 and subsequent cohorts)								<b>18</b>				
<b>Path Computer Vision</b>												
140266	Computer Vision		ING-INF/03	6	Aff.	1	2			Conci	Nicola	
145869	Advanced Computer Vision		ING-INF/05	6	Car.	2	1			Ricci	Elisa	
145870	Trends and Applications of Computer Vision		ING-INF/05	6	Car.	2	1			Mancini	Massimiliano	



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<b>Path Methodologies</b>											
145871	Advanced Topics in Machine Learning and Optimization		MAT/09	6	Aff.	2	1			Passerini Teso	Andrea Stefano
Other 2 courses among {Depth courses, Advanced Computer Vision}			ING-INF/05 ING-INF/04	12	Car.	1-2	2-1				
<b>Path Intelligent Robots</b>											
145872	Distributed Robot Perception		ING-INF/07	6	Aff.	2	1			Fontanelli	Daniele
146216	Optimisation and Learning for Robot Control		ING-INF/04	6	Car.	2	1			Del Prete	Andrea
145874	Robot Planning and its application		ING-INF/05	6	Car.	2	1			Palopoli	Luigi
<b>Path Humans and AI - Il path è selezionabile solo dagli studenti della coorte 2024-25 e successive.</b>											
145899	Studies on Human Behaviour		INF/01	6	Aff.	2	1			Bison	Ivano
146114	Knowledge Graph Engineering		ING-INF/05	6	Car.	2	1			Giunchiglia	Fausto
<b>146307</b>	Human-Centric AI (sarà attivato dal 2025-26)		ING-INF/05	6	Car.	2	1			Giunchiglia	Fausto
146155	Advanced HCI		ING-INF/05	6	Car.	2	1			Varni	Giovanna Paola
<b>Free-choice courses (see list below)</b>								<b>12</b>			
<b>145884</b>	<b>Tesi / Thesis</b>							<b>24</b>			
<b>145885</b>	<b>Tirocini formativi e di orientamento</b>							<b>6</b>			
							<b>TOT</b>	<b>120</b>			
<b>B - Curriculum AI and Innovation</b>											
<b>Path AI and Innovation</b>											
145881	AI and Innovation		ING-INF/05	6	Car.	2	1			Formentini	Marco
<b>12 Crediti a scelta nel seguente gruppo</b>								<b>12</b>			
145636	Business Development Laboratory		SECS-P/08	6	Aff.	1	2			Formentini	Marco



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145936	Innovation and Entrepreneurship Basic		SECS-P/10	6	Aff.	2	1			Angeli	Lorenzo
146077	AI for finance (tace nel 24-25/ The course will not be offered in 24-25)		SECS-P/11	6	Aff.	1	2			Tace nel 2024-25	
	<b>Free-choice courses (see list below)</b>							<b>12</b>			
<b>145884</b>	<b>Tesi / Thesis</b>							<b>24</b>			
<b>145885</b>	<b>Tirocini formativi e di orientamento</b>							<b>6</b>			
<b>C - Curriculum Systems</b>											
<b>Path AI Systems for Environment and Sustainability</b>											
	<b>Free-choice courses (see list below)</b>							<b>18</b>			
146217	Software Development for Collaborative Robotics		ING-INF/05	6	Car.	2	1			Palopoli	Luigi
146303	Sensing Technologies and Data Processing (ex 145883 Sensing and Radar Technologies)		ING-INF/03	6	Aff.	2	1			Bruzzone	Lorenzo
146218	AI for Food Quality Control		ING-INF/03	6	Aff.	2	1			Melgani	Farid
	<b>Free-choice courses (see list below)</b>							<b>12</b>			
<b>145884</b>	<b>Tesi / Thesis</b>							<b>24</b>			
<b>145885</b>	<b>Tirocini formativi e di orientamento</b>							<b>6</b>			
							<b>TOT</b>	<b>120</b>			
<b>D - Curriculum Neurocognitive Architectures</b>											
<b>Track Neurocognitive Architecture</b>											
	<b>Free-choice courses (see list below)</b>							<b>30</b>			
146121	Foundations of Cognitive Psychology and Neuroscience		ING-INF/05	9	Car.	2	1		*	Bottini	Roberto
146078	Grounded Language Processing		ING-INF/05	9	Car.	2	1			Bernardi	Raffaella
154152	Introduction to Human Language		L-LIN/01	6	Aff.	2	1		**	Zamparelli	Roberto
154108	Language and Social Cognition		M PSI/02	6	Aff.	2	1			Hasson	Uri
* Cambio di denominazione del corso, fino alla coorte 2022-23 'Understanding Cognitive Psychology 154115'/Up to 2022-23 the course was called 'Understanding Cognitive Psychology 154115'											
** Cambio di denominazione del corso, fino alla coorte 2022-23 'Intro to Human Language 154036'/Up to 2022-23 the course was called 'Intro to Human Language 154036'											



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	<b>Free-choice courses (see list below)</b>							<b>12</b>			
<b>145884</b>	<b>Tesi / Thesis</b>							<b>24</b>			
<b>145885</b>	<b>Tirocini formativi e di orientamento</b>							<b>6</b>			
							<b>TOT</b>	<b>120</b>			
<b>Free-choice courses</b>											
Students are encouraged to choose firstly among the courses of the Path(s) that have not been selected in their study plan, secondly from the list below. These courses are automatically approved.											
145091	Technical Writing		L- LIN /12	6	Scelta	1	1-2		*	Centro Linguistico di Ateneo	
146102	Italian Exam for International Students			6	Scelta	1	1-2		**	Centro Linguistico di Ateneo	
145875	Modeling and simulation of mechatronic systems		ING-IND/13	6	Scelta	1	2			Biral	Francesco
145865	Optimization techniques		INF/01	6	Scelta	1	2			TBD	
146079	Formal Verification		ING-INF/05	6	Scelta	1	2		***	Sebastiani	Roberto
145774	Automatic Control		ING-INF/04	6	Scelta	1	2			Zaccarian	Luca
146120	GPU computing		INF/01	6	Scelta	1	2			Vella	Flavio
146200	Digital Epidemiology		ING-INF/05	6	Scelta	1	2			Tizzoni	Michele
146170	Applied Natural Language Processing		ING-INF/05	6	Scelta	1	2			Staiano	Jacopo
146321	Knowledge Discovery and Pattern Extraction		INF/01	6	Scelta	1	2			Casati	Fabio
146322	Designing Large Scale AI Systems		INF/01	6	Scelta	1-2	2			Casati	Fabio
146114	Knowledge Graph Engineering		ING-INF/05	6	Scelta	2	1			Giunchiglia	Fausto
145899	Studies on human behaviour		SPS/07	6	Scelta	2	1			Bison	Ivano
146308	Process Mining and Management		ING-INF/05	6	Scelta	2	1			Di Francescomarino	Chiara
145972	High-Performance Computing for Data Science		ING-INF/05	6	Scelta	2	1			Fiore	Sandro
145801	Neuroimaging for Data Science		M-PSI/02	6	Scelta	2	1			Baldauf	Daniel
145762	Ultrasound Technologies for Medical Applications		ING-INF/03	6	Scelta	2	1			Demi	Libertario



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155020	Multisensory Interactive Systems		ING-INF/05	6	Scelta	2	1			Turchet	Luca
140466	Computational methods for mechatronics		MAT/08	6	Scelta	2	1			Bertolazzi	Enrico
146155	Advanced HCI		ING-INF/05	6	Scelta	2	1			Varni	Giovanna Paola
146217	Software Development for Collaborative Robotics		ING-INF/05	6	Scelta	2	1			Palopoli	Luigi
145779	Dynamics and control of vehicles and robots		ING-IND/13	6	Scelta	2	2			Biral	Francesco
145877	Logical Structures of Natural Language		M-FIL/05	6	Scelta	2	2			Zamparelli	Roberto
145289	Research Project		INF/01	12	Scelta	1-2	1-2			DISI Faculty	
		ING-INF/05									
145301	Project course		INF/01	6	Scelta	1-2	1-2			DISI Faculty	
		ING-INF/05									
146317	Soft Skills Developments		ING-INF/05	6	Scelta	1-2	2			D'Andrea	Vincenzo
145820	Laboratory of Computer Science Education - tace nel 2024-25		INF/01	6	Scelta	1	2		****	Montresor	Alberto

(\*) 145091 Foreign students cannot take Technical Writing along with '146102 Italian Exam for International Students', except for the case of supernumerary credits.

(\*\*) 146102 Italian Exam for International Students - This course is reserved to foreign students only.

Please note that foreign students lacking a sufficient level of knowledge of the Italian language (i.e. who cannot provide a CLA-recognized Italian Language certificate) will be required to follow the Italian language course and include 146102 Italian Exam for International Students, offered by CLA (University Language Center) in their study plan.

(\*\*\*)146079 Formal Verification: requires as prerequisite 145863 Automated Reasoning (aka Formal Methods Module I)

(\*\*\*\*) 145820 Laboratory of Computer Science Education - il corso tace nel 24-25/The course is not active in a.y. 2024-25.



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[Safety courses](#)  
 The on-line courses “Health and Safety in the workplace General Risk training” (4 hours) and “Health and Safety in the workplace Specific risk training (Low Risk)” (4 hours) are mandatory for all the students attending courses held in computer and/or teaching labs. The courses are available through [Didattica online](#). Some of the courses may have additional requirements in terms of knowledge on the safety regulations. Such requirements are explicitly mentioned in the [Syllabus of the courses](#) and can be covered through specific safety courses (medium risk) offered by the University. <https://infostudenti.unitn.it/it/formazione-sicurezza-studenti-studentesse>

**RECAP TABLE**

A - Methodologies and Applications	B - AI and Innovation	C - Systems	D - Neurocognitive Architectures
48 CFU Mandatory courses	48 CFU Mandatory courses	48 CFU Mandatory courses	48 CFU Mandatory courses
12 CFU Depth requirement	12 CFU Depth requirement	12 CFU Depth requirement	
18 CFU Path choose among Computer Vision Methodologies Intelligent Robots Humans and AI	18 CFU Path AI and Innovation	18 CFU Path AI Systems for Environment and Sustainability	30 CFU Track Neurocognitive Architectures
12 CFU Free-choice courses	12 CFU Free-choice courses	12 CFU Free-choice courses	12 CFU Free-choice courses
24 CFU Thesis	24 CFU Thesis	24 CFU Thesis	24 CFU Thesis
6 CFU Internship	6 CFU Internship	6 CFU Internship	6 CFU Internship
<b>120 CFU</b>	<b>120 CFU</b>	<b>120 CFU</b>	<b>120 CFU</b>