

Manifesto Laurea Magistrale in Informatica (Percorso Scienze e Tecnologie Informatiche - Computer Science and Technologies) - Studenti coorte 2017/2018
(1) Mandatory courses (12 CFU)

I seguenti due corsi devono essere inclusi in tutti i piani di studio.
The following two courses must be included in all study plans.

Titolo / Note	SSD	CFU	Tipo	Anno	Sem.	Docente
145451 - Computability and computational complexity	INF/01	6	Car.	1	1	Kuper G.
145936 - Innovation and Entrepreneurship Basic	SECS-P/10	6	Affine	1	1	Milena Stoycheva

(2) Foundation of Computer Science (12 CFU)

Selezionare 12 CFU fra i seguenti corsi relativi ai fondamenti dell'informatica.
Select 12 CFU taken from the following courses related to the foundations of computer science.

Titolo / Note	SSD	CFU	Tipo	Anno	Sem.	Docente
145300 - Concurrency	INF/01	6	Car.	1	1	Quaglia P.
145062 - Machine learning	INF/01	6	Car.	1	1	Passerini A.
145462 - Simulation and performance evaluation	INF/01	6	Car.	1	2	Lo Cigno R.

(3) Complements of Telecom (6 CFU)

Selezionare 6 CFU fra i seguenti corsi relativi all'area delle Telecomunicazioni.
Select 6 CFU taken from the following courses related to the Telecom area.

Titolo / Note	SSD	CFU	Tipo	Anno	Sem.	Docente
145612 - Advanced remote sensing systems (LM INF/COM)	ING-INF/03	6	Affine	1-2	1	Bruzzone L.

145611 - Computer Vision and Multimedia Analysis (<i>sharing 6 credits with the course 145630 offered by LM INF/COM</i>)	ING-INF/03	6	Affine	1-2	1	Conci N.
145614 - Multimedia Data Security (<i>offered by LM INF/COM</i>)	ING-INF/03	6	Affine	1-2	1	Boato G.
140153 - Network modeling and design (<i>offered by LM INF/COM</i>)	ING-INF/03	6	Affine	1-2	1	Granelli F.
145447 - Advanced computing architectures	ING-INF/01	6	Affine	1-2	1	Passerone R.

(4) Depth requirement (18 CFU)

Scegliere *una* fra le aree seguenti e selezionare 18 CFU da essa.
Choose *one* among the following areas and select 18 CFU from it.

Area Data Science

Titolo / Note	SSD	CFU	Tipo	Anno	Sem.	Docente
145449 - Big Data and Social Networks	ING-INF/05	6	Car.	1	1	Velegrakis Y.
145453 - Data Mining	ING-INF/05	6	Car.	1-2	1	Velegrakis Y.
145919 - Knowledge and Data Integration	ING-INF/05	6	Car.	1-2	1	Giunchiglia F.
145053 - Laboratory of Biological Data Mining (<i>offered by LM QCB 145547 - Data Mining: mod. 2 Biological Data Mining</i>)	ING-INF/05	6	Car.	1-2	1	Blanzieri E.
145635 - High-Throughput Sequencing Data Analysis (<i>offered by LM QCB 145542 - Genomics II mod.</i>)	INF/01	6	Car.	1	2	Mutuato da CIBIO
145615- Intelligent Optimization for data science	INF/01	6	Car.	1	2	Battiti R.
145299 - Language Understanding Systems (*)	ING-INF/05	6	Car.	1	2	Riccardi G.
145106 - Laboratory of Business Process Management and Integration	INF/01	6	Car.	1	2	TACE nel 2017/2018 (attivato ad anni alterni)
145084 - Spatial Databases	INF/01	6	Car.	1	2	TACE nel 2017/2018

145296 – Advanced Natural Language Processing and Information Retrieval	ING-INF/05	6	Car.	1	2	Moschitti A.
145520 - Affective computing (offered by LM HCI - 155004)	ING-INF/05	6	Car.	2	1	Sebe N.

(*) It is required as a pre-requisite: 145062 - Machine learning or 145461 - Recognition Systems.

Area Service Design and Engineering

Titolo / Note	SSD	CFU	Tipo	Anno	Sem.	Docente
145388 - Introduction to Service Design and Engineering	ING-INF/05	6	Car.	1-2	1	Marchese M.
145068 - Organizational Information Systems	INF/01	6	Car.	1-2	1	TACE nel 2017/2018 (attivato ad anni alterni)
145072 - Requirements Engineering	INF/01	6	Car.	1-2	1	Perini A.
145322 - Security Testing	INF/01	6	Car.	1-2	1	Tonella P.
145045 - Agent-Oriented Software Engineering	ING-INF/05	6	Car.	1	2	Giorgini P.
145622 - Cyber Security Risk Assessment (*)	ING-INF/05	6	Car.	1	2	Massacci F.
145056 - Formal methods	ING-INF/05	12	Car.	1	2	Sebastiani R.
145293 - Laboratory of Service Design and Engineering (**)	ING-INF/05	6	Car.	1	2	TACE nel 2017/2018

(*) Si consiglia come pre-requisito 145937- Introduction to Computer and Network Security al primo semestre per gli studenti che non hanno fatto altri corsi di Security. It is recommended as a pre-requisite to attend 145937- Introduction to Computer and Network Security in the 1st semester for students that have not done other courses in Security.

(**) Si consiglia come pre-requisito 145388 - Introduction to Service Design and Engineering. It is recommended as a pre-requisite to attend 145388 - Introduction to Service Design and Engineering.

Area Systems and Networks

Titolo / Note	SSD	CFU	Tipo	Anno	Sem.	Docente
145618 - Distributed systems 2	INF/01	6	Car.	2	1	TACE nel 2017/2018
145458 - Laboratory of Applied robotics	ING-INF/05	6	Car.	1-2	1	Palopoli L.
145943 - Wireless Mesh and Vehicular Networks	INF/01	6	Car.	1-2	1	Lo Cigno R.
145079 - Laboratory of Wireless Sensor Networks	ING-INF/05	6	Car.	1-2	1	Picco G.
145071 - Real-Time Operating Systems and Middleware	ING-INF/05	6	Car.	1-2	1	Palopoli L.
145085 - Web Architectures	INF/01	6	Car.	1-2	1	Ronchetti M.
145617- Distributed systems 1	ING-INF/05	6	Car.	1	2	Picco G.
145065 - Network Security (*)	ING-INF/05	6	Car.	1	2	Crispo B.

(*) Si consiglia come pre-requisito 145937 Introduction to Computer and Network Security al primo semestre per gli studenti che non hanno fatto altri corsi di Security. It is recommended as a pre-requisite to attend 145937- Introduction to Computer and Network Security in the first semester for students that have not done other courses in Security.

(5) Breadth requirement (18 CFU)

Scegliere 18 CFU fra i corsi elencati nelle aree diverse dall'area scelta al punto (4)
Select 18 CFU among the course listed distinct from the one chosen at step (4)

(6) Free-choice courses (24 credits)

Selezionare 24 crediti scelti liberamente fra gli insegnamenti offerti dall'Università di Trento. Gli insegnamenti elencati nella liste precedenti, quelli elencati nella lista di corsi opzionali successiva e quelli suggeriti dallo strumento di compilazione dei piani di studio di ESSE3 sono approvati automaticamente. In tutti gli altri casi, è necessaria la compilazione di un piano di studio cartaceo che sarà valutato dall'apposita commissione.

Select 24 free-choice credits among the courses offered by the University of Trento. The courses listed in the tables above, those listed in the free-choice courses table listed below, and those suggested in the online tool for study plan of ESSE3 are automatically approved. In all other cases, a personalized study plan must be completed and submitted to the commission for study plan examination.

Technical Elective Courses

Titolo / Note	SSD	CFU	Tipo	Anno	Sem.	Docente
145321 - Cryptography (<i>Mutuato da DIPMAT - 145441 - Algebraic Cryptography 1° mod.</i>)	MAT/02	6	Scelta	1-2	1	Sala M.
145256 - Statistics of Stochastic Processes (<i>Mutuato DIPMAT</i>)	MAT/06	6	Scelta	1-2	1	Agostinelli C.
145937 - Introduction to Computer and Network Security	INF/01	6	Scelta	1-2	1	Ranise S.
145389 - Introduction to cell biology	BIO/13	9	Scelta	1-2	1	Cusanelli E. e Mione M.
145519 - Offensive Technologies (*)	ING-INF/05	12	Scelta	1-2	1	Massacci F.
145914 - Statistical Models (<i>Mutuato da DIPMAT</i>)	MAT/06	6	Scelta	1-2	1	Agostinelli C.
145301 - Project course	INF/01 ING-INF/05	6	Scelta	1-2	1/2	Tutti / All
145289 - Research Project	INF/01 ING-INF/05	12	Scelta	1-2	1/2	Tutti / All
145396 - Formal Techniques for Cryptographic Protocol Analysis (<i>Mutuato da DIPMAT</i>)	INF/01	6	Scelta	1	2	Zunino R.
145619 - Inverse problems and optimization (<i>offered by LM INF/COM</i>)	ING-INF/02	9	Scelta	1	2	Rocca P.
145459 - Participatory Design (<i>condiviso con il corso 145638 mod. 2</i>)(**)	ING-INF/05	6	Scelta	1	1	D'Andrea V.
145944 - User-centered design (<i>condiviso con il corso 145638 mod. 1</i>)(**)	ING-INF/05	6	Scelta	1	1	De Angeli A.
145561 - Bayesian Statistics (<i>Mutuato da DIPMAT</i>)	MAT/06	6	Scelta	1	2	Agostinelli C. e Novi Inverardi C.

(*) Si consiglia 145322 - Security Testing al primo semestre e 145065 - Network Security al secondo semestre come pre-requisiti.
The courses 145322 - Security Testing and 145065 - Network Security are recommended as pre-requisites.

(**) Condiviso con il corso 145638 (mod. 1 e mod. 2) pertanto non è possibile avere entrambi i corsi nel piano di studi.
The course is shared with 145638 (mod. 1 and 2) and it is not possible to have both courses in the study plan.

Innovation and Entrepreneurship Elective Courses

Titolo / Note	SSD	CFU	Tipo	Anno	Sem.	Docente
145620 - Business in ICT (<i>offered by LM INF/COM</i>)	ING-INF/03	9	Scelta	1-2	1	Filippas V.
145518 – ICT Innovation – Product Design and Development (<i>in condivisione di orario con 145455 – ICT Innovation</i>)	INF/01	6	Scelta	1	2	Massacci F.
145459 – Participatory Design (condiviso con il corso 145638 mod. 2) (**)	ING-INF/05	6	Scelta	1	1	D'Andrea V.
145323 - Privacy and Intellectual Property Rights	ING-INF/05	6	Scelta	1-2	1	D'Andrea V. – Rossato A.
145078 - Science Technology and Business	INF/01	6	Scelta	1	2	Battiti R.
145091 - Technical Writing	L-LIN/12	6	Scelta	1-2	2	Centro Linguistico di Ateneo

(**) Condiviso con il corso 145638 (mod. 2) pertanto non è possibile avere entrambi i corsi nel piano di studi.
The course is shared with 145638 (mod. 2) and it is not possible to have both courses in the study plan.

Il corso di studi si completa con / the study course is completed by:

- Tesi / thesis: 24 CFU
- Tirocini formativi e di orientamento / internship: 6 CFU

Manifesto (ICT Innovation)**Specialization area: Service design and Engineering (SDE) (Entry Point)****(1) Mandatory Innovation and Entrepreneurship courses (24 CFU)**

I seguenti corsi devono essere inclusi in tutti i piani di studio.
The following courses must be included in all study plans.

Titolo / Note	SSD	CFU	Tipo	Anno	Sem.	Docente
145936 - Innovation and Entrepreneurship Basic	SECS-P/10	6	Aff.	1	1	Milena Stoycheva
145288 - Business Development Laboratory	SECS-P/08	9	Aff.	1	2	Filippas V.
145455 - ICT Innovation **	INF/01	9	Car.	1	2	Massacci F.

** Una parte dei crediti del corso è ottenuta dalla partecipazione con successo ad una delle Scuole Estive EIT ICTLabs.
A part of the credits of this course is achieved by a successful participation to one of the EIT ICTLabs Summer Schools.

(3) Mandatory Technical courses (18 CFU)

I seguenti corsi devono essere inclusi in tutti i piani di studio.
The following courses must be included in all study plans.

Titolo / Note	SSD	CFU	Tipo	Anno	Sem.	Docente
145388 - Introduction to Service Design and Engineering	ING-INF/05	6	Car.	1	1	Marchese M.
145449 - Big Data and Social Networks	ING-INF/05	6	Car.	1	1	Velegrakis Y.
145085 - Web Architectures	INF/01	6	Car.	1	1	Ronchetti M.
145106 - Laboratory of Business Process Management and Integration	INF/01	6	Car.	1	2	TACE nel 2017/2018 (attivato ad anni alterni)

(2) Additional courses (18 CfU)

Selezionare 18 CFU fra i seguenti corsi.

Select 18 CFU taken from the following courses.

Titolo / Note	SSD	CFU	Tipo	Anno	Sem.	Docente
145062 - Machine learning	INF/01	6	Car.	1	1	Passerini A.
145068 - Organizational Information Systems	INF/01	6	Car.	1	1	TACE nel 2017/2018 (attivato ad anni alterni)
145072 - Requirements Engineering	INF/01	6	Car.	1	1	Perini A.
145937 - Introduction to Computer and Network Security	INF/01	6	Car.	1-2	1	Ranise S.
145323 - Privacy and Intellectual Property Rights	ING-INF/05	6	Car.	1-2	1	D'Andrea V. Rossato A.
145045 - Agent-Oriented Software Engineering	ING-INF/05	6	Car.	1	2	Giorgini P.
145622 - Cyber Security Risk Assessment (*)	ING-INF/05	6	Car.	1	2	Massacci F.
145615- Intelligent Optimization for data science	INF/01	6	Car.	1	2	Battiti R.
145459 - Participatory Design (condiviso con il corso 145638 - mod. 2 Participatory Design) (**)	ING-INF/05	6	Car.	1	1	D'Andrea V.
145617- Distributed systems 1	ING-INF/05	6	Car.	1	2	Picco G.

(*) Si consiglia come pre-requisito 145937- Introduction to Computer and Network Security per gli studenti che non hanno fatto altri corsi di Security.

It is recommended as a pre-requisite to attend 145937- Introduction to Computer and Network Security in the first semester for students that have not done other courses in Security.

(**) Condiviso con il corso 145638 - mod. 2 pertanto gli studenti non possono avere entrambi i corsi nel piano di studi.

The course is shared with 145638 mod. 2 and it is not possible to have both courses in the study plan.

Manifesto (ICT Innovation)**Specialization area: Service design and Engineering (SDE) (Exit Point)****(1) Mandatory courses (6 CFU)**

I seguenti corsi devono essere inclusi in tutti i piani di studio.
The following courses must be included in all study plans.

Titolo / Note	SSD	CFU	Tipo	Anno	Sem.	Docente
145623 - Innovation and Entrepreneurship Studies in ICT	INF/01	6	Car.	2	1	Marchese M.

(2) Additional courses (24 CFU)

Selezionare 24 CFU fra i seguenti corsi.
Select 24 CFU taken from the following courses.

Titolo / Note	SSD	CFU	Tipo	Anno	Sem.	Docente
145449 - Big Data and Social Networks	ING-INF/05	6	Car./Scel.	2	1	Velegrakis Y.
145453 - Data Mining	ING-INF/05	6	Car./Scel.	2	1	Velegrakis Y.
145090 - Interazione Uomo-Macchina / Human-Computer Interaction	ING-INF/05	6	Scelta	2	1	De Angeli A.
145937- Introduction to Computer and Network Security	INF/01	6	Car./Scel.	2	1	Ranise S.
145062 - Machine learning	INF/01	6	Car./Scel.	1-2	1	Passerini A.
145323 - Privacy and Intellectual Property Rights	ING-INF/05	6	Car./Scel.	2	1	D'Andrea V. Rossato A.
145068 - Organizational Information Systems	INF/01	6	Car./Scel.	2	1	TACE nel 2017/2018 (attivato ad anni alterni)
145072 - Requirements Engineering	INF/01	6	Car./Scel.	2	1	Perini A.

Il corso di studi si completa con / the study course is completed by:

- Tesi / thesis : 24 CFU
- Tirocini formativi e di orientamento / internship: 6 CFU

Manifesto (ICT Innovation)**Specialization area: Security & Privacy (S&P) (Entry Point)****(1a) Mandatory Innovation and Entrepreneurship courses (24 CFU)**

I seguenti corsi devono essere inclusi in tutti i piani di studio.
The following courses must be included in all study plans.

Titolo / Note	SSD	CFU	Tipo	Anno	Sem.	Docente
145936 - Innovation and Entrepreneurship Basic	SECS-P/10	6	Aff.	1	1	Milena Stoycheva
145288 - Business Development Laboratory	SECS-P/08	9	Aff.	1	2	Da definire
145455 - ICT Innovation **	INF/01	9	Car.	1	2	Massacci F.

** Una parte dei crediti del corso è ottenuta dalla partecipazione con successo ad una delle Scuole Estive EIT ICTLabs.
A part of the credits of this course is achieved by a successful participation to one of the EIT ICTLabs Summer Schools.

(1b) Mandatory courses (24 CFU)

Una selezione dei seguenti corsi devono essere inclusi in tutti i piani di studio per raggiungere il completamento dei 24 crediti obbligatori.
A selection of the following courses must be included in all study plans to achieve the mandatory 24 credits.

Titolo / Note	SSD	CFU	Tipo	Anno	Sem.	Docente
145323 - Privacy and Intellectual Property Rights	ING-INF/05	6	Car.	1-2	1	D'Andrea V. Rossato A.
145321 - Cryptography (Mutuato da DIPMAT - 145441 - Algebraic Cryptography 1° modulo)	MAT/02	6	Car.	1	1	Sala M.
145322 - Security Testing	INF/01	6	Car.	1	1	Tonella P.
145622 - Cyber Security Risk Assessment	ING-INF/05	6	Car.	1	2	Massacci F.
145065 - Network Security	ING-INF/05	6	Car.	1	2	Crispo B.

(2) Additional courses (12 CFU)

Selezionare 12 CFU fra i corsi della tabella precedente (1b) che non sono già stati scelti od i corsi della seguente tabella.
Select 12 CFU taken from the previous list (1b) which has not been selected yet as well as the following courses.

Titolo / Note	SSD	CFU	Tipo	Anno	Sem.	Docente
145062 - Machine learning	INF/01	6	Car.	1	1	Passerini A.
145614 - Multimedia Data Security (<i>Offerto da LM INF/COM</i>)	ING-INF/03	6	Scelta	1-2	1	Boato G.
145519 – Offensive Technologies (*)	ING-INF/05	12	Car.	2	1	Massacci F.
145618 - Distributed systems 2	INF/01	6	Car.	2	1	TACE nel 2017/2018
145396 - Formal Techniques for Cryptographic Protocol Analysis (<i>Mutuato da DIPMAT - 145396</i>)	INF/01	6	Scelta	1	2	Zunino R.
145068 - Organizational Information Systems	INF/01	6	Car.	1-2	1	TACE nel 2017/2018 (attivato ad anni alterni)
145937 – Introduction to Computer and Network Security (*)	INF/01	6	Car.	1	1	Ranise S.

(*) Il programma di doppia laurea EIT Security & Privacy raccomanda fortemente a tutti gli studenti che non hanno seguito alcun corso di sicurezza informatica e delle reti all'interno del proprio percorso di studio triennale di scegliere il seguente corso per avere i necessari pre-requisiti.

The EIT Degree Program in Security & Privacy strongly recommends all students who have not attended any course on network and computer security in their bachelor degree to attend the following course to achieve the necessary pre-requisites.

Manifesto (ICT Innovation)**Specialization area: Security & Privacy (S&P) (Exit Point)****(1) Mandatory Innovation and Entrepreneurship courses (6 CFU)**

I seguenti corsi devono essere inclusi in tutti i piani di studio.
The following courses must be included in all study plans.

Titolo / Note	SSD	CFU	Tipo	Anno	Sem.	Docente
145623 - Innovation and Entrepreneurship Studies in ICT	INF/01	6	Car.	2	1	Marchese M.

(2) Additional courses (24 CFU)

Scegliere 24 crediti tra le due tabelle seguenti:
Choose 24 CFU taken from the following tables:

Titolo / Note	SSD	CFU	Tipo	Anno	Sem.	Docente
145614 - Multimedia Data Security (<i>Offered by LM INF/COM</i>)	ING-INF/03	6	Scelta	1-2	1	Boato G.
145519 – Offensive Technologies	ING-INF/05	12	Car.	1-2	1	Massacci F.
145301 - Project course	INF/01 ING-INF/05	6	Scelta	1-2	1	Tutti / All
145289 - Research Project	INF/01 ING-INF/05	12	Scelta	1-2	1	Tutti / All
145322 - Security Testing (*)	INF/01	6	Car.	1-2	1	Tonella P.
145068 - Organizational Information Systems	INF/01	6	Car.	1-2	1	TACE nel 2017/2018 (attivato ad anni alterni)
145618 - Distributed systems 2	INF/01	6	Car.	1-2	1	TACE nel 2017/2018
145323 – Privacy and Intellectual Property Rights (*)	ING-INF/05	6	Car.	1-2	1	D'Andrea, V. Rossato A.

(*) Only for students who have not attended it in the Entry University.

Il corso di studi si completa con / the study course is completed by:

- Tesi / thesis: 24 CFU
- Tirocini formativi e di orientamento / internship: 6 CFU

Manifesto (ICT Innovation)**Specialization area: Embedded Systems (Exit Point)****(1) Mandatory courses (6 CFU)**

I seguenti corsi devono essere inclusi in tutti i piani di studio.
The following courses must be included in all study plans.

Titolo / Note	SSD	CFU	Tipo	Anno	Sem.	Docente
145623- Innovation and Entrepreneurship Studies in ICT	INF/01	6	Car.	2	1	Marchese M.

(2) Additional courses (24 CfU)

Scegliere 24 crediti tra le due tabelle seguenti:
Choose 24 CFU taken from the following tables:

Tab 2.1 (12 - 24 CFU)

Titolo / Note	SSD	CFU	Tipo	Anno	Sem.	Docente
145447 – Advanced computing architectures	ING-INF/01	6	Scelta	2	1	Passerone R.
145458 – Laboratory of Applied Robotics	ING-INF/05	6	Car./Sc.	2	1	Palopoli L.
140437 – Laboratory of Wireless Sensor Networks	ING-INF/05	6	Car./Sc.	2	1	Picco G. P.
145071 – Real Time Operating Systems and Middleware	ING-INF/05	6	Car./Sc.	2	1	Palopoli L.

Tab 2.2 (0-12 CFU)

Titolo / Note	SSD	CFU	Tipo	Anno	Sem.	Docente
145462 - Simulation and Performance evaluation	INF/01	6	Car./Sc.	2	2	Lo Cigno R.
145937 - Introduction to Computer and Network Security	ING-INF/05	6	Scelta.	2	1	Ranise S.
145618 - Distributed systems 2	INF/01	6	Car./Sc.	2	1	TACE nel 2017/2018
145943 - Wireless Mesh and Vehicular Networks	INF/01	6	Car./Sc.	2	1	Lo Cigno R.
145322 - Security Testing	INF/01	6	Car./Sc.	2	1	Tonella P.
145289- Research Project	INF/01 - ING-INF/05	12	Car./Sc.	2	1-2	Tutti - no lezioni

Il corso di studi si completa con / the study course is completed by:

- Tesi / thesis: 24 CFU
- Tirocini formativi e di orientamento / internship: 6 CFU

Specialization area: Human Computer Interaction and Design (2nd year: exit point)

I seguenti corsi devono essere inclusi in tutti i piani di studio.

The following courses must be included in all study plans.

(1) Mandatory courses (18 CFU)

Titolo / Note	SSD	CFU	Tipo	Anno	Sem.	Docente
145638 - Design Experience (<i>offered by LM HCI 155000</i>): Mod. 1- User-centered design (condiviso con 145944 - User-centered design) (*) Mod. 2 - Participatory design (condiviso con 145459 - Participatory design) (**)	ING-INF/05	6	Car.	2	1	De Angeli A.
6		1			D'Andrea V.	
145623 - Innovation and Entrepreneurship Studies in ICT	INF/01	6	Car.	2	1	Marchese M.

(*) Condiviso con 145944 - User-centered design, pertanto gli studenti non possono avere entrambi i corsi in piano di studi.
The course is shared with 145944 and it is not possible to have both courses in the study plan.

(**) Condiviso con 145459 - Participatory design, pertanto gli studenti non possono avere entrambi i corsi in piano di studi.
The course is shared with 145459 and it is not possible to have both courses in the study plan.

(2) Additional courses (12 CFU)

Scegliere 12 crediti tra le due tabelle seguenti:

Choose 12 CFU taken from the following tables:

Titolo / Note	SSD	CFU	Tipo	Anno	Sem.	Docente
145611 - Computer Vision and multimedia Analysis	ING-INF/03	6	Scelta	2	1	Conci N.
155011 - Design epistemology and ethics (<i>offerto da LM HCI</i>)	M-FIL/04	6	Scelta	2	1	Troncon R.
155009 - E-learning (<i>offerto da LM HCI</i>)	INF/01	6	Scelta	2	1	Ronchetti M.
145919 - Knowledge and Data Integration	ING-INF/05	6	Scelta	2	1	Giunchiglia F.

145458 - Laboratory of Applied Robotics	ING-INF/05	6	Scelta	2	1	Palopoli L.
155002 - Prototyping interactive systems (<i>offered by LM HCI</i>)	ING-INF/05	6	Scelta	2	1	Zancanaro M.
155010 - Visual design (+lab) (<i>offered by LM HCI</i>)	ICAR/17	6	Scelta	2	1	Franz F.
155001 - User experience (<i>offered by LM HCI</i>)	ING-INF/05	6	Scelta	2	1	De Angeli A.
155004 - Affective computing (offerto da LM HCI)	ING-INF/05	6	Scelta	2	1	Sebe N.
145449 - Big Data and Social Networks	ING-INF/05	6	Scelta	2	1	Velegrakis Y.
145453 - Data Mining	ING-INF/05	6	Scelta	1-2	1	Velegrakis Y.

Il corso di studi si completa con / the study course is completed by:

- Tesi / thesis: 24 CFU
- Tirocini formativi e di orientamento / internship: 6 CFU