

Manifesto Laurea Magistrale in Informatica (Percorso Scienze e Tecnologie Informatiche - Computer Science and Technologies) - Studenti coorte 2018/2019
(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 <i>condivide con LM: Info, Mat</i>	INF/01	6	Car.	1	1	Brunato M.
145761 - Innovation and Business in ICT <i>condivide con LM: Info, Com (in condivisione d'orario con 145936 - Innovation and Entrepreneurship Basic)</i>	SECS-P/10	6	Affine	1	1	Stoycheva M. Guarise A.

(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 <i>condivide con LM: Info, Mat</i>	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 <i>condivide con Lm: Com, Info</i>	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 COM)</i>	ING-INF/03	6	Affine	1-2	1	Conci N.
145614 - Multimedia Data Security <i>condivide con LM: Com, Info, Mat 145192 - Data hiding</i>	ING-INF/03	6	Affine	1-2	1	Boato G.
140153 - Network modeling and design <i>condivide con LM: Com, Info</i>	ING-INF/03	6	Affine	1-2	1	Granelli F.
145447 - Advanced computing architectures <i>condivide con LM: Info, Com</i>	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
145453 - Data Mining <i>condivide con LM: Info, Com, Mat</i>	ING-INF/05	6	Car.	1-2	1	Velegrakis Y.
145919 - Knowledge and Data Integration <i>condivide con LM: Com, Info, QCB</i>	ING-INF/05	6	Car.	1-2	1	Giunchiglia F.
145449 - Big Data and Social Networks <i>condivide con LM: Info, Com, Mat</i>	ING-INF/05	6	Car.	1	1	Velegrakis Y.
145764 - Deep learning <i>condivide con LM: Info, Mat (145903), Data Science (145718)</i>	ING-INF/05	6	Car	1	2	Ricci E.
145615- Intelligent Optimization for data science <i>condivide con LM: Info, Com</i>	INF/01	6	Car.	1	2	Battiti R.

145299 - Language Understanding Systems (*)	ING-INF/05	6	Car.	1	2	Riccardi G.
145084 - Spatial Databases	INF/01	6	Car.	1	2	Kuper G.
145296 – Advanced Natural Language Processing and Information Retrieval <i>condivide con LM: Com, Mat</i>	ING-INF/05	6	Car	1	2	Moschitti A.
145520 - Affective computing <i>(offered by LM HCI - 155004)</i>	ING-INF/05	6	Car.	2	1	Sebe N.

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

Area Bioinformatics

Titolo / Note	SSD	CFU	Tipo	Anno	Sem.	Docente
145919 - Knowledge and Data Integration	ING-INF/05	6	Car.	1-2	1	Giunchiglia F.
145053 - Laboratory of Biological Data Mining <i>condivide con LM QCB (145547 - Data mining), Info, Mat</i>	ING-INF/05	6	Car.	1-2	1	Blanzieri E.
145323 - Privacy and Intellectual Property Rights	ING-INF/05	6	Car.	1-2	1	D'Andrea V. Rossato A.
145389 - Introduction to cell biology <i>condivide con: LM Info, Mat</i>	BIO/13	6	Affine	1-2	1	Cusanelli E.
145085 - Web Architectures	INF/01	6	Car.	1-2	1	Ronchetti M.
145635 - High-Throughput Sequencing Data Analysis <i>condivide con LM QCB (145542 - Genomics II mod.), Info, Bio, Mat</i>	INF/01	6	Car.	1	2	Segata N.
145765 - Algorithms for Bioinformatics	ING-INF/05	6	Car.	1	2	Blanzieri E.
145767 - Bioinformatics Resources	BIO/11	6	Affine	1	2	Romanel A.

Area Software and Service Architectures

Titolo / Note	SSD	CFU	Tipo	Anno	Sem.	Docente
145388 - Introduction to Service Design and Engineering <i>condivide con LM: Info, Com</i>	ING-INF/05	6	Car.	1-2	1	Marchese M.
145072 - Requirements Engineering	INF/01	6	Car.	1-2	1	Perini A.
145322 - Security Testing	INF/01	6	Car.	1-2	1	Ceccato M.
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 <i>condivide con LM: Info, Mat</i>	ING-INF/05	12	Car.	1	2	Sebastiani R.

(*) 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.

Area Systems and Networks

Titolo / Note	SSD	CFU	Tipo	Anno	Sem.	Docente
145458 - Laboratory of Applied robotics	ING-INF/05	6	Car.	1-2	1	Palopoli L.
145943 - Wireless Mesh and Vehicular Networks <i>condivide con LM: Info, Com</i>	INF/01	6	Car.	1-2	1	Lo Cigno R.
145079 - Laboratory of Wireless Sensor Networks <i>condivide con LM: Info, Com</i>	ING-INF/05	6	Car.	1-2	1	Picco G.
145071 - Real-Time Operating Systems and Middleware <i>condivide con LM: Info, Com</i>	ING-INF/05	6	Car.	1-2	1	Palopoli L.

145085 - Web Architectures	INF/01	6	Car.	1-2	1	Ronchetti M.
145065 - Network Security (*) <i>condivide con LM: Info, Com, Mat</i>	ING-INF/05	6	Car.	1	2	Crispo B.
145617- Distributed systems 1 <i>condivide con LM: Info, Com</i>	ING-INF/05	6	Car.	1	2	Picco G.
145618 - Distributed systems 2	INF/01	6	Car.	2	1	Montresor A.

(*) 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 nelle 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>condivide con LM: Mat (145441 - Algebraic Cryptography 1° mod.), Info</i>	MAT/02	6	Scelta	1-2	1	Sala M.
145256 - Statistics of Stochastic Processes <i>condivide LM: Mat, Info</i>	MAT/06	6	Scelta	1-2	1	Agostinelli C.

145937 - Introduction to Computer and Network Security <i>condividere con LM: Info, Com, LT: Info</i>	INF/01	6	Scelta	1-2	1	Ranise S.
145389 - Introduction to cell biology	BIO/13	6	Scelta	1-2	1	Cusanelli E.
145519 - Offensive Technologies (*)	ING-INF/05	12	Scelta	1-2	1	TACE 2018/19
145766 – Complexity, Cryptography and Financial Technologies (mod. 1 e mod.2)	ING-INF/05	12	Scelta	1-2	1	Massacci F.
145914 - Statistical Models <i>condividere con LM: Mat, Info</i>	MAT/06	6	Scelta	1-2	1	Agostinelli C.
145763 - Bio-Inspired Artificial Intelligence <i>condividere con LM: Info, Com</i>	ING-INF/05	6	Scelta	1-2	1	Iacca G
145459 – Participatory Design <i>condividere con LM HCI (155000 Design Experience modulo 2) offered by LM HCI</i>	ING-INF/05	6	Scelta	1	1	D’Andrea V.
145944 – User-centered design <i>condividere con LM HCI parte di (155000 Design Experience modulo 1) offered by LM HCI</i>	ING-INF/05	6	Scelta	1	1	De Angeli A.
145396 - Formal Techniques for Cryptographic Protocol Analysis <i>condividere con LM: Mat, Info</i>	INF/01	6	Scelta	1	2	Zunino R.
145619 - Inverse problems and optimization <i>condividere con LM: Com, Info (offered by LM COM)</i>	ING-INF/02	9	Scelta	1	2	Rocca P.
145561 - Bayesian Statistics <i>condividere con LM: Mat, Info</i>	MAT/06	6	Scelta	1	2	Agostinelli C. Novi Inverardi C.
145769 - Middleware for Internet of Things	ING-INF/05	6	Scelta	2	1	Vecchio M.
145771 - Fog and Cloud Computing	ING-INF/05	6	Scelta	1	2	Siracusa D.
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
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(*) 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.

Innovation and Entrepreneurship Elective Courses

Titolo / Note	SSD	CFU	Tipo	Anno	Sem.	Docente
145323 - Privacy and Intellectual Property Rights	ING-INF/05	6	Scelta	1-2	1	D'Andrea V., Rossato A.
145459 - Participatory Design <i>condivide con LM HCI (155000 Design Experience modulo 2)</i>	ING-INF/05	6	Scelta	1	1	D'Andrea V.
145518 - ICT Innovation - Product Design and Development <i>condivide con LM: Com (parte di 145455 - ICT Innovation), Info</i>	INF/01	6	Scelta	1	2	Massacci F.
145078 - Science Technology and Business	INF/01	6	Scelta	1	2	TACE nel 2018/19
145091 - Technical Writing	L-LIN/12	6	Scelta	1-2	1/2	Centro Linguistico di Ateneo

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

- 145302 - Tesi / thesis: 24 CFU
- 145098 - Tirocini formativi e di orientamento / internship: 6 CFU

Manifesto (ICT Innovation)

Specialization area: Software and Service Architectures (SSA) (1st year: 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 <i>condivide con LM: Info, Com (in condivisione d'orario con 145761 - Innovation and Business in ICT)</i>	SECS-P/10	6	Affine	1	1	Stoycheva M. Guarise A.
145288 - Business Development Laboratory <i>condivide con LM: Info, Com</i>	SECS-P/08	9	Affine	1	2	Da definire
145455 - ICT Innovation ** <i>condivide con LM: Com, Info</i>	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.
145072 - Requirements Engineering	INF/01	6	Car.	1	1	Perini A.
145459 - Participatory Design <i>condivide con LM HCI (155000 Design Experience modulo 2)</i>	ING-INF/05	6	Car.	1	1	D'Andrea V.

(2) Additional courses (18 CFU)

Selezionare 18 CFU fra i seguenti corso. 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.
145085 - Web Architectures	INF/01	6	Car.	1	1	Ronchetti M.
145322 - Security Testing	INF/01	6	Car.	1-2	1	Ceccato M.
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.
145301 - Project course	INF/01 ING-INF/05	6	Car.	1-2	2/1	Tutti / All
145615- Intelligent Optimization for data science	INF/01	6	Car.	1	2	Battiti R.
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.

Manifesto (ICT Innovation)**Specialization area: Software and Service Architectures (SSA) (2nd year: 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	Scelta	2	1	Velegrakis Y.
145453 - Data Mining	ING-INF/05	6	Scelta	2	1	Velegrakis Y.
145090 - Interazione Uomo-Macchina /Human-Computer Interaction <i>condivide LT: Info, Org, LM: Info</i>	ING-INF/05	6	Scelta	2	1	De Angeli A.
145937- Introduction to Computer and Network Security	INF/01	6	Scelta	2	1	Ranise S.
145062 - Machine learning	INF/01	6	Scelta	2	1	Passerini A.
145323 - Privacy and Intellectual Property Rights	ING-INF/05	6	Scelta	2	1	D'Andrea V. Rossato A.

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

- 145302 - Tesi / thesis : 24 CFU
- 145098 - Tirocini formativi e di orientamento / internship: 6 CFU

Manifesto (ICT Innovation)**Specialization area: Cyber Security (CSE) (1st year: 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 <i>condivide con LM: Info, Com (in condivisione d'orario con 145761 - Innovation and Business in ICT)</i>	SECS-P/10	6	Affine	1	1	Stoycheva M. Guarise A.
145288 - Business Development Laboratory <i>condivide con LM: Info, Com</i>	SECS-P/08	9	Affine	1	2	Da definire
145455 - ICT Innovation ** <i>condivide con LM: Com, Info</i>	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 <i>(Mutuato da Mat - 145441 - Algebraic Cryptography 1° modulo)</i>	MAT/02	6	Scelta	1	1	Sala M.
145322 - Security Testing	INF/01	6	Car.	1	1	Ceccato M.

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.

(2a) 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 table (1b) which has not been selected yet ,as well as from the following table.

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	TACE 2018/19
145766 – Complexity, Cryptography and Financial Technologies (mod. 1 e mod.2)	ING-INF/05	12	Car.	2	1	Massacci F.
145618 - Distributed systems 2	INF/01	6	Car.	2	1	Montresor A.
145396 - Formal Techniques for Cryptographic Protocol Analysis (<i>Mutuato da MAT – 145396</i>)	INF/01	6	Car.	1	2	Zunino R
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: Cyber Security (CSE) (2nd year: 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 <i>condivide con LM: Info, Com</i>	INF/01	6	Car.	2	1	Marchese M.

(2) Additional courses (24 CFU) (*)

Scegliere 24 crediti tra i corsi della seguente tabella.
Choose 24 CFU taken from the course listed in the following table.

Titolo / Note	SSD	CFU	Tipo	Anno	Sem.	Docente
145614 - Multimedia Data Security <i>(offered by LM COM)</i>	ING-INF/03	6	Scelta	2	1	Boato G.
145519 – Offensive Technologies	ING-INF/05	12	Car./Scelta	2	1	TACE 2018/2019
145766 – Complexity, Cryptography and Financial Technologies (mod. 1 e mod.2)	ING-INF/05	12	Car./Scelta	2	1	Massacci F.
145301 - Project course	INF/01 ING-INF/05	6	Car./Scelta	2	1	Tutti / All
145289 - Research Project	INF/01 ING-INF/05	12	Car./Scelta	2	1	Tutti / All
145322 - Security Testing	INF/01	6	Car./Scelta	2	1	Ceccato M.
145062 - Machine learning	INF/01	6	Car./Scelta	2	1	Passerini A.
145618 – Distributed systems 2	INF/01	6	Car./Scelta	2	1	Montresor A.

145323 – Privacy and Intellectual Property Rights	ING-INF/05	6	Car./Scelta	2	1	D'Andrea V., Rossato A.
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(*) Students cannot choose a course that has been already chosen in the past. A course cannot be chosen twice even if the choice is made at a different University.

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

- 145302 - Tesi / thesis: 24 CFU
- 145098 - Tirocini formativi e di orientamento / internship: 6 CFU

Manifesto (ICT Innovation)**Specialization area: Embedded Systems (2nd year: Exit Point)****(1) Mandatory course (6 CFU)**

Il seguente corso deve essere incluso in tutti i piani di studio.
The following course 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 i corsi inclusi nella seguente tabella.
Choose 24 CFU from the courses listed in the following table.

Titolo / Note	SSD	CFU	Tipo	Anno	Sem.	Docente
145447 – Advanced computing architectures	ING-INF/01	6	Car.	2	1	Passerone R.
145458 – Laboratory of Applied Robotics	ING-INF/05	6	Car.	2	1	Palopoli L.
145079 – Laboratory of Wireless Sensor Networks <i>condivide con LM: Info, Com</i>	ING-INF/05	6	Car.	2	1	Picco G. P.
145071 – Real Time Operating Systems and Middleware	ING-INF/05	6	Car.	2	1	Palopoli L.

Titolo / Note	SSD	CFU	Tipo	Anno	Sem.	Docente
145301 - Project course	INF/01 ING-INF/05	6	Car.	2	1	Tutti / All
145937 - Introduction to Computer and Network Security	ING-INF/05	6	Car..	2	1	Ranise S.
145618 - Distributed systems 2	INF/01	6	Car.	2	1	Montresor A.
145943 - Wireless Mesh and Vehicular Networks	INF/01	6	Car.	2	1	Lo Cigno R.
145322 - Security Testing	INF/01	6	Car.	2	1	Ceccato M.
145289- Research Project	INF/01 ING-INF/05	12	Car.	2	1	Tutti /All

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

- 145302 - Tesi / thesis: 24 CFU
- 145098 - 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
145944 - User-centered design <i>condivide con LM HCI (155000 Design Experience modulo 1) offered by LM HCI 155000</i>	ING-INF/05	6	Car.	2	1	De Angeli A.
145459 - Participatory design <i>condivide con LM HCI (155000 Design Experience modulo 2) offered by LM HCI 155000</i>	ING-INF/05	6	Car.	2	1	D'Andrea V
145623 - Innovation and Entrepreneurship Studies in ICT	INF/01	6	Car.	2	1	Marchese M.

(2) Additional courses (12 CFU)

Scegliere 12 crediti tra i corsi inclusi nella seguente tabella.

Choose 12 CFU from the courses listed in the following table.

Titolo / Note	SSD	CFU	Tipo	Anno	Sem.	Docente
145611 - Computer Vision and multimedia Analysis <i>condivide con LM: Com (parte di 145630), Info</i>	ING-INF/03	6	Affine	2	1	Conci N.
155011 - Design epistemology and ethics (<i>offered by LM HCI</i>)	M-FIL/04	6	Scelta	2	1	Dellantonio S. Iob R.
155009 - E-learning (<i>offered by LM HCI</i>)	INF/01	6	Car.	2	1	Pasqualotto A.
145919 - Knowledge and Data Integration	ING-INF/05	6	Car.	2	1	Giunchiglia F.
145458 - Laboratory of Applied Robotics	ING-INF/05	6	Car.	2	1	Palopoli L.

155002 – Prototyping interactive systems (<i>offered by LM HCI</i>)	ING-INF/05	6	Car.	2	1	Zancanaro M.
155001 – User experience (<i>offered by LM HCI</i>)	ING-INF/05	6	Car.	2	1	De Angeli A.
145520 - Affective computing <i>condivide con LM: HCI (155004), Info (offered by LM HCI)</i>	ING-INF/05	6	Car.	2	1	Sebe N.
145449 - Big Data and Social Networks	ING-INF/05	6	Car.	2	1	Velegrakis Y.
145453 - Data Mining	ING-INF/05	6	Car.	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

Legenda:

Info: corso di laurea magistrale in Informatica / Master of Science in Computer Science

Com: corso di laurea magistrale in Ingegneria dell'Informazione e delle Comunicazioni / Master of Science in Information and Communication Engineering

HCI: corso di laurea magistrale in Human-Computer Interaction / Master of Science in Human-Computer Interaction

QCB: corso di laurea magistrale in Quantitative and Computational Biology/ Master of Science in Quantitative and Computational Biology

Mat: corso di laurea magistrale in Matematica / Master of Science in Mathematics

LM: corso di laurea magistrale / Master of Science

LT: corso di laurea / Bachelor of Science