MASTER OF SCIENCE IN COMMUNICATION ENGINEERING

(Laurea Magistrale) ***https://corsi.unipr.it/cdlm-ce***

Program offered in English to students enrolled in year 2025-26

1st year

1st semester	*SSD*	*CFU*	*2nd semester*	*SSD*	*CFU*
Communication Fundamentals	ING-INF/03	9	Detection and Estimation	ING-INF/03	9
Network Performance	ING-INF/03	6	Information Theory	ING-INF/03	6
Antennas for wireless systems	ING-INF/02	6			

2nd year

1st semester	*SSD*	*CFU*	*2nd semester*	*SSD*	*CFU*
Digital Communications	ING-INF/03	9	Optical Communications	ING-INF/03	9
Wireless Communications	ING-INF/03	9	Photonic Devices	ING-INF/02	9

Thesis and final examination 24 CFU

(1) Elective Complementary Courses (pick >= 12 *CFU*)

1st semester, 1st year	*SSD*	*CFU*	*2nd semester, 1st year*	*SSD*	*CFU*
Machine learning for pattern recognition	ING-INF/05	6	Nonlinear systems and control	ING-INF/04	6
Project Management	ING-IND/17	6	High-performance computing	ING-INF/05	6
Ricerca Operativa	MAT/09	9			
ICT for health and well-being	ING-INF/01	6	Model identification and data analysis	ING-INF/04	6
Deep learning and generative models	ING-INF/05	6			
			Network Security	ING-INF/05	6
			Satellite Networks	ING-INF/03	6

(2) Elective Free Courses (pick >= 12 *CFU*)

1st semester, 1st year	*SSD*	*CFU*	*2nd semester, 1st year*	*SSD*	*CFU*
Optical Networking (*)	ING-INF/03	6	Network Information Theory (*)	ING-INF/03	6
Vehicular Communications	ING-INF/03	6			
			Internet of things	ING-INF/03	6

Lingua italiana per stranieri 3 CFU (Eligible by international students)

Instructions: To complete your study plan, you must pick: **(choice 1)** 2 courses (>=12 CFU) from the menu "Elective Complementary Courses"; AND **(choice 2)** 2 courses (>=12 CFU) from the menu "Elective Free Courses". Elective Free Courses can also be selected from the list of Elective Complementary Courses or from the programs of Second Cycle Degrees *(Lauree Magistrali)* in Electronics Engineering and Computer Engineering, with no need for further approval. Other courses of the University of Parma can be chosen subject to approval by the Course Program Committee.

Notes:

- "Master of Science Degree" is also called "Second Cycle Degree" (*Italian: Laurea Magistrale).*
- CFU = Number of course credits *(Italian: Crediti formativi universitari)*
- SSD = Course category *(Italian: Settore scientifico disciplinare)*
- This Second Cycle Degree course allows to obtain an Italian-French double degree within a Multilateral Cooperation Agreement between Italy and France.
- Courses in italics are taught in Italian.
- Courses with an asterisk (*) are in e-learning (i.e., based on pre-recorded video lectures, no physical classes).

(*) **Admission to the Master course in Communication Engineering:** requirements are reported both at art. 10 of the "Regolamento Didattico" (https://cdlm-ce.unipr.it/il-corso/regolamento-del-corso-di-studio) and on the course operational web site (http://communication-eng.unipr.it/index.php/admission-procedures/).