MASTER'S DEGREE IN ELECTRONIC ENGINEERING FOR INTELLIGENT VEHICLES

CALENDARIO ACCADEMICO A.A. 2024/2025*
Primo anno, erogato presso l'Università di Bologna

PERIODI DI LEZIONE

I periodo didattico	II periodo didattico
Da lunedì 16/09/2024 a venerdì 20/12/2024 Sospensioni: 4 ottobre 2024 (festività del patrono San Petronio) 7-8-9 ottobre 2024 (Lauree) 1° novembre 2024 (festività Ognissanti) 4-5-6 dicembre 2024 (Lauree) 8 dicembre 2024 (festività dell'Immacolata)	Da lunedì 17/02/2025 a venerdì 13/06/2025 Sospensioni: 24-25-26 marzo 2025 (Lauree) Dal 17 aprile al 22 aprile 2025 (festività di Pasqua) 23-24-25 aprile 2025 (Festa della Liberazione) 1-2 maggio 2025 (Festa del Lavoro)

SESSIONI DI ESAMI DI PROFITTO

I sessione	II sessione
Da lunedì 23/12/2024 a venerdì 14/02/2025	Da lunedì 16/06/2025 a venerdì 12/09/2025

* Le lezioni e gli esami del primo anno del Corso in "Electronic Engineering for Intelligent Vehicles" si svolgono presso l'Università di Bologna. Il calendario didattico e le sessioni di esami fanno riferimento all'Università di Bologna e sono differenti da quelle offerte dall'Università di Parma.

ACADEMIC CALENDAR A.Y. 2024/2025*
1st year, held in the University of Bologna

TEACHING TERMS

1st term	**2nd term**
From Monday 16/09/2024 to Friday 20/12/2024 Class suspensions: October 4th 2024 (city of Bologna Patron Saint Holyday) October 7th-8th-9th 2024 (Graduation session) November 1st 2024 (All Saints Holiday) December 4th-5th-6th 2024 (Graduation session) December 8th 2024 (Immaculate Conception Holiday)	From Monday 17/02/2025 to Friday 13/06/2025 Class suspensions: March 24th-25th-26th 2025 (Graduation session) From April 17th to April 22nd 2025 (Easter Holidays) April 23rd-24th -25th 2025 (Liberation Day) May 1st -2nd 2025 (Labour Day)

EXAM SESSIONS

1st session	**2nd session**
From Monday 23/12/2024 to Friday 14/02/2025	From Monday 16/06/2025 to Friday 12/09/2025

* Classes and exams of the 1st year of the Master degree in "Electronic Engineering for Intelligent Vehicles" will be held at the University of Bologna. The academic calendar and the exam sessions are provided by the University of Bologna, and are different from those offered by the University of Parma.

CALENDARIO ACCADEMICO A.A. 2024/2025*
Secondo anno, curriculum ECS erogato presso l'Università di Modena e Reggio Emilia

PERIODI DI LEZIONE

I periodo didattico	II periodo didattico
Da lunedì 16/09/2024 a venerdì 20/12/2024 Sospensioni: 17 ottobre 2024 (Lauree) 1° novembre 2024 (Festività Ognissanti) Dal 4 al 8 novembre 2024 (Prove intermedie) 3 dicembre 2024 (Lauree)	Da lunedì 24/02/2025 a giovedì 05/06/2025 Sospensioni: Dal 11 al 22 aprile 2025 (Prove intermedie e festività di Pasqua) 25 aprile 2025 (Festa della Liberazione) 1° maggio 2025 (Festa del Lavoro)

SESSIONI DI ESAMI DI PROFITTO

I sessione	II sessione
Da martedì 07/01/2025 a venerdì 21/02/2025	Da venerdì 06/06/2025 a giovedì 31/07/2025

*Le lezioni e gli esami del secondo anno del Corso in "Electronic Engineering for Intelligent Vehicles" per il curriculum "Electronic and Communication System" (ECS) si svolgono presso l'Università di Modena e Reggio Emilia. Il calendario didattico e le sessioni di esami fanno riferimento all'Università di Modena e Reggio Emilia e sono differenti da quelle offerte dall'Università di Parma.

CALENDARIO ACCADEMICO A.A. 2024/2025
Secondo anno, curriculum ADE erogato presso l'Università di Parma

Le lezioni e gli esami del secondo anno del Corso in "Electronic Engineering for Intelligent Vehicles" per il curriculum "Autonomous Driving Engineering" (ADE) si svolgono presso l'Università di Parma. Il calendario didattico e le sessioni di esami fanno riferimento all'Università di Parma e sono riportate nel paragrafo "Calendario delle attività didattiche" di questo Manifesto degli studi.

SESSIONI DI LAUREA

Le sessioni di Laurea per entrambi i curricula si svolgeranno presso l'Università di Parma e seguiranno il calendario indicato per gli altri corsi di Laurea di Ingegneria, salvo specifiche indicazioni per il corso di studio che verranno comunicate in prossimità delle sessioni.

ACADEMIC CALENDAR A.Y. 2024/2025*
2nd year for the curriculum ECS held in the University of Modena and Reggio Emilia

TEACHING TERMS

1st term	**2nd term**
From Monday 16/09/2024 to Friday 20/12/2024 Class suspensions: October 17th 2024 (Graduation session) November 1st 2024 (All Saints Holiday) From November 4th to 8th 2024 (partial examination session) December 3rd 2024 (Graduation session)	From Monday 26/02/2025 to Thursday 05/06/2025 Class suspensions: From April 11th to 22nd 2025 (partial examination session and Easter Holidays) April 25th 2025 (Liberation Day) May 1st 2025 (Labour Day)

EXAM SESSIONS

1st session	**2nd session**
From Tuesday 07/01/2025 to Friday 21/02/2025	From Friday 06/06/2025 to Thursday 31/07/2025

* Classes and exams of the 2nd year of the Master degree in "Electronic Engineering for Intelligent Vehicles" for the curriculum "Electronic and Communication System" (ECS) will be held at the University of Modena and Reggio Emilia. The academic calendar and the exam sessions are provided by the the University of Modena and Reggio Emilia, and are different from those offered by the University of Parma.

ACADEMIC CALENDAR A.Y. 2024/2025
2nd year for the curriculum ADE held in the University of Parma

Classes and exams of the 2nd year of the Master degree in "Electronic Engineering for Intelligent Vehicles" for the curriculum "Autonomous Driving Engineering" (ADE) will be held at the University of Parma. The academic calendar and the exam sessions are provided by the University of Parma and they can be found in the section " Calendario delle attività didattiche" of this Manifesto degli Studi.

GRADUATION SESSIONS

The Graduation sessions for both curricula will take place at the University of Parma and will follow the calendar indicated for the other Engineering Degree courses, except for specific indications for the Master's Degree that will be communicated close to the sessions.

MASTER'S DEGREE IN ELECTRONIC ENGINEERING FOR INTELLIGENT VEHICLES
(Class LM-29)
All the lectures will be held in English

1ST YEAR
Curriculum "Electronic and Communication System" (ECS)
(Place of teaching: University of Bologna)

Period	**Mandatory courses**	**SSD**	**ECTS (CFU)**
1st semester	**Advanced automotive sensors**	ING-INF/07	**6**
Annual course	**Hardware-software design of embedded systems I.C.** Architectures and firmware M Real time OS	 ING-INF/01 ING-INF/05	**12** 6 6
2nd semester	**Automatic control**	ING-INF/04	**6**
1st semester	**Signals and systems for vehicular communications**	ING-INF/03	**6**
Annual course	**Wired and wireless interconnections**	ING-INF/02	**9**

Period	**Elective courses**	**SSD**	**ECTS (CFU)**
	Elective complementary courses (pick 2/3)(‡)		
1st semester	**Power electronics for automotive**	ING-INF/01	**6**
1st semester	**Test, diagnosis and reliability**	ING-INF/01	**6**
2nd semester	**Statistical signal processing**	ING-INF/01	**6**
	Elective complementary courses (pick 1/2)(†)		
2nd semester	**Dynamics and compliant design of road vehicles**	ING-IND/32	**6**
2nd semester	**Deep learning for engineering applications**	ING-INF/05	**6**

	Elective complementary courses (pick 1/2)(+)		
1st semester	**Ground vehicle dynamics**	NN	**3**
2nd semester	**Connected vehicles**	NN	**3**

1ST YEAR
Curriculum "Autonomous Driving Engineering" (ADE)
(Place of teaching: University of Bologna)

Period	**Mandatory courses**	**SSD**	**ECTS (CFU)**
1st semester	**Advanced automotive sensors**	ING-INF/07	**6**
Annual course	**Hardware-software design of embedded systems I.C.** Architectures and firmware M Real time OS	 ING-INF/01 ING-INF/05	**12** 6 6
2nd semester	**Automatic control**	ING-INF/04	**6**
1st semester	**Image processing and computer vision**	ING-INF/05	**6**
Annual course	**Vehicular radio propagation**	ING-INF/02	**9**
2nd semester	**Deep learning for engineering applications**	ING-INF/05	**6**

Period	**Elective courses**	**SSD**	**ECTS (CFU)**
	Elective complementary courses (pick 2/3)(*)		
1st semester	**Power electronics for automotive**	ING-INF/01	**6**
1st semester	**Test, diagnosis and reliability**	ING-INF/01	**6**
2nd semester	**Statistical signal processing**	ING-INF/01	**6**

2ND YEAR (held in 24/25)
Curriculum "Electronic and Communication System (ECS)
(Place of teaching: University of Modena and Reggio Emilia)

Period	**Mandatory courses**	**SSD**	**ECTS (CFU)**
1st semester	**Applied topics in automotive electronics** Electronic systems design Automotive technologies for ranging, vision, and connectivity	 ING-INF/01 ING-INF/02	**12** 6 6

Period	**Elective courses**	**SSD**	**ECTS (CFU)**
	Elective complementary courses (pick 2/6)(‡)		
1st semester	**Artificial intelligence for automotive**	ING-INF/05	**6**
1st semester	**Industrial co-teaching**	ING-ND/32	**6**
1st semester	**Automotive connectivity**	ING-INF/03	**6**
1st semester	**Automotive cyber security**	ING-INF/05	**6**
1st semester	**Modeling and control of electromechanical systems**	ING-INF/04	**6**
1st semester	**Platforms and algorithms for autonomous driving**	ING-INF/05	**6**
	ELECTIVE FREE-CHOICE COURSES *		**12**
Other activities	**Final examination** or **Final examination+ internship**		**24** **3+21**

2ND YEAR (held in 25/26)
Curriculum "Electronic and Communication System (ECS)
(Place of teaching: University of Modena and Reggio Emilia)

Period	Mandatory courses	SSD	ECTS (CFU)
1st semester	**Applied topics in automotive electronics** Electronic systems design Automotive technologies for ranging, vision, and connectivity	 ING-INF/01 ING-INF/02	**12** 6 6

Period	Elective courses	SSD	ECTS (CFU)
	Elective complementary courses (pick 2/5)(ǂ)		
1st semester	**Artificial intelligence for automotive**	ING-INF/05	**6**
1st semester	**Industrial co-teaching**	ING-ND/32	**6**
1st semester	**Automotive connectivity**	ING-INF/03	**6**
1st semester	**Automotive cyber security**	ING-INF/05	**6**
1st semester	**System identification and learning**	ING-INF/04	**6**
	ELECTIVE FREE-CHOICE COURSES *		**12**
Other activities	**Final examination** or **Final examination+ internship**		**24** **3+21**

2ND YEAR
Curriculum "Autonomous Driving Engineering" (ADE)
(Place of teaching: University of Parma)

Period	Mandatory courses	SSD	ECTS (CFU)
1st semester	**Electronics and lighting technologies for automotive** Electronics for Automotive systems Automotive lighting and ranging technologies	 ING-NF/01 ING-NF/02	**12** 6 6
1st semester	**Computer engineering laboratory**	NN	**3**

Period	Elective courses	SSD	ECTS (CFU)
	Elective complementary courses (pick 2/6)(*)		
1st semester	**3D perception, learning-based data fusion**	ING-NF/05	**6**
1st semester	**Autonomous driving and adas technologies**	ING-NF/05	**6**
1st semester	**Visual perception for self-driving cars**	ING-NF/05	**6**
1st semester	**Virtual systems and human machine interface**	ING-NF/05	**6**
1st semester	**Path and trajectory planning**	ING-NF/04	**6**
1st semester	**Vehicular communications**	ING-NF/03	**6**
	ELECTIVE FREE-CHOICE COURSES *		**12**
Other activities	**Final examination** or **Final examination+ internship**		**24** **3+21**

Elective free-choice courses 12 CFU
(Place of teaching: University of Modena and Reggio Emilia)

Period	**Elective free-choice courses**	**SSD**	**ECTS (CFU)**
2nd YEAR 1st semester	**Training for automotive companies creation I**	ING-INF/07	**6**
2nd YEAR 2nd semester	**Training for automotive companies creation II**	ING-INF/07	**6**
2nd YEAR 1st semester	**Product safety, product liability and automotive M**	IUS/01	**6**

Instructions: To complete your study plan, you must pick:

- 2 courses (>= 12 CFU) from each "Elective Complementary Courses" menu labeled with (‡)
- 1 course (>= 6 CFU) from each "Elective Complementary Courses" menu labeled with (†)
- 2 courses (>= 12 CFU) from "Elective Free-Choice Courses" menu. Elective free-choice courses can also be selected from the list of Elective Complementary Courses with no need of further approval. Other courses can be chosen from those offered within Second Cycle Degrees (Lauree Magistrali) of the four Universities of Emilia Romagna, subject to approval by the course Program Committee.