

## **TECHNOLOGY AREA**

## "Enzo Ferrari" Department of Engineering

Call for Applications for the International Inter-University Master's

Degree Programme in

## **ADVANCED AUTOMOTIVE ENGINEERING**

(Class LM-33)

MUNER - Motorvehicle University of Emilia Romagna

https://motorvehicleuniversity.com/

in collaboration with the Universities of Bologna, Ferrara, and Parma

Partner companies:

Automobili Lamborghini spa, Dallara Automobili spa, Ducati Motor Holding spa, Ferrari spa, Haas F1 Team, HPE COXA srl, Marelli spa, Maserati spa, Pagani Automobili spa, Visa Cash App RB Formula One Team

and

ART spa, AVL Italia srl, CNH Industrial spa, Danisi Engineering srl, MAHLE Aftermarket Italy srl., Pirelli Tyre spa, Robert Bosch spa, STmicroelectronics srl

RESERVED TO INTERNATIONAL STUDENTS REQUIRING AN ENTRY VISA IN ITALY

Academic Year 2025/2026

The programme will be held entirely in English

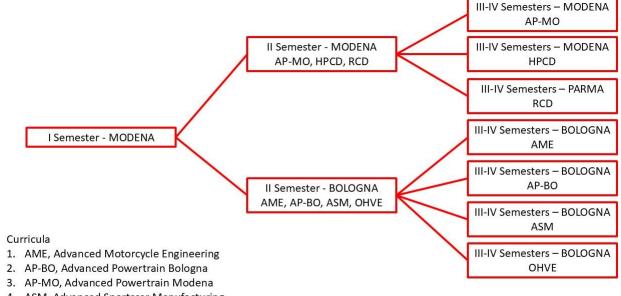
## 1. SUBJECT

At the University of Modena and Reggio Emilia, from **07/02/2025 to 28/03/2025** candidates can submit their online applications for the admission to the Master's Degree Programme in Advanced Automotive Engineering. The programme includes seven curricula:

- Advanced Motorcycle Engineering
- Advanced Powertrain- Bologna
- Advanced Powertrain- Modena
- Advanced Sportscar Manufacturing
- High Performance Car Design
- Off-Highway Vehicle Engineering
- Racing Car Design

There are **21 places available (three for each curriculum)**, reserved for international students who require an entry visa for Italy.

Depending on the curriculum, teaching activities take place at the teaching sites in Bologna (BO), Modena (MO) and Parma (PR) as shown in Figure 1:



- 4. ASM, Advanced Sportscar Manufacturing
- 5. HPCD, High Performance Car Design
- 6. OHVE, Off-Highway Vehicle Engineering
- 7. RCD, Racing Car Design

Figure 1: course breakdown at the teaching sites in Bologna (BO), Modena (MO) and Parma (PR).

In the event that the 21 places are not fully filled according to the slidings in the ranking list, they will be made available to Italian, EU and non-EU applicants with regular residence in Italy, in accordance with the deadlines set out in the call for admission to the Master's Degree in Advanced Automotive Engineering reserved for Italian, EU and non-EU students with regular residence in Italy.

European and non-European applicants who are legally resident in Italy have the same status as Italian applicants. They can therefore apply for admission to the Master's Degree in Advanced Automotive Engineering by following the procedure indicated in the call for applications, which will be drawn up specifically for them and published at the following link:

https://www.unimore.it/it/didattica/corsi-di-studio/advanced-automotive-engineering

The director of the Master's Degree programme is Professor Matteo Giacopini (info.aae@unimore.it).

#### QUALIFICATIONS AND KNOWLEDGE REQUIRED FOR THE **ADMISSION**

Eligibility requirements for the Master's Degree programme are as follows:

- Candidates shall possess one of the following study qualifications:
  - Bachelor's Degree;
  - Three-year University Diploma;
  - Five-year University Degree (before MD 509/1999);

obtained with a minimum score of 95/110 or, for study qualifications obtained abroad and considered equivalent, at least 86% of the maximum score or a ranking in the top 30% of the candidate's reference class.

The knowledge required for accessing this programme refers to a suitable knowledge of general scientific methods and contents in the basic disciplines (Mathematics, Computer Science, Statistics, Physics and Chemistry) as well as in engineering disciplines that are preparatory for the specific subjects of the degree programme. Three-year degree programmes in Mechanical, Vehicle, Aerospace, Naval, Mechatronics and Industrial Engineering automatically guarantee the consistency of prior knowledge; other degree programmes will be evaluated by a dedicated Board by examining the candidate's academic career.

- Knowledge of the English language at a level suitable to use texts of the sector and to follow the classes and seminars in English, equivalent at least to level B2 of the common European framework. The following documents shall be submitted:
  - International certificate recognised by UNIMORE, among those listed at the link: http://www.cla.unimore.it/site/en/home/certifications.html;
  - University examinations on English language skills at a level equivalent to B2, documented by a certificate from the home University;
  - Proof that the degree or diploma obtained is awarded in English;
  - Proof of origin from English mother-tongue countries (foreign or Italian citizens who are fluent in English as a consequence of their family background or linguistic experience shall be considered native speakers).

For potential future students who do not have suitable documentation to certify their language level upon entry, the Language Centre of the University of Modena and Reggio Emilia offers the possibility of taking a B2 level test remotely. Enrolment in the English test is subject to the application for the degree programme of interest. Candidates can therefore only register for an English test after they have applied for the degree programme of their choice. All information on the B2 test offered by the Language Centre is published at the following link https://www.cla.unimore.it/site/en/home.html.

The fulfilment of the curricular requirements for eligibility to the degree programme is assessed by a specific Board that analyses the documents submitted.

## 3. SUBMITTING THE APPLICATION

Applications can only be submitted online between 07/02/2025 and 28/03/2025 at 3.00 p.m. (CET) by accessing the website http://www.esse3.unimore.it.

The procedure involves the following steps:

Register on the Esse3 website. Enter your personal details, place of birth, residence, domicile, telephone number and e-mail address.

If the registration is successful, a username and password (personal data) will be displayed, which are required for the next steps. The login details will also be sent to the student by e-mail.

It is possible to download the "Guide to registration guide for Master's programmes" at the following https://www.unimore.it/en/services/guides-onlinelink:

procedures.https://www.unimore.it/servizistudenti/guideEsse3.html

- 2. Enter your username and password to access the personal area in Esse3.
- 3. In the menu on the right, select "Registered Area / Student Area Admission" and select "Advanced Automotive Engineering" from the list of degree programmes. Answer "Yes" to the question "Are you an international student with a foreign qualification applying for a visa at the embassy?".

Each candidate may only submit one application, in which it is <u>MANDATORY</u> to indicate the order of preference of the following seven curricula:

- Advanced Motorcycle Engineering
- Advanced Powertrain Bologna
- Advanced Powertrain Modena
- Advanced Sportscar Manufacturing
- High Performance Car Design
- Off-Highway Vehicle Engineering
- Racing Car Design

#### The order of preference indicated in the application is binding and CANNOT be changed later.

Once all the procedures for enrolment in the Degree programme have been completed, enrolled students may submit a request to change the curriculum, following the instructions in the specific notice published at the link <a href="https://www.unimore.it/it/didattica/corsi-di-studio/advanced-automotive-engineering">https://www.unimore.it/it/didattica/corsi-di-studio/advanced-automotive-engineering</a>
The requests will be evaluated by the Degree Programme Council.

IMPORTANT: To complete the application, the candidate must attach the following documents, under penalty of exclusion from the evaluation process, paying particular attention to the naming of the files as indicated.

- Documents necessary for assessing the eligibility of the candidate:
  - 1. PDF format file named
    - "familynamecandidate\_namecandidate\_certificatefinalgrade" containing the certificate of the degree obtained and the degree final grade.
  - PDF format file named
    - "familynamecandidate\_namecandidate\_minmaxfinalgrade" containing the certification of the maximum and minimum final grade according to the grading system adopted by the foreign university where the degree was obtained.
  - 3. PDF format file named
    - "familynamecandidate\_namecandidate\_top30percent"
    - containing a declaration from the foreign university where the degree was obtained that the final grade obtained by the candidate is within the top 30% of the reference class to which the candidate belongs.
    - NOTE: this file is optional if the degree grade is at least 86% of the maximum score provided for in the grading system of the foreign university where the degree was obtained.
  - 4. PDF format file named
    - "familynamecandidate\_namecandidate\_B2englishcertificate" containing a certificate stating the knowledge of the English language.
  - 5. PDF format file named
    - "familynamecandidate\_namecandidate\_valididdoc" containing copy of a valid identity document.
  - 6. PDF format file named
    - "familynamecandidate\_namecandidate\_AppendixA" containing Appendix A to this call for applications, carefully completed in all its parts.

#### NOTE: ALL the attached documents listed above must be in ITALIAN or ENGLISH.

#### Documents necessary to determine the candidate's admission score:

- PDF format file named
  - "familynamecandidate\_namecandidate\_transcript" containing a detailed list of exams taken during the university career and the corresponding grades (Transcript of Records).
- PDF format file named
  - "familynamecandidate namecandidate topiclist" containing a description of the topics covered in the individual courses.
- PDF format file named
  - "familynamecandidate\_namecandidate\_studyexchange" containing a certification of possible participation in student mobility projects (e.g. Erasmus+). NOTE: this file is optional and must be uploaded only if the candidate actually participated in student mobility projects.
- PDF format file named
  - "familynamecandidate\_namecandidate\_LbD"
  - containing a certification of possible participation in university projects of Learning by Doing type (e.g. Formula Student, Formula SAE, Motostudent).
  - NOTE: this file is optional and must be uploaded only if the candidate has actually taken part in university projects of Learning by Doing type.
- PDF format file named
  - "familynamecandidate\_namecandidate\_internship"
  - containing a certification of completion of a possible curricular internship in a field similar to that of the degree programme.
  - NOTE: this file is optional and must be uploaded only if the candidate has actually completed a curricular internship in a field similar to that of the degree programme.
- 6. Self-presentation video lasting 90 seconds recorded according to the methods described in Appendix C of this call. (WARNING: The video cannot be uploaded to the esse3 website. but must be made available by carefully following the instructions in Appendix C)
- PDF format file named
  - "familynamecandidate namecandidate AppendixB" containing Appendix B to this call for applications, carefully completed in all its parts.

#### NOTE: ALL the attached documents listed above must be in ITALIAN or ENGLISH.

IMPORTANT: the application will not be submitted correctly until you save the data and answer YES in the specific field "Do you want to submit your application now?". Once the submission has been successfully completed, printing of the application will become possible. The Board WILL NOT assess candidates whose application HAS NOT been explicitly confirmed.

In the event that the question "Do you want to submit your application now?" has been answered with "Yes", but the attachments have not been submitted correctly or completely via the online procedure, candidates can send an email to segrstud.ingegneria@unimore.it by 28/03/2025 at 3:00 pm (CET), providing a valid ID and explaining the problem. Should it be necessary to re-open the application to amend the attached documents or attach new ones, please note that it is the applicant's responsibility to finalise and close the application, to avoid exclusion from the evaluation.

The application for admission requires a non-refundable contribution of € 55,00 to cover the costs. Payment shall be made BY 28/03/2025.

As indicated in the information on the link

https://www.unimore.it/en/education/enrolment-and-admission/paying-university-tuition-fees

log on to the website www.esse3.unimore.it and go to the "Taxes" section to view the amounts due and to access the PagoPA payment circuit.

Payment of the amounts due must be made exclusively via the PagoPA circuit, which allows online payment by selecting your Payment Service Provider - PSP. Upon payment confirmation, an email will be

sent to the personal mailbox indicated during registration, or to the University mailbox if it is already activated. You can print out the payment receipt on your personal Esse3 page, under the "Taxes" section. Please note that the amount of commission may vary depending on the PSP selected.

#### Mind the deadlines

**Important:** The University considers THE PAYMENT DATE STATED ON THE ONLINE PAYMENT RECEIPT (RT) TO BE DECISIVE.

Regardless of the justifying reasons, payments dated after 28 March 2025 on the payment receipt (RT) will not be considered valid for registration.

Warning! According to AgID, the Agency for Digital Italy, the payment could be processed by the Payment Service Provider (PSP) the day after the payer's request, which will affect the success of the registration.

## 4. RANKING

At the end of the evaluation process, a ranking list will be drawn up listing the admitted candidates on the basis of the results of the assessment and taking into account the preferences expressed by the candidates in the application. The ranking list will be published by **18/04/2025** on the website <a href="https://wss.unimore.it/public/albo">https://wss.unimore.it/public/albo</a> (search for the type: "Calls and Tenders" and the "Students" area) or <a href="https://www.unimore.it/it/didattica/corsi-di-studio/advanced-automotive-engineering">https://www.unimore.it/it/didattica/corsi-di-studio/advanced-automotive-engineering</a> This will be displayed in the reserved area of the website after logging in with the username and password provided upon registration.

Warning: the ranking list will only be published on the above-mentioned website and NO communications will be sent directly to the applicants.

Should further places become available at the end of the pre-enrolment process (described in section 5), the ranking list will be updated automatically.

The ranking list will be drawn up with a score out of 100 by considering:

- 1. the candidate's previous career
- 2. any curricular experience related to participation in student mobility programmes and/or in "Learning by Doing" university projects and/or to carrying out a curricular internship in a field similar to that of the degree programme
- 3. the content of the self-presentation video

A minimum score of 6/10 in relation to the self-presentation video is required for admission, as specified in Appendix C of this call for applications.

ADMITTED candidates will receive a certificate confirming their eligibility for the enrolment, which they must forward to the Italian Embassy/Consulate of their country of residence. The certificate will also certify the candidate's inclusion in the ranking list of students admitted to the master's degree course.

Eligible candidates who have not yet been admitted will also receive notification of their eligibility, as they may be admitted at a later date when any vacant places are assigned again.

#### Tie ranking

In the event of tie ranking, the youngest candidate shall take precedence.

# 5. PRE-ENROLMENT OF CANDIDATES FAVOURABLY LISTED IN THE RANKING

Admitted candidates are entitled to pre-enrol from the date of publication of the ranking list and until **05/05/2025 at 3:00 p.m. (CET)** by accessing the website <a href="www.esse3.unimore.it">www.esse3.unimore.it</a>, clicking on "Enrolment", and following the instructions in the "Online enrolment" guide available on <a href="https://www.unimore.it/en/services/guides-online-procedures">https://www.unimore.it/en/services/guides-online-procedures</a>.

Before starting the procedure, make sure you have the following documents in electronic format:

- · copy of passport;
- double-sided copy of a valid identity card;
- a self-declaration in which you confirm that you are not yet in possession of a residence permit for Italy and you will be present such a document as soon as possible.

The pre-enrolment procedure consists of two steps:

- completing the online enrolment procedure: candidates shall use the username and password they
  received when registering, access the Reserved Area of the website and confirm the data entered at
  the time of submitting their application (<a href="www.esse3.unimore.it">www.esse3.unimore.it</a>, select "Enrolment" after logging in).
  In the section relating to the permit of stay, you must attach the self-declaration mentioned in the
  previous paragraph.
- paying the university enrolment fee for the programme, as indicated on the website <a href="https://www.unimore.it/en/education/enrolment-and-admission/paying-university-tuition-fees">https://www.unimore.it/en/education/enrolment-and-admission/paying-university-tuition-fees</a>. The payment is done on the website <a href="www.esse3.unimore.it">www.esse3.unimore.it</a>. Click on "Login" and sign into your reserved area. Then click on "Taxes" and follow the instructions to view the amount due and access the PA payment circuit.

Payment of the due amounts must be made exclusively via the **PagoPA** circuit, which allows **online payment** by choosing your Payment Service Provider - **PSP**. Upon payment, an email will be sent to the personal mailbox indicated during registration, or to the University mailbox if it is already activated. From your personal Esse3 page, you can print out the payment receipt under "Taxes".

Please note that the amount of commission due may vary depending on the PSP chosen.

#### Mind the deadlines

**Important:** The University considers THE PAYMENT DATE AS STATED ON THE ONLINE PAYMENT RECEIPT (RT) TO BE DECISIVE.

Regardless of the justifying reason, payments dated after 05 May 2025 on the payment receipt (RT) is will not be considered valid for enrolment.

Warning! According to the AgID, the Agency for Digital Italy, the payment could be processed by the Payment Service Provider (PSP) the day after the payer's request, which will affect the success of the enrolment.

The initial payment of 159,05 euro shall be considered as a deposit of the enrolment fees for the degree programme.

Non-EU candidates residing abroad should follow the procedures for the academic year 2025-26 established by the Ministry of University and Research for access to master's degree programmes and published on <a href="http://www.studiare-in-italia.it/studentistranieri/">http://www.studiare-in-italia.it/studentistranieri/</a>.

International students who need to apply for a visa and reside abroad must apply on the Universitaly portal (<a href="https://www.universitaly.it/index.php/registration/firststep">https://www.universitaly.it/index.php/registration/firststep</a>) for pre-enrolment by entering all the required information and qualifications necessary for admission to the degree programme.

Candidates must attach the following documents via Universitaly:

- Copy of passport
- · photo of the identity card

If available, further documents can be attached, e.g.:

- Original degree certificate and its translation
- Declaration of value issued by the Italian Embassy or Consulate in the country to which the school/university that issued the qualification belongs, or, as an alternative, declarations from the ENIC-NARIC centers, for example the certificate of comparability issued to the Information Center on Mobility and Academic Equivalences (CIMEA) website <a href="www.cimea.it/it/servizi/attestati-di-comparabilita-e-certificazione-dei-titoli/attestati-di-comparabilita-e-certificazione-dei-titoli/attestati-di-comparabilita-e-diverifica-dei-titoli-diplome.aspx">www.cimea.it/it/servizi/attestati-di-comparabilita-e-certificazione-dei-titoli/attestati-di-comparabilita-e-diverifica-dei-titoli-diplome.aspx</a>
- The list of exams taken in Italian or English
- Any language certificates of English language proficiency

It is recommended to contact the diplomatic/consular missions as soon as possible to find out the

requirements and documents needed to obtain the visa.

Should the candidate fail to obtain the visa by the diplomatic or consular mission, the administration will refund the amount paid net of the money transfer fees.

After arriving in Italy, candidates shall go to the Registrar's Office of the "Enzo Ferrari" Department of Engineering at the address Via Campi 213/b in Modena. The office opening hours can be found at the following link https://www.unimore.it/en/services/registrar-and-student-offices.

For enrolment it is necessary to send the following documents in advance by email to the Student Secretariat at segrstud.ingegneria@unimore.it:

- Bachelor's diploma, translated and legalised by the Italian Embassy/Consulate of the country where it was obtained:
- certificate of validity of the degree issued by the Embassy/Consulate;
- degree certificate with a list of exams, issued by the University in which the degree was obtained (it is also accepted in English, French, Spanish, German and Chinese) or alternatively the "diploma supplement";
- international language certificates or a declaration from the home university proving the required language skills:
- copy of the residence permit or alternatively a copy of the postal receipt, certifying the filing of the residence permit request;
- Study visa.

## 6. ASSIGNMENT OF VACANT PLACES

If there are vacant places after the pre-enrolment procedure (described in section 5) has been completed, ELIGIBLE candidates will be immediately notified by the person in charge of the procedure and will receive instructions on the terms for pre-enrolment.

## 7. COSTS, ALLOWANCES AND SUPPORT FOR CANDIDATES WITH **DISABILITY**

Students with non-EU citizenship whose family has income/assets exclusively abroad may benefit from a subsidized fixed contribution system (FLAT TAX EXTRA UE) based on an economic condition calculated by the University, based on the income determined taking into account the GDP (gross domestic product) PPA (at purchasing power parity) determined on the basis of each individual country of origin, and updated annually with data from the World Bank.

The university will organize information meetings on this topic for all students who have submitted their application on the Universitaly platform, the calendar of which will be published at the link https://www.unimore.it/it/webinar-benefici.

International students residing abroad who wish to apply for benefits (exemption from university fees, scholarships, accommodation in university residences, catering services and other benefits) must submit the application online by the end of August 2025. The online application can be submitted on the website www.er-qo.it even before enrolment or before the result of the application or visa is known.

The Benefits Notice, with all the rules that constitute a special law, will be published from around the beginning of July 2025.

Students are asked to pay attention to the deadlines. Further information and any updates for the 2025-2026 academic year can be found on the website https://www.unimore.it/en/services/fees-and-benefits.

If you do not submit the online application for benefits, you will have to pay the total amount of tuition fees of approximately €2,200.00, divided into 4 instalments.

The above information is as of December 2024 and may be updated/amended/integrated based on Resolutions of the Academic Bodies after the issue of this announcement. However, these decisions will be published and announced on the website www.unimore.it.

Candidates with disabilities who wish to present a document issued by a public authority certifying a disability must provide a certified translation of this document into Italian and upload it on the website <a href="https://www.esse3.unimore.it">www.esse3.unimore.it</a> when submitting the application.

The candidate with a disability should also contact the Welcome Office for Students with Disability and Specific Learning Disorders of UNIMORE: <a href="https://www.unimore.it/en/services/students-disabilities-and-sld">https://www.unimore.it/en/services/students-disabilities-and-sld</a>.

Students with disabilities willing to apply for the exemption or the reduction of university fees shall submit an online request through the website <a href="https://www.er-go.it">www.er-go.it</a>.

## 8. PERSON IN CHARGE OF THE PROCEDURE

The person in charge of the procedure is Giuseppe Milano, who is responsible for the Registrar's Office. The responsible office is the Registrar's Office of the "Enzo Ferrari" Department of Engineering, ADVANCED AUTOMOTIVE ENGINEERING programme, tel. 059/2055637; fax: 059/2055648, e-mail: <a href="mailto:segrstud.ingegneria@unimore.it">segrstud.ingegneria@unimore.it</a>.

## 9. OFFICES AND REFERENCE LINKS

For information on the call for applications (e.g.: submission of the application, deadlines, ranking, application for vacant places) please contact the Student Secretariat of the 'Enzo Ferrari' Department of Engineering, Via Campi 213/b 41125 - Modena tel. 059/2055637;

e-mail: <a href="mailto:segrstud.ingegneria@unimore.it">segrstud.ingegneria@unimore.it</a>.

The reception hours can be found under the link

https://www.unimore.it/en/services/registrar-and-student-offices

**For information on enrolment** please contact the Student Secretariat of the 'Enzo Ferrari' Department of Engineering, Via Campi 213/b 41125 - Modena tel. 059/2055637;

e-mail: segrstud.ingegneria@unimore.it.

The reception hours can be found under the link

https://www.unimore.it/en/services/registrar-and-student-offices

For information on didactics (e.g. study plan, subjects, lesson timetables, reference professors), please contact the Didactics Secretariat of the 'Enzo Ferrari' Engineering Department, Via Pietro Vivarelli, 10 - 41125 - Modena <a href="www.ingmo.unimore.it">www.ingmo.unimore.it</a> e-mail: <a href="mailto:didattica.dief@unimore.it">didattica.dief@unimore.it</a>.

**For computer problems** related to online enrolment and assessment procedures or the recovery of Esse3 access credentials, write to <a href="webhelp@unimore.it">webhelp@unimore.it</a>. Support is available is guaranteed from Monday to Thursday from 9.00 to 15.00 and on Fridays from 9.00 to 14.00.

**For problems with the application for benefits,** please contact ER-GO: Tel. 051.19907580 or Tel. 051.0185268, or select the option WRITE via your User Dossier.

For technical problems while filling in the application, please contact: 051.0517140 or 051.0185291 Website where you can submit the application for benefits www.er-go.it.

For information about services offered to students with disabilities or specific learning disabilities, please contact the Disability and DSA Reception Services:

Website: www.asd.unimore.it

Head office in Modena: strada Vignolese 671/c

Tel. 059 2058311

Head office in Reggio Emilia: viale Antonio Allegri, 13

Tel. 0522 523506

E-mail: disabilita@unimore.it - dsa@unimore.it

For advice on choosing Unimore courses, contact the Informastudenti service:

Website: https://poa.unimore.it/informastudenti/

Modena Campus: Via Università, 4

Tel. 059 2058255

Reggio Emilia Campus: Viale Antonio Allegri, 15

Tel. 0522 523555

E-mail: informastudenti@unimore.it

The reception hours can be found under the link:

https://www.unimore.it/en/services/registrar-and-student-offices/office-study-orientationinformastudenti

If you are an international candidate residing abroad, please contact UNIMORE's International Welcome Desk for assistance with administrative formalities (e.g. applying for a residence permit, applying for a tax number, opening a bank account, health insurance, transport facilities, access to the housing search and housing counselling service, accommodation certificate for diplomatic missions).

It is necessary to register on the platform <a href="www.isu-services.it/it/universities/universita-di-modena">www.isu-services.it/it/universities/universita-di-modena</a> to book the provision of services.

Office in Modena: Complesso S. Geminiano, 3.

For opening hours:

 $\underline{\text{https://www.unimore.it/it/servizi/segreterie-e-uffici-studenti/international-welcome-desk-sede-di-modena}$ 

Office in Reggio Emilia: via Allegri, 15.

For opening hours:

https://www.unimore.it/it/servizi/segreterie-e-uffici-studenti/international-welcome-desk-sede-di-reggio-emilia

Tel. 059 2058171

E-mail: internationalwelcomedesk@unimore.it

NOTE: The Registrar's Office and Informastudenti are closed from 11 to 15 August 2025.

In general, it is suggested to consider that during the month of August in Italy most administrative offices operate with reduced staff; students are invited to take this into account for responsible planning of procedures.