



Erasmus Mundus Joint Master in Intelligent Field Robotic System (IFROS)

Student Agreement

§1. The University of Girona (UdG), established in C/Universitat de Girona, 6 Edifici, P4, 17003 Girona, Spain.

Coordinating Institution of the Erasmus Mundus Joint Master degree IFROS (Erasmus Mundus Joint Master in Intelligent Field Robotic Systems) represented by Dr Narcís PALOMERAS, Coordinator of the one part,

Family Name:

First name:

Date of birth:

Place of birth:

Nationality:

, **the student**, of the other part,

HAVE AGREED to the following terms and conditions.

§2. The student hereby commits him/herself on his or her honour to:

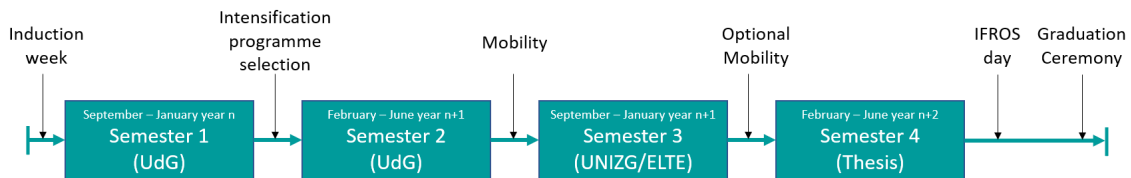
- Follow the academic structure and calendar as well as the mandatory mobility defined in the IFROS master. This is a two-year programme of study with 120 ECTS, divided into four semesters. The first two semesters are taught at the University of Girona (UdG); for the third, students can choose between two intensification programs either at the University of

IFROS – Erasmus Mundus Joint Master
In Intelligent Field Robotics System
<https://ifrosmaster.org/> – info@ifrosmaster.org



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Zagreb (UNIZG) or the Eötvös Loránd University (ELTE). The last semester corresponds to the Master's thesis which can be carried out in any of the universities, and co-hosted by one of the associated partners. The structure of the IFROS master is depicted in the following figure, showing where each semester is taught and the main academic milestones: induction week, itinerary selection, mobility periods, IFROS day and graduation ceremony. The Master's degree will be taught entirely in English.



- As agreed by the consortium, the distribution of the students among the two institutions that offer the intensification programmes (UNIZG and ELTE) will be such that at least 40% of the students will be enrolled in each institution for the third semester. Students will be asked for their preferred option for the intensification at the end of the first semester. The selection of the students will be based on their preference, as long as the above target of 40% minimum per institution is met. If this target cannot be met, then the student's choices will be ranked by the grades they obtained in the first semester, and a decision on which students will be chosen for each intensification programme will be made by the Academic Board during the first half of the second semester.
- At the end of the second semester, students will move to either the University of Zagreb (UNIZG) or to Eötvös Loránd University (ELTE) to complete the intensification program. These mandatory mobility periods cannot be replaced by virtual mobility.
- The Master's thesis will be carried out during the 4th semester within the consortium or associated partners. It consists of either an introduction to research carried out in one of the laboratories of the consortium or an industry placement in a company involved in field robotic applications and technologies. Most students are expected to carry out their thesis within one of the consortium universities labs. However, they can also choose to join another host laboratory/company for their thesis in any country of the European Union whose host will need to be accredited by the Academic Board.
- Students need to stay at least in two countries other than their own. Therefore, any student whose nationality coincides with the place where she/he has completed either the first year or the intensification programme will be requested to complete the master's thesis in a third country.
- The Master's thesis will be submitted early June and will be defended at the UdG in mid-June with a public defence with a common jury with academic partners from the three universities.

A summary of the common and optional courses that integrate the master's program are available in the following table. The evaluation criteria for each course as well as academic output deliverables, exam dates and rules will be detailed on the official intranet of the institution responsible for this course.

UDG		
1st Semester	Main Topics	ECTS
Robot Manipulation	Manipulator kinematics and dynamics, trajectory control, force-based control, task priority	6
Probabilistic Robotics	Montecarlo and Gaussian based algorithms	6
Autonomous Systems	Mobile Robots, Path planning	6
Multiperview Geometry	Image processing, calibration, multicamera vision	6
Machine Learning	Task planning, reasoning, physical agents	6
2nd Semester	Main Topics	ECTS
Hands-on Perception	Component of the Field Robotics project on perception	6
Hands-on Localization	Component of the Field Robotics project on localization	6
Hands-on Planning	Component of the Field Robotics project on planning & AI	6
Hands-on Intervention	Component of the Field Robotics project on intervention	6
Management	Project Management & Entrepreneurship skills	3
Research best practices	Best practices in Research and Scientific Writing	3
UNIZG		
INTENSIFICATION ON MULTI-ROBOTS, UAVS AND HMI		
3rd Semester	Main Topics	ECTS
Advanced Machine Learning	Supervised/unsupervised learning, multilayer perceptrons, generalization problem	6
Aerial Robotics	Fluid dynamics, momentum theory, fuselage design, propulsion, flight control	5
Multi-robot Systems	Control and analysis, mission planning, scheduling, formation control	6
Human-robot Interaction	motion detection, tracking, prediction, task sharing, telerobotics, telepresence	5
Sensors, perception and actuation in Robotics	land and aerial sensors and actuators, perception principles	6
Ethics and Technology	ethical issues of novel technologies	2
ELTE		
INTENSIFICATION ON AUTONOMOUS SYSTEMS AND SELF-DRIVING VEHICLES		
3rd Semester	Main Topics	ECTS
Advanced Machine Learning	Deep learning approaches and applications.	5
Introduction to Vehicles and Sensors	Principles of autonomous vehicles, and self-driving cars. Sensors. Intelligent transportation systems.	4
3D Sensing and Sensor Fusion	Operation principles of 3D sensors. Active and passive 3D sensing for autonomous vehicles. Sensor fusion and semantic segmentation	5
Security of Autonomous Systems	security analysis methods, cryptographic primitives, networking and automotive protocols, safety and security of autonomous driving systems	5
Artificial Intelligence lab	hands-on lab on artificial intelligence tasks applied to real data from industrial and academic partners	5
Methods and tools for AI Applications	methods for recent AI applications, convolutional neural networks, Monte Carlo tree search, state-of-the-art software libraries	5
Learning Methodology	Introduction to the Hungarian education system and ELTE, communication and learning skills, improvement of social relationships among students	1
UDG, UNIZG, ELTE OR ANY ASSOCIATED PARTNER		
THESIS		
4th Semester	Main Topics	ECTS
Master Thesis	(Tutored by UNIZG or ELTE)	30

§3. The student hereby commits him/herself on his or her honour to:

- Attend the student induction week that will be organised at the beginning of the academic year in UdG during September. In this event, the enrolled students will be informed about the program, the partner institutions, the assessment, and the rules, and will have the help from UdG to facilitate the visa issues for non-EU students. Furthermore, in the same week will take place the student Graduation Ceremony for recently graduated students.
- Participate in the IFROS day (in June) that will be held at UdG after the end of the 2nd/4th semester. This one-day event will group 1st year students (finishing the 2nd semester) and 2nd year students (finishing the master thesis) together with companies in a conference-like event, in order to find internships and placements for the master thesis (1st year students) or possible job positions (graduate students). In addition, this will be a very good opportunity to meet and exchange experiences between different student promotions.
- Participate in the Graduation Ceremony that will be hosted at UdG in September of the last year, coinciding with the induction week of a new IFROS intake.

§4. Participation cost for the two-year course will be 9.000€ for Programme Country students and 15.000€ for Partner Country students¹. The participation costs include the tuition fees, plus the operational costs such as: issuance of the diploma, students insurance, organisation of events like the IFROS day, the induction week and students competition on field robotics, coordination, promotion and dissemination, etc. The difference in the participation costs between Programme and Partner Country students are due to the fact that tuition fees charged by the Universities are different for the two categories of students and also to the differences in staff workload due to the handling of visas and other logistic aspects of Partner Country students' enrolment.

§5. The IFROS consortium will implement the insurance scheme with the insurer MARSH, that offers a 100% compliant insurance solution ensuring coverage compliance with the Education, Audiovisual, and Culture Executive Agency (EACEA) guidelines for the Erasmus Mundus programme. Terms and conditions are sent to the students individually at the beginning of the course.

§6. The student hereby commits him/herself on his or her honour to:

¹ Criteria for defining Programme Country students and Partner Country students is as described in https://ec.europa.eu/programmes/erasmus-plus/about/who-can-take-part_en

- attend compulsory lectures, courses, tutorials, examinations, and other activities which form part of the programme, except in cases of justified absence for medical or other agreed reasons;
- submit, by the established deadlines, the course work and other assignments required for the programme, except in cases of justified subject to absence for medical or other agreed reasons
- reach the level of academic attainment required for your programme as defined by the Academic Board;
- behave appropriately while on the Universities' premises;
- be adequately prepared for any activity which you are required to undertake as part of your programme outside the Universities, at all times conducting yourself in a proper manner;
- comply with any professional standards applicable to your programme;
- abide by any special conditions relating to your programme set out in the prospectus, or otherwise notified to you by the University;
- provide your faculty office with an emergency contact name and details which the Consortium may use at its discretion;
- notify your faculty office of any changes to the information which you have submitted on application or enrolment, for example, if you change your address.

§7. The student understands that he/she shall be excluded from the IFROS Master in the following cases:

- In case of non-attendance to the courses (lectures, practical sessions, field trips, informative and official meetings)
 - that the student cannot justify with medical certificates,
 - for which permission has not been granted by the IFROS staff, noting that permission should be asked in advance).
- If the student fails to validate a year of study.
- If the student is the subject of disciplinary measures leading to his/her exclusion from the IFROS Partner Universities (UdG, UNIZG, ELTE).
- If the student is the subject of legal prosecutions that prevent him/her from attending the IFROS programme.
- If the student withdraws from the IFROS programme, on his/her own decision or by force majeure.
- If the student arrives later than October 15, he/she will be considered unable to follow the syllabus correctly and will be withdrawn from the IFROS programme.

§8. For all granted students:

- It is her/his responsibility to confirm to not have already benefited from a previous EMJMD scholarship or an Erasmus Mundus Master Course/Joint Doctorate scholarship and must not benefit from another EU funded scholarship scheme to follow the same EMJMD course for the entire period of the course. Any fraud or false declaration will imply repayment of the scholarship.
- The financial aspects related to the EMJMD scholarship awarded to the student are specified in Annex A. The amounts specified in this annex include the contributions to the costs of participation, the cost of travel and installation, and of subsistence. All of them have been calculated using the following table, set out in the Erasmus+ Program Guide for EMJMD. All payments will be made by bank transfer to an account in the name of the student. The payments related to the subsistence costs will be made on a monthly basis, whereas those related to travel will be done once per year, and a single payment will be done related to installation costs.

Erasmus Mundus Joint Master Degree student scholarships

Contribution to the participation costs	up to 9 000 EUR per year per scholarship holder from a Partner Country up to 4 500 EUR per year per scholarship holder from a Programme Country Any amount in excess of these maximum contributions must be covered by the participating organisations and cannot be charged to the scholarship holder.
Contribution to the travel and installation costs	1 000 EUR per year per scholarship holder resident in a Programme Country for travel costs 2 000 EUR per year for travel costs + 1.000 EUR for installation costs for a scholarship holder, resident in a Partner Country less than 4000 KM from the EMJMD coordinating HEI. 3000 EUR per year for travel costs + 1.000 EUR for installation costs for a scholarship holder, resident in a Partner Country 4000 KM or more from the EMJMD coordinating HEI.
Contribution to subsistence costs	1 000 EUR per month for the entire duration of the EMJMD study programme (24 months maximum). Contribution to subsistence costs will not be given to the scholarship holders for the EMJMD periods (study/research/placement/thesis preparation) spent in their country of residence, nor to scholarship holders from a Partner Country for the EMJMD periods exceeding one trimester (i.e. 3 months or the equivalent of 15 ECTS credits) spent in any Partner Country.

- Payments will not be received until students are physically present in the host institution (University of Girona). Please notice that a Bank account from Europe or one such as REVOLUT or WISE are required to have the scholarship transferred.
- In case of withdrawal from the course before its completion, the scholarship payment is going to be automatically cancelled.

§9. Upon exclusion, the student shall in due time and before his/her departure pay for the following:

- the remaining tuition fees for the IFROS programme,
- the rent of his/her accommodation, for the month of the day of his/her exclusion,
- the bank fees corresponding to his/her accommodation insurance, for the month of the day of his/her exclusion,
- the bank fees to pay for his/her bank account and his/her visa card, for the year of the day of his/her exclusion.

§10. For all students self-funded it is his/her responsibility to make sure the participation costs (including tuition fees and all other expenses relating to your programme) are paid. The tuition fees will be covered as stated in the IFROS Tuition invoice forms supplied to the students by the IFROS secretariat. It should be noted that the amount will be different for program and partner country students. These fees and expenses do not include any fees payable for residential accommodation provided to the student by the Consortium Universities or by any third party, nor do they include additional fees for reassessment (such as having to retake an exam), travelling expenses or other course costs.

Any payment to be done directly by an external sponsor to the universities must be communicated to the IFROS programme administration by the student, and requires submission of supporting documents.

Students are bound by the Consortium's regulations on the payment of fees, and the consequences of non-payment. If the fees due to the IFROS Consortium remain unpaid after 28 days of the due date, the Consortium shall be entitled to take legal action to recover the debt and/or take any or all of the following steps:

- exclude the student from the program and end this Agreement;
- withhold any award or qualification which would otherwise have been made to the student, suspend further performance of its obligations under this Agreement and/or to refuse to allow him/her to proceed to any further stage of the program, until all outstanding amounts have been paid, or arrangements for payment have been established which the Consortium considers satisfactory.

Students may be required to pay a tuition fee deposit to secure your registration in the IFROS. This is an advance payment which will be later deducted from the first year IFROS tuition fees bill. In the offer of acceptance form, details will be given to the students on how to transfer these funds. Please bear in mind that this deposit is not refundable in the case that the student's visa application is not approved.

§11. Permits and Visa. The programme involves studying in, at least, two different European countries. It is the responsibility of the student to secure the needed permits. The Consortium and host institutions will provide assistance in applying for a visa to enter Europe and in their subsequent relocation from country to country within Europe, along with the necessary information and supporting documents. Students should note that the acquisition of a residence permit is a time consuming task. Therefore it is his/her responsibility to start application procedures as soon as the documents from the Consortium and host institution are provided to them.

Once admitted to the IFROS, the Consortium will send the student:

1. A letter of acceptance by the Consortium.
2. A reply-to-offer form, that the student needs to sign and send back to the IFROS secretariat, accepting the offer.

§12. Academic Rules:

- Erasmus Mundus students enrol on a full-time basis. They must attend all classes (lectures and lab classes). Students who must interrupt their studies for a certain period, due to justifiable reasons of health, pregnancy, or family matters, must give the consortium coordinator and the local coordinator due notification. All such situations will be evaluated on an individual basis.
- If a student fails (obtains an F grade) at the first exam session he/she will have to pass a second exam (or additional evaluation) session. The F grade will be replaced by the new grade (and will not appear in the diploma). The second session will be organised at most six months after the first exam to allow the student to prepare for the exam. If a student fails an exam in one institution during one of the three first semesters, he/she will have the possibility to pass a second exam in the institution where he/she will study in the following semester.
- If after all examinations, a student fails a module, the student will abide by the regulations regarding re-enrolment of the university where the module is taught.

IFROS validation rules

<p>Universitat de Girona (UdG):</p> <ul style="list-style-type: none"> - To validate a semester, the students must have no module with F - A student must be reassessed if he/she got an F in the first session.
<p>University of Zagreb (UniZG):</p> <ul style="list-style-type: none"> - To validate a semester, the students must have at least D in each module. - A student must be reassessed if he/she got an F in the first session.
<p>Eötvös Loránd University (ELTE):</p> <ul style="list-style-type: none"> - To validate a semester, the students must have at least D in each module

- A student must be reassessed if he/she got an F in the first session.

- If a student fails a module and has to re-enrol again, she/he will be required to pay a re-enrollment fee in order to retake the course. This fee is intended to cover the cost of the student's participation in the module and the amount may vary depending on the institution's policies and may be different from the original tuition fee. It is advisable for students to carefully review the regulations regarding re-enrollment fees and any available financial assistance programs in order to fully understand the financial implications of repeating a module.
- Complaints and problem resolution mechanisms: the students should first submit their concerns to the module coordinator. If no consensus can be reached, the students can then submit their concern to the Course Director. Finally, if no satisfactory solution is found, the Academic Board of the consortium will study and jointly take the necessary actions.
- At the end of the programme, students will get the Erasmus Mundus Joint/Dual Master's degree in Intelligent Field Robotic Systems (IFROS) signed by the UdG, depending on the intensive programme taken, if they comply with the legislation and validation rules of each university involved. The students will also obtain the IFROS Diploma Supplement summarising the courses delivered along the first three semesters and the research training achieved during the fourth semester.
- The marks will be converted and homogenised according to the conversion rules given below. Marks at UdG are expressed on a scale of 0-10 and in UNIZG and ELTE, on a scale of 1-5.

Conversion rules: IFROS Grading scale

- o **Universitat de Girona:** scale is from 0 to 10 where : 0 – 4.9 (Suspès / Suspenso); 5 – 6.9 (Aprovat / Aprobado); 7 – 8.9 (Notable / Notable); 9 – 10 (Excel·lent / Sobresaliente). In some cases, the student can also get the mention “with honour / matrícula d’honor / matrícula de honor”.
- o **Sveučilišta U Zagrebu:** scale is from 1 to 5 where: 1 (Nedovoljan); 2 (Dovoljan); 3 (Dobar); 4 (Vrlo Dobar) ; 5 (Odlican).
- o **Eötvös Loránd University :** scale is from 1 to 5 where: 1 (Elégtelen) 2 (Elégséges); 3 (Közepes); 4 (Jó) ; 5 (Jeles) .

	ECTS	ES-1	ES-2	HR -1	HR -2	HU-1	HU-2
Excellent	A+	10	Matrícula de honor	5	Odlican	5	Jeles
	A						
	A-	9,5	Sobresaliente	4	Vrlo dobar	4	Jó
Pass with distinction	B+	9	Notable	3	Dobar	3	Közepes
	B	8,5					
	B-	8					
Pass	C+	7,5	Aprobado	2	Dovc		
	C	7					
	C-						
	D+	6,5					
	D	6					
	D-	5,5					
	E	5					
Fail	FX	<5	Suspenso	<1	Nedovoljan	1	Elégtelen



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§13 Internships. If there is a mutual interest between a student and one of the associated partners to carry out an internship, an *ad hoc* agreement will have to be established between the student, the associated partner and at least one of the universities of the consortium which will be in charge of tutoring the internship.

§14. Students are encouraged to participate in the program surveys/evaluations, as well as join the Erasmus Mundus Students and Alumni Association (EMA, see <http://www.em-a.eu/>). Additionally, students are informed that they can find online resources available for EMJMD actions, such as the Erasmus+ Program Guide, on the EACEA online portal (<https://ec.europa.eu/programmes/erasmus-plus/resources/>).

§15. Appeals shall be made in accordance with procedures established by the Academic Board. Responsibility for determining appeals at the programme level rests with the administration and the Academic Board.

Student's Name:

Dr. N. Palomeras

Student's Family name:

IFROS Coordinator

Signature:

Signature:

Date:

Date: