



N°2021-6926

**Erasmus Mundus Joint Master Degree FUSION-EP
'European Master of Science in Nuclear Fusion and Engineering Physics'**

The aim of this agreement is to establish the implementation issues of the Erasmus Mundus Joint Master Degree (EMJMD) programme in European Master of Science in Nuclear Fusion and Engineering Physics (FUSION-EP) between

1. Aix-Marseille Université (AMU), Marseille, France,
Jardin du Pharo, 58 Boulevard Charles Livon, 13284 Marseille, France,
represented by its President, Professor Eric BERTON
2. CEA/INSTN, Saclay, France,
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represented by its President, M. Eric GADET
3. Czech Technical University (CTU), Prague, Czech Republic,
Jugoslávských partyzánů, 1580/3, 160000 Prague 6, Czech Republic
represented by its Rector, doc. RNDr. Vojtěch PETRÁČEK
4. Universidad Carlos III de Madrid (UC3M), Madrid, Spain,
Calle Madrid 126, 28903 Getafe Madrid, Spain
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represented by its Rector, Professor Wolfram RESSEL
8. Université de Lorraine (U LORRAINE), Nancy, France,
Cours Leopold 34, 54052 Nancy Cedex, France
represented by its President, Professor Pierre MUTZENHARDT

The institutions 1 to 8 are further called 'partner universities'.

Jointly they are called 'Consortium'.

In view of the relevant laws and decrees concerning the offer of a joint inter-institutional training within the framework of international and/or European funding programmes, and the relevant laws and/or decrees on issuing double, multiple and/or joint degrees valid in the respective partner countries, France, Czech Republic, Germany, Belgium and Spain, these partner universities agree to organise the joint master's programme entitled: 'European

Master of Science in Nuclear Fusion and Engineering Physics'. The implications of this are set forward in this Consortium Agreement.

This interuniversity agreement applies within the framework of Erasmus Mundus Joint Master Degree Grant Agreement 2019-1419 in the context of the EMJMD project 610557-EPP-1-2019-1-FR-EPPKA1-JMD-MOB, between EACEA and Aix-Marseille Université as coordinating institution. However, all conditions described hereunder also apply to students enrolled in the programme who are not benefitting from EACEA financial support.

Financial aspects are clarified in article 6 and Annex Budget.

Article 1. Scope

1.1. Background

The aim of the master's programme is to provide a high-level research-oriented education in fusion science and technology, in close relation to the research activities of the partners and with industrial partners and with a well-integrated language and cultural experience. The combined and harmonized teaching and research activities of the 8 partner universities involved offer a great variety of competences in the field of fusion science and engineering physics. The joint European master's programme offers a genuine European opportunity for master level studies in a field of crucial importance for the world energy supply. The partners have a long-standing relationship in the framework of the coordinated EURATOM research programme on nuclear fusion. The association of EU and non EU partners can guarantee a significant added-value for students in term of specialisation opportunities in fusion science and engineering physics. An increasing number of scientists and engineers will be required by the labour market in two main categories: 'Fusion Science' and 'Fusion Technology'. It normally takes 10 years to deliver advanced knowledge and skills training required to have full command of the discipline. The scientific progress in 'Physics' and 'Engineering' will generate important spin-offs in science and technology in the future.

1.2. Objectives of FUSION-EP

The studies focus on physics and technology of nuclear fusion. They are strongly supported by research activities in the different laboratories taking part in the Consortium. By combining the basic learning skills in engineering sciences and fundamental physics, the programme gives scientists the possibility to perform or lead scientific teams in university research laboratories or industry.

The programme aims at attracting interested top-level students from all over the world. They should receive the best international education taught in this area, allowing them to choose a study track that matches with their interests (with emphasis either on physics or engineering aspects), while providing them with sufficient knowledge to be able to work in both fields in professional and academic spheres, including R&D in industry. A further objective is to host students from different origins and backgrounds and to prepare them to work in an international environment and to offer a significant cultural experience and a long-lasting positive attitude towards Europe.

The European Master of Science in Nuclear Fusion and Engineering Physics will therefore train students such that they:

- master the foundations of modern physics;
- have an overview of the main application fields in modern physics, along with an in-depth knowledge of the basic notions;
- have knowledge of the technical approach of physical science applications as traditionally studied in applied sciences;
- have adequate skills and competencies to apply for doctoral studies in a research field covered by the Consortium;
- be able to use modern physics concepts to R&D and to develop new technological concepts;

- be capable of generating theoretical models through which scientific research results can be described and understood;
- learn the basic principles and practice, both of scientific and technical thinking;
- have acquired in-depth knowledge of at least one scientific field and one specialized engineering speciality;
- be able to study and work independently or as part of a team on a concrete and practical problem;
- are able to report orally and in writing on the methods followed and the results yielded by experiment with a relevant interpretation;
- develop a sense of responsibility;
- be familiarised with European languages and cultures.

In the academic field that concerns more directly “fusion science” and “fusion technology”, the student should:

- have advanced knowledge and understanding in the field of nuclear fusion and engineering physics;
- be able to use equations and fundamental models for qualitative modelling, reflection guide, validation of numerical models, diagnostic design, measurement interpretation;
- be able to define a problem in the complex, intrinsically multi-disciplinary environment of magnetic fusion;
- be able to aggregate reasonings in interdependent fields, link models in various topics (e.g; MHD and transport, or fuel cycle and nuclear safety);
- be able to interact with people having different skills, competences, positions and objectives (physicists/engineers/technicians/manual workers/project managers, etc.) thanks to the broad-spectrum content of teaching, field-research periods in Prague and Cadarache and a 4-6 month placement during her/his Master thesis;
- be able to derive pragmatic workplans and details of technical or numerical designs and operations from academic models in form of equation systems;
- be able to develop and to use both generic and fusion-specific numerical methods for
 - theoretical models of plasma dynamics,
 - empirical models of experiments and synthetic measurements.

An underlying objective is to provide each student with the possibility of defining her/his own curriculum within the course variety offered by the different partners and the specific mobility scheme.

Article 2. Language, structure and content of the programme and student mobility

2.1 Language of the programme

The programme is taught in English. The Master’s Thesis has to be written and publicly defended in English.

2.2 Structure of the programme

According to the partner’s expertise, the programme offers the student two programme tracks: ‘Fusion Science’ and ‘Fusion Technology’. The programme structure (table below) is scheduled for two mandatory stays at two universities, in two countries: semesters 1 and 2 (first master’s year, ‘M1’) at university A, semesters 3 and 4 (second master’s year, ‘M2’) at university B. Each semester corresponds to 30 ECTS.

The curriculum comprises compulsory and elective courses (i.e. courses from a well-defined and restricted list). The first year’s compulsory courses are organised along the following list of topics:

- Plasma physics
- Atomic and molecular physics

- Electromagnetism and classical electrodynamics
- Statistical physics
- Continuous media
- Instrumentation
- Computational physics

In addition, each host university must organise the following particular compulsory activities:

- a lab project for at least 6 ECTS during the first year,
- a course of local language and culture for 6 ECTS in both years.

Each partner offers a panel of elective courses, according to its research expertise. The students' electives will reflect their track choice.

A joint orientation and networking seminar takes place during two days at CEA Cadarache in the 1st year. At the end of the 1st year, a Summer Event is organised. All students participate in a two-week *Joint Experimentation and Analysis Session* in Prague (Czech Republic) for 6 ECTS during semester 3 and in a two-week *Joint Practicum mini-projects* in Cadarache (France) for 6 ECTS during semester 4.

The master's thesis work counts for 30 ECTS and is performed mainly in semester 4. After semester 4, during the Summer Event, students defend their thesis.

1 st semester (30 ECTS) *	Joint thesis orientation and networking seminar	2 nd semester (30 ECTS) *	Summer event 1	3 rd semester (18 ECTS) **	Joint exp' and analysis session (6 ECTS)	3 rd semester (ct'd)**	Joint practicum (6 ECTS)	Master thesis (30 ECTS)	Summer event 2
AMU-CEA/INSTN Madrid Gent Stuttgart Lorraine	2 days, CEA/INSTN-IRFM ¹	id. 1 st sem.	4 days Location: rotating among full partners Discussion and selection of master's thesis topics	AMU Madrid Gent Stuttgart Lorraine CTU	2 weeks, IPP Prague	AMU-CEA/INSTN Madrid Gent Stuttgart Lorraine CTU	2 weeks, CEA/INSTN-IRFM ¹ and ITER	4-6 months	4 days Location: rotating among full partners Defence of the master's thesis
GOLEM remote group (all)									

¹ Institut de Recherche sur la Fusion par confinement Magnétique

At the *Joint Orientation and Networking seminar* during two days at CEA Cadarache in the 1st year, students discuss their M2 track and location.

During a subsequent steering committee meeting, a suggestion for the M2 distribution and track of the students is prepared. The final decision is taken by the Steering Committee during the Summer Event at the end of the 1st year. At this occasion, possible relevant master's thesis topics are discussed.

Summer Events are organised by each partner in turn. The designation of the partner is discussed and agreed upon by the Steering Committee. Each student attends two Summer Events, one between the first and the second year, and another one, during which the master's thesis is defended, at the close of the second year.

Two weeks before the second Summer Event at the latest, the M2 students shall submit their Master's thesis report. The defence of the master's thesis takes place during the Summer Event. An international panel composed of all local coordinators of the Consortium and specialists from the associated partners is assigned to assess the defence of the candidates' master thesis. The joint examination Committee confirms the results of the defence assessment. The grading is performed according to the rules and uses of the student's hosting university. Unless otherwise required, the thesis defences are public and M1 and M2 students and international speakers may attend the students' thesis defence. A private defence can be organised in cases confidentiality is requested by the hosting entity.

In the event a partner university intends to modify its compulsory or elective course list, the corresponding local coordinator will submit to the steering committee the proposed list of course titles. The Steering Committee validates the list recognising each university the right and the competence to define the content of a given course according to its generic title. The current course title list is provided in Annex A. All proposals for modifications must be submitted to the partner institutions before the start of the academic year in which these changes will apply in time for the involved partners to adapt their curriculum.

2.3 Mobility

The students' mobility scheme is organised along the following guidelines :

- Each student validates 60 ECTS over the first year in a first partner university and 60 ECTS over the second year in a second partner university in a different country.
- During their *Joint Thesis Orientation and Networking Seminar* (Cadarache, France) all M1 students meet the M2 students, who are then at Cadarache for the Joint Practicum.
- All M1 students meet at their first Summer Event with the M2 students of the previous cohort.
- All M2 students attend the two weeks' *Joint Experimentation and Analysis Session* (Prague, the Czech Republic)
- All M2 students attend the two weeks' *Joint Practicum* (Cadarache, France)
- All M2 students meet at their second Summer Event with the M1 students of the next cohort.

There are thus three times during which students of both years meet: the Cadarache Event and the two Summer Events.

The students discuss and choose a master thesis topic with the local coordinator of their host university during semester 3. The Steering Committee then approves and confirms their choice regarding the master's thesis topics.

Article 3. Responsibilities and organisational structure

3.1 Responsibilities

The coordinating institution:

- is responsible for all financial transfers to students, partner institutions and lecturers and for the overall coordination of the programme,

- collects all examination results, converts them into the local rating system, and certifies the corresponding ECTS after the student passed the relevant examinations,
- is responsible for communicating all curricula (courses taken up at partner institutions) and study results obtained at partner universities (not yet converted) which will be required in order to prepare students' national diplomas and diploma supplements, to the partner universities needing these results.
- is responsible for designing and editing the joint diploma and a supplement to the joint diploma for each graduated student, unless an exception is justified by local constraints in some countries (see article 5.10 and annex G).
- is responsible for the submission of technical/financial reports to the EACEA,
- provides the web hosting service and the promotional tools,
- Coordinates the relations with the associate partners.

All partner universities (including the coordinating institution) are responsible for the students' administrative and educational enrollments and must assist them for their accommodation. Each partner university provides the students with access to its facilities under the same conditions as other regular students enrolled at the institution. Students requiring support due to a disability or special needs will be offered dedicated services and facilities, wherever possible. The necessary arrangements are implemented by the coordinating institution only within its institution. The partner universities must also work closely with the coordinating institution to provide information about the organisation of the courses and examinations taken by the students. Each partner university is responsible for communicating all curricula (courses taken up at partner institutions) and study results obtained by its hosted students to the coordinating university in time for the latter to distribute this information to all partners and establish the joint degree certificate.

All partner universities appoint a '**local coordinator**'. This coordinator is (one of) the representative(s) of his/her university in the Steering Committee (see 3.2.1). The local coordinator assumes the role of local contact person for the students enrolled in the programme.

3.2 Governing structures

The programme is governed by the following management structure:

3.2.1 The Steering Committee

The Steering Committee is composed of the following members:

- One or two representatives of each partner university (only one vote is taken into account per partner),
- A representative of the associated partners (see Article 4.2 and Annex B),
- An external member representing industry,
- A student representative elected by students of M1 and M2,
- A FUSION-EP alumni representative.

When outgoing members need to be replaced, their institution nominates a replacement. The nominate must then be approved by the remaining members. The nomination of new members must be recorded in writing in the report of the Steering Committee meeting.

The Steering Committee takes decisions on the following matters, and it mandates the Executive Committee with the executive and preparatory actions for this:

- 1) selection of students;
- 2) programme evolution;
- 3) programme management;

The Steering Committee can request the guidance of the Advisory board on issues related to the aforementioned issues. The Steering Committee meets (in person or in videoconference) at least twice a year. The Steering Committee can invite outsiders for all or part of their meeting. If the situation does not permit a proper meeting, decisions can be taken by consensus after email exchanges and explicit agreement of all the Steering Committee members. The working language of the Steering Committee is English.

3.2.2 The Executive Committee

The **Executive Committee** consists of the full partner representatives of the Steering Committee, its representative of the associated partners and the programme manager. It appoints a chairman. The Executive Committee prepares decisions of the Steering Committee on the following topics :

- 1) selection of students;
- 2) quality of teaching;
- 3) evolution of the academic programme;
- 4) research topic of Master thesis.

For all these topics, the Executive Committee will ensure the link between the advisory board and the Steering Committee. The Executive Committee will implement the decisions taken by the Steering Committee.

The Executive Committee will inform the participating universities about the decisions taken by the Steering Committee.

3.2.3 Advisory Board

The Advisory Board is appointed by the Steering Committee and consists of at least one representative of the following categories: industry, fusion research institutes and university (the latter two in particular through the EU and non-EU associated academic and research partners). Consequently, it represents a link between the Consortium and its stakeholders.

Its aims are to guarantee the academic quality by verifying that

- the student selection process is in line with the defined criteria;
- the actual teaching content is in line with the defined programme.

The Advisory Board suggests evolutions of the academic programme depending on advances in research. It advises the Executive Committee in the choice of Master thesis themes. It will enable the programme to establish solid contacts with industry and take employability needs into consideration.

The programme coordinator is a member of the Advisory Board. The Steering Committee elects a chairperson among the members of the Advisory Board. The Advisory Board meets once a year.

3.2.4 Central Secretariat

The Central Secretariat consists of at least a part-time administrative staff member – the programme manager – employed at the coordinating institution. He/she works under the supervision of the programme coordinator. The Central Secretariat is in charge of all administrative and organisational issues of the programme. It operates as a reference contact point for the students enrolled in the programme. The programme manager is a member of the executive committee.

The Central Secretariat deals with all administrative issues. It monitors the practical implementation of the programme, such as the arrival of students in their host university, the mobilities of students scheduled as part of the study programme, the administrative tasks concerning the mobility scheme for study periods between partners, organisation of the selection process and meetings for the managing bodies, the communication process and the writing of financial and technical reports.

The Central Secretariat keeps student records and transcripts of records. It communicates these data, where necessary and on request, to the partner institutions for the issuing of diplomas and their supplements as laid down in article 5.10.

3.2.5. The Joint Examination Committee

The Joint Examination Committee is composed of the members of the Executive Committee who hold academic authority.

Its role is to :

- validate the transcript of records obtained by the students at each partner university at the end of the academic year;
- implement the evaluation criteria of the performance achieved by the students during their Master's thesis, including the evaluation sheet written with the supervisor's remarks and, if applicable, with other comments written by the co-supervisors involved in the preparation of the thesis and the public defence during the Summer Event;
- where necessary, impose disciplinary measures in case of irregularities or fraud during the participation in the programme.

It will decide on the joint awarding of the Master degree upon successful completion of the programme, as laid down in article 5.10.

3.2.6. Local Examination Committees

Each partner university appoints a local Examination Committee for the Fusion-EP programme. These committees are responsible for all issues concerning the examination and evaluation of courses taken at their respective universities. They meet the national obligations and principles regarding examinations, the awarding of national degrees.

Article 4. Educational responsibilities

4.1 Partner universities

Each partner university, which hosts students, is sole responsible for the teaching and the organization of exams for the hosted students, as well as for determining the examination marks for each course taken at its university. The central coordinating partner will not interfere in the local organisation of the partner universities. When taking course units at a partner university, the students are subject to the education and examination regulations of this institution.

At each university, the local coordinator and the lecturers are attentive to the needs and concerns of the FUSION-EP students and organize the communication with them.

Transparency and equal treatment between the FUSION-EP students and other students in the same course shall be applied by all the teaching staff. However, special availability will be organized for FUSION-EP students who may require more support from lecturers to address problems which could arise, for example, in terms of language skills or the necessity of remedial courses for some disciplines.

The local coordinator and the lecturers participating in the programme endeavour to propose master's theses in their field of activity or speciality. A master's thesis supervisor is assigned to each student. If a student chooses a master's thesis topic outside the hosting university, the supervisor will be a staff member of the thesis location. A

staff member of the hosting university will serve as contact person between the programme, the student and the master's thesis supervisor. The name of the contact person will be sent by the local coordinator to the Steering Committee. By default, the contact person is the local coordinator.

Both academic and administrative staff involved in the programme inform the students of their opening hours.

4.2 Associated partners

The Consortium has excellent contacts with a number of high-level EU and non-EU universities and research institutes. Some of them are Associated partners of the Consortium.

EU and non-EU Associated partners play an active role in the study programme:

- They can offer advanced specialised courses for students who are encouraged to take them. The students interested in courses offered by an Associated partner will seek the advice and authorization of the Steering Committee. Non-higher education institutions may provide courses in close collaboration with one of the higher education institutions of the consortium or associated to it;
- They can offer opportunities of group mobilities, especially the large facilities such as ITER IO;
- They can propose master's thesis topics and host students for their master's thesis;
- They provide guidance and support during the preparation of the master thesis work carried out in their company/institute/university, in coordination with the contact person at the student's host university.

The non-academic associated partner FuseNet support the dissemination of the programme in the wider European educational context.

4.3 Mobility for consortium staff and invited guest lecturers.

Staff mobility funded by the programme must contribute to improving the quality of the degree programme. The partners can invite scholars or lecturers, preferably from associated partners. The choice of an invited scholar by a full partner is motivated by a common research interest or an interest in a specific topic or a particularly interesting or unusual career path. Meetings with scholars who are alumni of the programme can be very interesting for students.

Proposals are discussed among the Steering Committee members. Invitations of guest lecturers should be approved by consensus. The reception of staff will be subject to the conclusion of an individual agreement determining the duration of the mobility, the modalities of the reception of the person concerned, as well as the financial conditions attached to their reception. At the end of their working period, they will send a written report to the Central Secretariat.

Costs incurred by the visiting scholars and lecturers may be reimbursed by the consortium only from the EACEA contribution to the consortium's management costs. The Coordinating Institution will cover part or all of the costs linked to the staff expenses (flight/train tickets, accommodation, meals) and invited guest lecturers.

The annual amount foreseen for the support of the mobility activities of invited guest lecturers is fixed at 13000€. They shall receive individual and travel support for the duration of the mobility period. The financial amount for the mobility period shall be determined by multiplying the number of days of the mobility with the individual support rate applicable per day for the receiving country and adding the contribution for travel to the amount obtained (see the Erasmus+ document "taux applicables pour les contributions unitaires – 2020").

Article 5. Students' selection, enrolment, assessment and degree awarding

5.1 Admission criteria

Diploma requirements and prerequisites

Each applicant must hold a bachelor's degree (minimum 3 year full time study or 180 ECTS credits) in physics or engineering physics, or a related discipline. Sufficient knowledge in classical and modern physics is required, including necessary mathematical and computer programming skills.

Applicants with identified skills/competency/ knowledge gaps (e.g. in quantum physics and/or statistical physics) are not automatically excluded from the selection procedure. If the Steering Committee decides to select them, the Executive Committee may be requested by the Steering Committee to organise a mandatory additional training in the identified topics. This is considered as a preparatory course programme. It gives the Steering Committee an opportunity to select and integrate outstanding students who haven't studied one of these subjects.

English language requirements

All applicants must provide a proof that they master the English language at a level allowing them to successfully follow the programme. The reference level C1 as defined within the Common European Framework of Reference for languages (CEFR), is required.

Examples of such English tests and corresponding minimal scores will be accepted in the context of the selection procedure are given in Annex D.

Applicants who can demonstrate that they are native English speakers, and applicants who can prove that they have validated at least 120 ECTS (corresponding to two academic years) of a comprehensively English-based curriculum at an institute for higher education are exempted from this requirement.

5.2 Conditions applied for the selection

All candidates must submit their application to the FUSION-EP application website. The selection procedure does not make any distinction between EU students and students coming from outside the EU, scholarship holders and non-scholarship holders. Every applicant is subject to a well-defined selection procedure that complies with the admission conditions and meets criteria of quality.

Gender balance among students is promoted by favouring the application of the least-represented gender group, in case of ex aequo ranked applicants.

- Admission requirements:
 - Students must comply with the diploma requirements,
 - Students must comply with the language requirements,
 - Applications must be submitted in accordance with the deadlines which can differ according to the country of origin of students (EU or non-EU countries) and the various types of funding graduate students may be eligible to receive,
 - All documents concerning the elements requested in the application form (copy of passport (non-EU) or ID document (EU), letters of recommendation, copies of diplomas ...) must be submitted.

- Main selection criteria:
 - Outstanding study results
 - Motivation
 - Quality and recognition of the institution that awarded the degree
 - Letters of recommendation

The selection criteria and their relative weight in the final assessment of the applicants are revised and decided upon by the Steering Committee when requested.

In his/her application, the candidate indicates an order of preference for the institution where he/she wishes to study during the first year.

5.3 Application procedure

The language of application is English. The opening dates of the selection campaign are indicated on the FUSION-EP website <https://www.em-master-fusion.org> and on the application website <https://www.em-master-fusion.org/applying>

The application website must be used. No application submitted through another channel will be considered.

The approximate schedule is the following:

- Mid-February: closing date for the application (according to the calendar, the date can vary from late January to late February)
- Late February to early March: checking of the eligibility of the candidates by the Central Secretariat and evaluation of the applications
- Mid-March: meeting of the Executive Committee to rank the candidates
- Mid-March: meeting of the Steering Committee to finalise the list of selected candidates

If the Steering Committee considers that the participation of a candidate in the selection process of the programme may be valuable, they may accept exceptions regarding the schedule (late applications) in case the candidate is not able to submit documents in time.

If the final bachelor's degree has not been awarded yet to the student at the time of submission of her/his applications, she/he will provide on the application website the transcripts of records issued by her/his university for all grades available at the time of application. After graduation, the legalised copy of the diploma should be sent to the Central Secretariat in order to validate the application. The selection is considered as final only when the Central Secretariat has received the official proof of success to the bachelor (or equivalent) degree.

5.4 Selection and admission of students

The Executive Committee will hold a meeting specially dedicated to the selection. Prior to the meeting, the coordinating institution distributes the application files to the Executive Committee members so that each applicant is evaluated at least twice. The Executive Committee members assess the applications according to the procedure validated by the Steering Committee. The case of applicants in specific or atypical situations will be discussed in this selection meeting. For these cases and if necessary, the Executive Committee members will adapt the criteria by consensus. When EACEA scholarships are at stake, the (main and reserve) selection lists will be established according to the EACEA rules and guidelines. As for the self-funded students, the Executive Committee will establish the selection lists according to the Steering Committee request. The Executive Committee is also in charge of proposing the students' distribution among the hosting partners. This distribution must balance the number of students in the hosting partners taking into account their specific situations.

Successful applicants are ranked in lists (in general a main list and a reserve list) according to the eligibility criteria imposed by the relevant funding organizations (in particular the EACEA) and by the Steering Committee.

The applicants of the various lists receive an official letter signed by the programme coordinator on behalf of the Consortium. This letter notifies each applicant about their selection status (main list, reserve list, EACEA scholarship, other financial support).

A copy of this letter is sent to the department of the host institution that shall be responsible for the registration and enrolment of the student in the programme.

Once admitted, students can be enrolled at the host institution under the conditions set by the rules of the Consortium. The self-funded students (non-scholarship holders) must pay the enrolment fees relating to the programme participation to the coordinating institution which is in charge of the financial transfer to the hosting partners.

Every rejected student must be notified by the coordinating institution and has two weeks to enter an appeal.

All selected students have to fill out the necessary documents via the online procedure and must comply with the deadlines notified to them by the coordinating institution. Any student who will not provide the necessary documents in time, may be refused and replaced by the first applicant on the corresponding reserve list. Should this be the case, the student at fault will be notified of his replacement by the coordinating institution.

5.5 Enrolment of students

Every student is 'fully' enrolled at their hosting institution and 'pro-forma' enrolled at the coordinating institutions (no enrolment fees charged = simple registration). Students may need to be 'pro-forma' enrolled at Partners to comply with specific regulations of these partners.

On request of any partner institution, the Central Secretariat will communicate them the list of admitted students, including an e-mail address for each student so that the partner institutions can enrol the students as specified by their administrative regulations.

5.6 Programme fee and enrolment fees

The **programme fee**, also referred to as the participation fee, is an *overall* fee paid by each student to participate in the FUSION-EP master programme (including charges, such as transfer between partners, the minimum required level of the obligatory insurance coverage for EMJMD eligible student candidates, which includes certain risks such as illness, accident, death, permanent disability, third-party liability for their mandatory as well as non-mandatory mobility study periods in both Programme and Partner countries, and the additional costs for running the programme);

The programme fee is charged each year to the students for the participation in the programme. During the EACEA funding period, the programme fee is EUR 4500/year for programme country nationals and EUR 9000/year for partner country nationals.

Self-funded students pay the programme fee into the central FUSION-EP account at AMU provided for this purpose (cf. article 6). For students who are granted an EMJMD scholarship, the programme fee is paid directly by EACEA to AMU and transferred by AMU to the programme account.

Self-funded students will be granted waivers to the extent that this does not compromise the sustainability of the programme. The amount of these waivers will be determined by the Steering Committee and will be subject to yearly revision, depending on the available budget, the ranking and the specific financial situation of the student. Changes must be approved by all members of the Steering Committee.

Institutional enrolment fees

The **institutional enrolment fee**, also referred to as the tuition fee, is the institutional fee for enrolment and/or training of the student at the hosting Partner.

Each hosting Partner receives a sum for the payment of local enrolment (or tuition) fee for each hosted student. For students from programme countries, this sum is equal to 1 000 € for the partners charging an enrolment fee less than 1 000 € and equal to the enrolment fee for the partners charging an enrolment fee higher than 1 000 €. For students from Partner countries, this sum is equal to 2 000 € for the partners charging an enrolment fee less than 2000 €, and equal to the enrolment fee for the partners charging an enrolment fee higher than 2 000 €.

The amounts of the local enrolment fee are listed in the Annex "Tuition Fees".

These amounts can be adjusted before the start of each new academic year, in accordance with the institutional decisions relative to the amount of requested enrolment fees. As long as it does not exceed a small increase (< 10%), it is not necessary to organise a special meeting of the Steering Committee in that respect. The "Enrolment Fees" in annex are modified in line with these changes.

Large changes in the enrolment fees may have implications on the budget. Therefore, adjustments are required in the "Tuition Fees" and "Budget repartition" in annexes. The Steering Committee and the governing bodies of the institutions shall consider and validate these major changes for the efficient running of the Master programme FUSION-EP.

If students need to be enrolled during one or more additional semester(s) beyond the standard duration of the degree programme, the enrolment fees are paid in accordance with the standard rate applied at each partner institution involved. Institutional enrolment fees as well as the insurance costs will be paid by the students and cannot be waived.

In accordance with the articles L 123-7-1 and R 719-50-1 of the French Education Code, the Parties agree that for students coming from outside the EU and hosted by a French university, the same enrolment fees apply as those paid by the French and EU students.

5.7 Transfer of credits for students in the programme

Every partner university sends the coordinating institution the transcript of records of each student taking part in the courses of the programme. In compliance with the GDPR, the transcript of records can be forwarded only with the consent of the concerned student. For this reason, it is expected that the student gives a prior approval by signing the Student Contract Agreement granting permission to forward the grades to the awarding institutions. Otherwise, the student undertakes to provide the coordinating institution with a certificate of all his/her validated ECTS (ECTS obtained per term) in order to continue his/her studies at the other partner institutions.

In turn, the coordinating institution will communicate all curricula (courses taken up at partner institutions) and study results obtained at partner universities (not yet converted) to the partner universities who request this information.

The Partner institutions accept differences in national regulations among the Partner Institutions concerning the awarding of ECTS credits and they recognise the number of ECTS credits awarded by Partner Institutions for the degree programme without further conversion.

In order to establish the student's final result (grade point average) which is approved by the Joint Examination Committee according to article 3.2.5, before issuing the joint degree by the coordinating university (see article 5.10), all grades shall be converted to the grading system of the coordinating institution. This recognition is made in conformity with the joint conversion table for grades, as established in annex C of this agreement.

5.8 Passing exams

Each partner university organises the examinations of each course module given within the programme. The examinations are organised in compliance with the existing local rules and regulations in force at each partner university. The assessment methods and criteria are described for each course module in the individual ECTS sheet.

Resits are preferably organised before the Summer Event in M1 and M2 to avoid problems of residence permits.

All the results of session 1 and 2 (retake session) need to be communicated by the partner university to the Central Secretariat at the coordinating institution before the deadline fixed each year.

5.9 The validation of each semester of the study programme

Partner institutions shall conduct examinations and assessments in compliance with the policies and procedures in force at the Partner Institutions without prejudice to those adopted by the Steering Committee, as part of the Joint degree programme FUSION-EP.

All modules are weighted according to the ECTS system and in conformity to the applicable national regulations.

Students need to obtain a credit certificate for every course module to validate the study programme.

The Joint Examination Committee is verifying that:

- the student has taken up all necessary course units to validate the study programme in his/her curriculum
- the local examination committee has validated locally the passing exams with transferable ECTS credits that the student has completed
- the student has obtained an ECTS weighted average of 10/20 or more
- the student has obtained at least 8/20 for each course unit
- the student has obtained less than 10/20 for not more than two course units
- the student's deficit to pass one or two course units is not larger than 6 weighted marks. For one course, the weighted deficit is calculated by multiplying the deficit on the examination mark for the course unit by the ECTS credits that are awarded to that particular course unit. If the student has a deficit in two courses, the sum of the weighted deficits for both needs to be no larger than 6.

In exceptional cases the Joint Examination Committee can decide to deliberate on student's results in case he/she has not fulfilled the above-mentioned conditions.

5.10 Awarding of the Master degree

Joint decision on successful completion of the programme

The awarding of the Joint Master degree in FUSION-EP is based on the mutual recognition of the programme course provided by the 8 institutions involved in the Consortium. Common standards and quality criteria are decided within the Consortium. The design of the programme, its implementation and management and the evaluation of its quality assurance are shared by all partner universities. Within the context of the joint programme, they recognise the passed examinations and the courses taken by each student enrolled in the programme.

Successful completion of the joint 'European Master of Science in Nuclear Fusion and Engineering Physics' programme shall be decided as a joint decision of the partner universities by the Joint Examination Committee. Students having successfully obtained all ECTS credits required to complete the programme including in particular a successful defence of their master's thesis, will be declared having successfully completed the joint "European Master of Science in Nuclear Fusion and Engineering Physics" programme.

Award of the joint degree (one single diploma)

After successful completion of the programme as decided by the Joint Examination Committee according to the provisions laid down in the first part of this article, students will receive a joint diploma issued by the coordinating university, signed by the representatives of all partner universities. This joint diploma will mention all national degrees which will be thereby awarded to the students according to the national legislations on higher education of the respective partner universities, in compliance with the provisions and the diploma model laid down in annex G. U STUTTGART does not award a national degree and recognizes only the national degrees of the partner universities.

The joint diploma will not mention a degree of merit.

It will be accompanied by the diploma supplement which follows the model developed by the European Commission, Council of Europe and UNESCO/CEPES. The diploma supplement is issued and signed by AMU on behalf of all partner universities.

5.11 Quality assurance

Each institution is responsible for the quality assurance (QA) of its course curriculum and training programme, in compliance with the standard QA procedures. The overall quality of the study programme is assessed by internal and external quality assessment procedures.

With the objective to meet criteria of the external QA procedures, the partner universities are bound to follow and comply with the recommendations of the 'European approach to QA for Joint Programmes', as approved by the EHEA ministers in May 2015, for the accreditation of the joint programme.

The Steering Committee is responsible for the development and implementation of internal quality assessment procedures. An evaluation of every course module taken by the students is scheduled at the end of the semester. The evaluations made by the student are anonymous and recorded in the website of the programme. During the meetings of the Steering Committee, the results of the evaluation of the course modules are discussed to identify problems and find the best solution to meet those needs.

Special attention is paid to students' employability and job position of alumni graduate from the Master FUSION-EP programme. In this regard, the programme website has a special section for alumni. Possibilities for further networking between students and alumni are being considered e.g. increasing involvement of students in the preparation of partners' research projects. A Facebook Group with restricted access – FusionAllTogether – is operational.

Article 6. Costs and financing

The financial and administrative coordination of the Master's programme must be managed by the Central Secretariat under supervision of the coordinator.

The Central Secretariat is responsible for opening two special sub-accounts (herein called "central FUSION-EP accounts") at the coordinating institution;

- One dedicated to all financial transactions related to EMJMD scholarship holders;
- One dedicated to all financial transactions related to self-funded students.

This procedure guarantees full transparency of money flows and effective internal and external controls.

A special financial sub-account (herein called “**local FUSION-EP financial account**”) is open for the master’s programme at each participating institution under control of the respective financial services.

The financial management of the programme is run according to the following principles:

1. Incomes and expenses related to the central FUSION-EP organisation of EMJMD scholarship holders and self-funded students are paid from the central budgets handled by the respective “**central FUSION-EP accounts**”. The FUSION-EP Steering Committee annually decides on the estimated budgets of the coming year, following the guidelines as defined in the Annex “Budget Guidelines”. The Annex “Budget Guidelines” can be modified by unanimity of the Steering Committee’s members, provided that these changes will appear to be minor for the partner institutions. Otherwise, the proposed amendment of this Annex needs to be approved by the partner institutions. Only costs associated with a decision/approval by the Steering Committee can be paid from the central accounts under the approved annual budget.
2. The “**central FUSION-EP accounts**” are managed by the coordinator in compliance with:
 - the detailed rules applied for financial transfers by the coordinating institution in line with the “Budget Guidelines” and
 - the annual provisional budgets – one for EMJMD scholarship holders and one for self-funded students – approved by the FUSION-EP Steering Committee.

The coordinator provides regular analysis of the account’s financial statements to the FUSION-EP Steering Committee.

3. Expenses not supported by the Steering Committee’s approval, must be paid by the partner institutions.
4. From the “**central FUSION-EP accounts**” the following financial transfers are made in particular:
 - a) the payment of local enrolment fees to each partner institution hosting master students according to article 5.2. Money is transferred from the central FUSION-EP accounts to the local FUSION-EP account of the partner universities.
 - b) for the payment of student’s EMJMD scholarship. The scholarships shall be paid from the “central FUSION-EP accounts” related to EMJMD scholarship holders to the student’s personal bank account in the EU.
 - c) for the payment of Consortium grants to self-funded students. The financial transfer is made from the “central FUSION-EP account” related to self-funded students to the student’s personal account in the EU.
 - d) for the payment of visiting scholars, the financial transfer is made from the “central FUSION-EP account” related to EMJMD scholarship holders to the visiting scholar’s personal bank account.
 - e) for the Central Secretariat, which is paid from this “central FUSION-EP accounts”, related to EMJMD scholarship holders to the appropriate account of the coordinating institution.
5. The partners agree that the residual funds of the central budgets from the previous FUSION-EP programme (based on the 2019-2426 Financial annex n°1 of the amendment n°2019-2426 to the COA signed in 2018) may be used to finance the continuation of the programme.

The financial statement of the EMJMD project must be drawn up by the coordinating institution in accordance with the structure of the estimated budget during the whole implementation period of the EMJMD project. The coordinating institution must certify to EACEA that the information provided in the request for payment of the balance is full, reliable and true.

The coordinating institution must also certify that the costs incurred can be considered eligible in accordance with the consortium agreement.

If the total amount of earlier payments by EACEA is greater than the final amount of the grant determined in the Grant Agreement n°2019-1419, the payment of the balance takes the form of a recovery.

If the total amount of earlier payments by EACEA is lower than the final amount of the grant determined in the Grant Agreement n°2019-1419, the EACEA must pay the balance within 60 calendar days from the reception of the request.

Payment is subject to the approval of the request for payment of the balance.

The financial surplus generated at the end of this agreement may be available for the continuation of the program; provided that it corresponds to the lump sums that have not yet been used for the project.

Article 7. Student support

The partners commit themselves to promoting the FUSION-EP programme and informing potential candidates about application procedure. They invest themselves in facilitating the integration of the participating students into the programme according to their mobility pathway.

During the application campaigns

The application campaign opens in November for a start in September of the following year. It closes between mid-January and mid-February. During the application campaign, the Central Secretariat is the reference contact to candidates.

On the programme's website (www.em-master-fusion.org), the detailed procedure for the selection process is available with the deadline to submit application.

After the Steering Committee meeting which validates the main and reserve lists of students, the students are informed by email of the results of their application. In case of a drop-out from the main list, an email is sent to the first student of the reserve list to inform him/her that he/she is integrated to the main list, with the corresponding financial help.

Preparation and arrival of the students at their host university

The name and the contact details of the local coordinator are given to the incoming new Master students. All necessary logistic and administrative information is provided to the students by the host university: for travel, for visa, for university support services, for housing on the Campus, for registration, for academic and practical courses etc. Support to open a bank account and to get a wireless internet access can be requested from the hosting university by the students. These services can be extended to the eligible dependents (spouse and dependent children) if necessary.

The programme coordinator can be referred to as a last resort, if the problem is too serious to be solved only with the assistance of the local coordinator.

Services for students

The questions addressed by the students to the coordinating university are referred to the local coordinators whenever appropriate. Nevertheless, a guide will be made available for FUSION-EP students and provided by the programme manager. It will help them to overcome the first adaptation difficulties. The coordinating university (through the administrative officer and the programme coordinator) processes all students' requests, which cannot be answered by the hosting university.

The university services and facilities for international students at the hosting partner universities are offered to the FUSION-EP students. The International Offices (both at central and faculty level) or the equivalent university departments are the reference contact points for FUSION-EP students. Students are provided with all necessary information and material on the organisational structure of the university, its academic programmes and extra-curricular options/activities. The FUSION-EP students are encouraged to participate in the welcoming events and orientation meetings organised by the international offices and student associations in addition to excursions such as city tours and day-trips promoting the cultural and heritage significance of the region.

The programme fee of the students includes an insurance policy that can be considered valid in each country of consortium members. A certificate of insurance is sent to students directly by the insurance company.

Students are informed via their hosting university's website or their local coordinator about the course content and online material (e-learning activities such as video, synchronous distance activities or any other tool).

Information about the available master's thesis topics available at the hosting universities and the associated partners is communicated to the students by the local coordinators. The M1 mobility stay at Cadarache and the Summer Event are also good opportunities for the students to discuss their master's thesis with all the local coordinators and the coordinating team.

The Ph.D topics are also discussed mostly between the students and their M2 local coordinator. In addition, such Ph.D offers as received by the coordinating team are posted on a special page of the website where also the names and email addresses of contact persons of all the full and associated partners is kept up-to-date. Access to this page is reserved for the FUSION-EP students.

Feedback opportunities

The local coordinators will keep in touch with the students hosted at their university, in the form of group meetings or face-to-face discussions. Informal contacts are also possible at any time with the local coordinators or members of the coordinating unit. FUSION-EP staff members fully adheres to an 'open door' policy.

The students' representative (elected by M1 and M2 students, see 3.2.1) can provide input and direction to the development of the programme, based on data gathered e.g from student surveys and face-to-face meetings.

The students' and alumni's feedback is an issue of major importance on the agenda of the Steering Committee meetings. The discussions in the Steering Committee should identify the need for improvement that should be brought to the programme. For each issue raised by the students' and alumni representatives, the Steering Committee can suggest the name of a person who will be responsible to undertake the necessary measures to that effect, if need be, with an emphasis on monitoring and evaluation. Examples of topics, where problems can occur and that are put in the Steering Committee's agenda to be discussed: mobility, differences in teaching and examination practices, practical and specific problems, thesis subjects proposed by future supervisors.

Answers are provided directly to the students and alumni or given to their representatives.

Ombuds services

In case of ethical problems, the office of the ombudsperson of the host university can be contacted for mediation. The ombudspersons provide independent, impartial, confidential and informal assistance to students (and staff). For the following universities, a central ombudsperson is appointed: Universiteit Gent, Universidad Complutense de Madrid, Universidad Carlos III de Madrid, Universität Stuttgart and Aix-Marseille Université. For Université de Lorraine, CEA/INSTN and Czech Technical University the Central Secretariat will assist student in getting in contact with a local person, who may act as the mediator.

Article 8. Intellectual Property Rights connected to Master's Thesis

Each partner must notify the student about intellectual property provisions of the agreement and the Research & Development procedures applied in the university where he or she studies. Such provisions shall include copyrights and the distribution of results protected by intellectual property rights, before they can be exploited. Each partner shall ensure that a student makes a commitment for every scientific outcome achieved at the university where he/she has studied: findings, conception, inventions, software, designs, databases, semiconductor chips ...

Unless something else is agreed to in writing or in case a student is already employed in a company or when copyright or any other kind of intellectual property result from a project in collaboration between two or more universities, results shall be shared in consideration of each party's contributions and the intellectual property enforcement procedures of each university.

If a student is employed by a company and the master thesis subject is connected with the student's business activities, a specific agreement should be signed between the partners involved and the employer before starting any work.

In any case where student and supervisors establish new intellectual property rights, they shall file the application for intellectual property right protections in compliance with the procedures intended for this purpose.

Most institutions have their own policy about confidentiality and acknowledge that particular pieces of knowledge are recognized confidential. Each partner should inform the student about the provisions taken in this respect as part of this agreement.

Where confidentiality of results of any work is an issue, the supervisor of the student should make his or her institution aware and arrange to put in place a confidentiality agreement. This need may extend to the external examination of the master's thesis by consortium members.

Article 9. Liability

- 9.1 Each partner shall be solely liable for any loss incurred by third partners, or damage and injury to, third parties resulting from actions taken by it or on its behalf in the execution of this agreement.
- 9.2 Each partner shall be fully responsible for the performance of its share within the agreement and for the requirements regarding Insurance and Social Security for the staff involved.
- 9.3. Everybody who benefits from mobility through the programme (students, scholars and staff) should comply with visa requirements and residence permits.

Article 10. Entry into force and termination

This agreement shall come into force at the beginning of the academic year 2021/2022 (admission of the first cohort of students).

The agreement is valid for the number of years corresponding to the completion of 4 intakes (2021-2023, 2022-2024, 2023-2025, 2024-2026), and it shall continue until the end of the month of the last graduation of the last student enrolled in the programme.

It will be in compliance with the duration of the accreditations of every partner institution and their renewal for issuing the master's degrees as provided for in article 5.10.

If a partner university wants to withdraw from the agreement, this partner will notify its decision to the other consortium members by giving at least twelve months prior written notice, and this only prior to the start of a new academic year. However, this Agreement will remain in effect until each party has completed its obligations towards all partners and students enrolled in the programme.

In case a partner institution is involved in a serious violation of human rights as supported by clear and convincing evidence and which is not remedied within [30] calendar days or is not capable of remedy, the Steering Committee may decide to declare said party to be a defaulting party and shall decide on the consequences thereof which may include termination of its participation with immediate effect.

Article 11. Applicable law and Competent Court

This agreement shall in all respect be in compliance with the terms of the related Grant Agreement n°2019-1419 and be governed by French law. The settlement of any difference or conflict arising from or in connection with this Consortium Agreement shall be attempted by an amicable effort from the Partners.

The students are bound to the rules and regulations from the institution at which they are enrolled. The students are also bound by their individual student contracts (student agreements) between the coordinator and each student.

Article 12. Human Rights

The partner universities guarantee to respect human rights.

For the purpose of this Agreement, “human rights” is defined as the rights included in the International Convention on Civil and Political Rights (ICCPR) and the International Convention on Economic, Social and Cultural Rights (ICESCR).

Article 13. Personal Data protection

The partner universities agree that they will act as joint controllers for the processing of personal data in the context of the implementation of the underlying agreement.

Each partner university agrees that the personal data will be processed by the host university in accordance with the provisions of this agreement and the national legislation of the country of each university where the registration is made. The processing of personal data shall be carried out in accordance with the European Union’s General Data Protection Regulation (GDPR), as well as with the European Union Regulation (EC) 45/2001 of December 18, 2000.

The students’ data being passed will only be used within the framework of this Agreement for the academic and administrative management of the mobilities, for statistical purpose, and to protect the personal interests of the data subject.

Within the context of the Erasmus+ programme 2021-2027, straightforward and secure online administrative procedures will be implemented by each partner university.

The European Student Card Initiative is linked to the EU’s electronic identification rules (eIDAS regulation) to provide the trust needed to authenticate student and to allow them to ascertain their rights online.

A single authentication solution, via “**My academic ID**” initiative will make possible the digital identification of the student and will help the HEIs to share information held on the student. This simple and secure system of recognition of European student status will require the student’s prior consent to the use of personal data. **The European student card** will materialize the recognition.

Pending the implementation of My academic ID and the condition that My academic ID will also include the necessary arrangements for the processing of personal data between the partner institutions, the partners subscribe to the following joint controllers clause for the processing of personal data in the context of the implementation of the underlying agreement.

The terms below are used in the meaning as defined in the GDPR and the Personal Data Processing Act;

1. The partner universities will process the following Personal Data in the context of the implementation of the underlying agreement:

a) Personal data shared in the context of enrolment at all partner institutions: name - first name - sex - national number - date of birth - place of birth - country of birth - nationality - e-mail home institution - correspondence address (private) - mobile number - training - course units and curriculum components - passport photo

b) Personal data shared in the context of the admission and selection procedure: title - skype id - proof of residence - motivation for the application for enrolment - motivated application for scholarships - curriculum vitae - letters of recommendation or contact data reference persons - language certificate - scan or copy of identity document - application form coordinating institution- copies of diploma documents and certificates concerning previous studies - transcripts of records.

c) Personal data pertaining to the curriculum and study results, shared in the context of the joint organisation of the master's programme and of the awarding of the joint degree: course units - transcript of records - assessment reports master's dissertation - proof of obtaining a diploma.

The personal data processed by the Parties include the following categories of data subjects: Students.

2. The partner universities undertake to communicate with the students in a transparent manner on the way they can exercise the rights that are granted to them under the GDPR.

The partner universities will provide the students with the information set out in Articles 13 and 14 of the GDPR by including it in their privacy statement, which will be made explicit as follows:

AMU (coordinating institution) will publish the provisions referred to in this article on:

<https://www.univ-amu.fr/fr/public/donnees-personnelles-et-saisine-du-dpo>

CEA/INSTN will publish them on <https://www.cea.fr/Pages/protection-donnees-personnelles.aspx>

CTU will publish them on <https://www.cvt.cz/en/data-processing-and-protection-gdpr>

UC3M will publish them on <https://www.uc3m.es/home/data-protection>

UCM will publish them on <https://www.ucm.es/dpd/normativa>

UGent will publish them on its webpage concerning the Ghent University privacy statement, which is published on the following URL: <https://www.ugent.be/en/administration/privacy> and which is referred to in the Student Agreement, which is signed by students upon enrolment at Ghent University.

U STUTTGART will publish them on:

<https://www.student.uni-stuttgart.de/studienorganisation/datenschutzerklaerung/>

U LORRAINE will publish them on: <https://numerique.univ-lorraine.fr/organisation/protection-des-donnees>

3. The partner universities undertake to respect the confidentiality obligation when processing personal data and to provide each other with the required assistance that is necessary and / or may reasonably be expected to enable them to meet their obligations under the GDPR.

4. In the event that a student makes any request regarding his or her personal data to a partner universities, the responsibility for the execution of such a request lies with the partner universities receiving the request. The other partner universities shall assist them in this.

5. If the personal data is processed and / or stored outside of the European Economic Area e.g. within the context of the cooperation with associate partners of the consortium, and insofar as no adequacy decision applies, the partner universities will additionally sign an agreement between the consortium partners and these associate partners by which they endorse the standard clauses drawn up by the European Commission. The processing and storage will always take place in accordance with the GDPR as well as, where applicable, the national legislation of the country where the data is being processed / stored, if that would also apply.

6. The partner universities shall ensure that appropriate technical and organisational measures are taken to protect the personal data against loss or any form of unlawful processing. The measures to be taken are in line with the available technology.

In the event that there is an infringement with regard to personal data, the partner university who committed the infringement will be responsible for the communication (if any) to the Student and, if applicable, to the supervisory authority. The partner university will also notify the other partner university in writing without unreasonable delay. The partner university who committed the infringement is obliged to immediately take the appropriate measures at its own expense to stop the infringement and to limit any adverse consequences of the infringement.

7. If a student or a third party believes to have suffered damage as a result of (unlawful) processing of personal data or failure to fulfil an obligation, the partner university responsible for processing or complying with the obligation will fully indemnify the other partner university for this in accordance with the liability rules as established in the GDPR.

If the supervisory authority imposes a fine as a result of an unlawful or negligent act of one partner university, it will be obliged to indemnify the other partner university in case they have also been imposed with a fine.

8..

Pr. Hervé ISAR (dpo@univ-amu.fr) acts as data protection officer on behalf of AMU in the context of this Data Processing Agreement.

Mrs Laure FLAMAND (dpd@cea.fr) acts as a contact person and data protection officer on behalf of CEA/INSTN within the context of this Data Processing Agreement.

Ing. Josef Svoboda, Ph.D. (dpo@cvut.cz), acts as a contact person on behalf of CTU within the context of this Data Processing Agreement.

The contact person on behalf of UC3M in the context of this Data Processing Agreement can be contacted at the following address: dpd@uc3m.es

The Delegate of the Rector for Data Protection acts a contact person on behalf of UCM within the context of this Data Processing Agreement and can be contacted at dpd@ucm.es

Prof. Geert Verdoolaege (geert.verdoolaege@ugent.be) acts as a contact person on behalf of Ghent University within the context of this Data Processing Agreement.

Mrs Hanne Elsen (mailto:privacy@ugent.be) acts as data protection officer on behalf of Ghent University in the context of this Data Processing Agreement.

Mr Heinrich Schullerer (datenschutz@uni-stuttgart.de) acts as a contact person on behalf of U STUTT GART within the context of this Data Processing Agreement.

Mr. Jean-Daniel DURAND (dpo-contact@univ-lorraine.fr) acts as data protection officer of U LORRAINE within the context of this Data Processing Agreement.

Article 14. Amendments

The Steering Committee has the mandate to add amendments to this agreement when necessary, after approval by the appropriate bodies of the full partner universities. For any aspects not covered in this agreement, the Steering Committee can decide, eventually upon approval by the official bodies of the signing institutions and/or, if applicable, by the European Commission.

Article 15. Language

This agreement is made in English. All documents regarding the running of the programme are available in English.

Article 16. Annexes

Annex A. Programme detail

Annex B. Consortium partners

Annex C. Conversion table

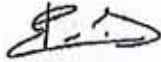
Annex D. English language tests

Annex E. Budget

Annex F. Enrolment fees

Annex G. Accreditation programme and degrees and diplomas awarded

AIX-MARSEILLE UNIVERSITÉ



President
Eric BERTON

UNIVERSITEIT GENT

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Rector
Rik VAN DE WALLE

UNIVERSIDAD COMPLUTENSE DE MADRID

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Rector
Joaquín GOYACHE GOÑI

UNIVERSIDAD CARLOS III DE MADRID

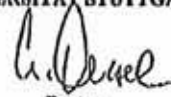
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Rector
Juan ROMO

UNIVERSITÉ DE LORRAINE



UNIVERSITÄT STUTTGART



Rector
Wolfram RESSEL

INSTN-CEA SACLAY

le 09/12/2021


Directeur
Eric GADDET

CZECH TECHNICAL UNIVERSITY



Rector
Vojtěch PETRÁČEK



ANNEXES

ANNEX A : PROGRAMME DETAILS

Table 2.1.1 Academic content of FUSION-EP : first year

	AMU		UCM / UC3M		UGent		U Lorraine		U Stuttgart	
FIRST YEAR	Plasma Physics	4	Plasma Physics	6	Plasma Physics	6	Fundamentals of Plasma Physics	6	Plasma Physics I	3
	Charged Fluid Dynamics	4	Introductory Atomic and Molecular Physics	6	Atomic and Molecular Physics	6	Atomic and Molecular Physics	6	Plasma Physics II	3
	Statistical Physics	6	Classical Electrodynamics	6	Magnetohydrodynamics of Plasmas	6	Classical Electrodynamics, Waves, Antenna and Emission Processes	6	Fusion research	3
	Quantum Mechanics	6	Computational Physics	6	Computational Fluid Dynamics	6	Computational physics	6	Numerical plasma phys. I	3
	Electromagnetism and Optics	4	Experimental Techniques in Plasmas, Nuclear Physics and Materials	6	Continuum Mechanics	6	Instrumentation and Signal Processing	6	Numerical plasma phys. II	3
	Mathematics for Physics	4	Fluid Dynamics	6	Cross-Course Project	6	Mechanics of Continuous Media	6	Advanced Physics lab	12
	Numerical methods and lab	8	Laboratory Project:	6	Plasma Technology and Fusion Technology	6	Lab Project	6	Advanced Experimental Physics	9
	Short internship	4		6					Microwave technology	3
	Scientific watch	2		6					Additional Elective	3
	Language & Culture	6	Language & Culture	6	Language & Culture	6	Language & Culture	6	Language & Culture	6
	First year elective courses (12 ECTS)									
On-line group work on the GOLEM device										

Table 2.1.2 Academic content of FUSION-EP : second year : Track Fusion Science

UCM / UC3M		UGent		U Lorraine		U Stuttgart	
Elective courses: 12 ECTS from :		Elective courses: 12 ECTS from :		Elective courses: 12 ECTS from :		Elective courses: 12 ECTS	
Fusion Reactor Physics	6	Machine Learning	6	Equilibrium and MagnetoHydroDynamics	3	Seminar on Special Problems of Fusion Research	3
Plasma Diagnostics and Materials Technology	6	Nonlinear Systems	6	Turbulence & Transport	3	Advanced Experimental / Computational Training	3
Turbulence in Plasmas	3	Physics of Semiconductor Devices	6	Plasma Heating	3	Simulation of Reflectometry Fusion Research	2
Magnetohydrodynamics	3	Physical Chemistry	6	Plasma Wall Interactions	3	Numerical Plasma Physics I	3
Computational Plasma Physics	3	Modelling and Engineering of Nanoscale Materials	6	Modelling and Numerical Methods	3	Numerical Plasma Physics II	3
Plasma in Space and Astrophysics	3	Physical Materials Science	6	Diagnosics for Fluctuations & Data Processing Methods	3	Thermo and Fluid Dynamics	3
Intertrial Confinement Fusion	3	Additional elective	6	Language and Culture	6	Comput. Materials Modeling	3
Fluid Mechanics and Partial Differential Equations	3					Modeling of 2-Phase Flows I	3
Computational Techniques in Atomic and Molecular Structure, Dynamics and Spectroscopy	6					Advanced Statistical Physics	9
Language and Culture	6	Language and Culture	6	Language and Culture	6	Superconductivity I + II	9
						Advanced Atomic Physics I	4
						Advanced Quantum Theory	9
						Language and Culture	6
SECOND YEAR - TRACK FUSION SCIENCE							
Joint Experimentation and Analysis Session in Prague (6 ECTS)							
Joint Practicum in Cadarache (6 ECTS)							
Master Thesis (30 ECTS)							

Table 2.1.3 Academic content of FUSION-EP : second year : Track Fusion Technology

AMU / CEA-INSTN		CTU	UCM / UC3M	UGent	U Stuttgart
Elect. courses: 12 ECTS:		Elect. courses: 12 ECTS from:		Elect. courses: 12 ECTS from:	
Magnetic Confinement Fusion: Physics and Technology	4	Tokamak physics	Fusion Reactor Physics	Antennas and propagation	Numerical Investigation of Mode Propagation in Corrugated Waveguides
Plasma-Wall Interaction, Discharge Plasmas	4	Fusion technology	Plasma Diagnostics and Materials Technology	Computational Materials Physics	Microwave Technology
Atomic and Molecular Physics, Spectroscopy	4	ITER components, related research and programme	Advanced Materials for Fusion	Computer Control of Industrial Processes	Magnet-Technology for Fusion reactors incl. practice
Power Sources and Materials in Extreme Environments	4	Fusion practicum	Plasma-Wall Interaction in Fusion Plasmas	Machine Learning	Vacuum technology and D/T Fuel cycle
Superconductors for Fusion	4		Engineering in Fusion Devices: Robotics	Micro-analysis and Structure Determination in Materials Science	Thermal and neutronically loaded materials
Laser Created Plasmas	4		Reactor Components (blankets, divertors) and Technology	Nuclear Instrumentation	Fusion technology B
Language & Culture	6	Lang. & Culture	Nuclear Physics and Fusion Plasma Technology Applied to Industry	Physics of Semiconductor Devices	Seminar on special problems of fusion research
			Engineering in Fusion Devices: Design, Safety and Fuelling Technology	Thin Films: Physics and Technology	Advanced experimental/computational training
			Language & Culture	Additional elective	Neutron Cross Section Theory + Nucl. Data Generat.
			Language & Culture	Language & Culture	Thermo and Fluid Dynamics Comput. Materials Modeling Modeling of 2-Phase Flows I
SECOND YEAR – TRACK FUSION TECHNOLOGY					
Joint Experimentation and Analysis Session in Prague (6 ECTS)					
Joint Practicum in Cadarache (6 ECTS)					
Master Thesis (30 ECTS)					

Design of the course programme:

The course programme is mostly structured in four sequences, with a number of shorter intertwined mobility stays, as shown in Table 1. The first three main sequences (namely the three semesters of academic teaching) obey a strict rule of mobility: no student can spend a single semester in his/her own country.

Table 1 – Overview of the mobility structure

1st semester (30 ECTS) *	Joint thesis orientation and networking seminar	2nd semester (30 ECTS) *	3rd semester (18 ECTS) **	Joint exp/ and analysis session (6 ECTS)	3rd semester (cf 4) **	Joint practicum (6 ECTS)	Master thesis (30 ECTS)	Summer event 2
AMU- CEA/ INSTN Madrid Gent Stuttgart Lorraine	2 days, CEA/INSTN -IRFM ¹	id. 1 st sem.	AMU Madrid Gent Stuttgart Lorraine CTU	2 weeks, IPP Prague	AMU- CEA/ INSTN Madrid Gent Stuttgart Lorraine CTU	2 weeks, INSTN- IRFM ¹ and ITER	4-6 months	4 days Location: rotating among full partners
GOLEM remote group (all)								

¹ Institut de Recherche sur la Fusion par confinement Magnétique

Table 2 – Short mobility stays and their objectives

<i>Event</i>	<i>1st year</i>		<i>2nd year</i>		
	Joint thesis orientation and networking seminar CEA-IRFM (Cadarache)	Summer event 1 Hosted by each full partner in turn Late July 4 days	Joint experimentation and analysis session IPP Prague December 2 weeks	Joint practicum CEA-IRFM (Cadarache) February 2 weeks	Summer event 2 Hosted by each full partner in turn Late July 4 days
<i>Location</i>	CEA-IRFM (Cadarache)	IPP Prague	IPP Prague	CEA-IRFM (Cadarache)	CEA-IRFM (Cadarache)
<i>Time duration</i>	February 2 days	Late July 4 days	December 2 weeks	February 2 weeks	Late July 4 days
<i>Objectives for the students</i>	<ul style="list-style-type: none"> Attend oral reports of M2 mini-projects Meet members of IRFM staff (networking) Discuss master thesis orientation with members of full & associated partners 	<ul style="list-style-type: none"> Meet and hear about previous cohort's experience Share their foreign culture experience with fellow 1st year students Refine their near-term future choice by attending master thesis defences 	<ul style="list-style-type: none"> Put into practice academic knowledge for tokamak experiments (1) First experience of work on a middle size team (20 people) Work in an international team 	<ul style="list-style-type: none"> Put into practice academic knowledge for tokamak and lab experiments (2) Witness and participate in the variety of research or R&D tasks in a large fusion laboratory Work in international teams Meet and discuss with international members of the ITER staff Meet, live and work with the French Fusion master students 	<ul style="list-style-type: none"> Defend their master thesis and attend all other defences Share their 2-years European experience with the 1st years Attend the diploma ceremony Discuss their future with the teaching staff members

ANNEX B : Consortium partners

The programme has access to the companies that have in the past provided internships to their students, as well as to industrial companies where former students were hired.

Moreover, FUSION-EP is supported by F4E, the European Union's Joint Undertaking for ITER and Development of Fusion Energy. F4E strives to broaden the European industrial base for fusion technology for the long-term development of fusion as a future energy source and to ensure a strong and competitive European industrial participation in the future fusion market. F4E is committed to promote FUSION-EP among its industrial partners.

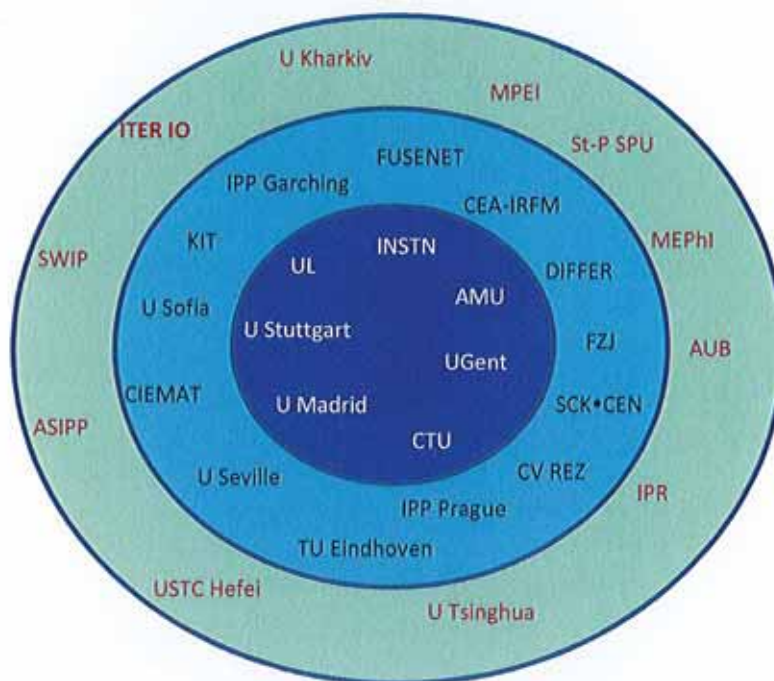
At the beginning of the EACEA period, the EU associated members are:

1. ITER International Organization (ITER IO)
2. Commissariat à l'Energie Atomique (CEA-IRFM, Cadarache, France)
3. Karlsruher Institut für Technologie (Karlsruhe Institute of Technology, KIT, Germany)
4. Max-Planck-Institut für Plasmaphysik, IPP Garching and Greifswald (IPP G+G+, Germany)
5. Forschungszentrum Jülich (FZJ, Germany)
6. Institute of Plasma Physics of the Czech Academy of Sciences (IPP Prague, Czech Republic)
7. Centrum Vyzkumu Rez (CV REZ, Prague, Czech Republic)
8. Centro de Investigaciones Energéticas, Medioambientales y Tecnológicas (CIEMAT, Madrid, Spain)
9. Dutch Institute for Fundamental Energy Research (DIFFER-FOM, the Netherlands)
10. FuseNet Association (Eindhoven, the Netherlands)
11. Technische Universiteit Eindhoven (TU/e, Eindhoven University of Technology, the Netherlands)
12. Universidad de Sevilla (University of Sevilla, Spain)
13. Sofia University St. Kliment Ohridski (Bulgaria)
14. Centre d'Etude de l'Energie Nucléaire (SCK•CEN, Belgium)

The non-EU associated members are:

15. National Research Nuclear University (MEPhI, Moscow, Russian Federation)
16. National Research University Moscow Power Engineering Institute (MPEI, Russian Federation)
17. Peter the Great St. Petersburg State Polytechnic University (St-P SPU, Russian Federation)
18. University of Science and Technology of China (USTC, Hefei, People's Republic of China)
19. Chinese Academy of Sciences, Institute of Plasma Physics, Hefei (ASIPP, People's Republic of China)
20. Tsinghua University Beijing (People's Republic of China)
21. Southwestern Institute of Physics (SWIP, Chengdu, People's Republic of China)
22. Institute for Plasma Research (IPR, Bhat Gandhinagar, India)
23. V.N. Karazin Kharkiv National University (Ukraine)
24. American University of Beirut (AUB, Lebanon)

Figure : Schematic view of FUSION-EP full partners (inner circle), EU associated partners (middle circle) and non-EU associated partners (outer circle).



ANNEX C : CONVERSION TABLE

Belgium	Czech Republic	France	Germany	Spain
20	A	20	0,3	10,0
19	A	19	0,7	10,0
18	A	18	1,0	10,0
17	A	17	1,3	10,0
16	B	16	1,7	9,0
15	B	15	2,0	8,5
14	C	14	2,3	8,0
13	C	13	2,7	7,5
12	D	12	3,0	7,0
11	D	11	3,3	6,5
10	E	10	4,0	5,0
5	F	5	5,0	2,5
0	F	0	6,0	0

ANNEX D : ENGLISH LANGUAGE TESTS

Except for applicants who can demonstrate that they are native English speakers or have validated a 2-year curriculum taught in English (see Article 5), an English language test must be provided by the applicants. The most common tests and the corresponding approximate levels required for each test are listed below:

- TOEFL ITB: 94
- IELTS: 7.0 with a minimum of 6.0 for each part
- Cambridge English: C1

These levels correspond approximately to a Common Reference (CEFR) level of C1. English test results provided by universities are not considered a sufficient proof. The exact requirements can be revised by the EC.

ANNEX E : BUDGET

E.1. Income

The total consortium income is the sum of the programme fees to be paid by EMJMD scholarship students (12 students from Partner countries + 3 students from Programme countries per intake), the programme fees to be paid by the self-funded students (2.5 students from Partner countries + 1.5 student from Programme countries per intake) and the lump sum allocated by the EACEA for the management of the programme. The breakdown is shown on Table 3.

Table 3: Breakdown of the consortium income

	/ intake	Total
EU contribution - Partner Countries (48 students in all for 4 intakes)	216 000 €	864 000 €
EU contribution – Programme Countries (12 students distributed in 4 intakes)	27 000 €	108 000 €
Self-funded students - Partner Countries (10 students distributed in 4 intakes)	45 000 €	180 000 €
Self-funded students - Programme Countries (6 students distributed in 4 intakes)	13 500 €	54 000 €
EACEA lump sum for management		220 000 €
Total income		1 426 000 €

E.2. Expenses

The consortium expenses are:

- the sum of the enrolment fees transferred to the partner universities,
- the expenses related to mobility stays, meetings of the consortium committees,
- the management costs.

The first two are detailed on Table 4, the third on Table 5.

Table 4. Programme fee distribution (total consortium expenses: 1 206 000 €)

		/student	Students/ intake	/ intake	Total cost
1	Enrolment fees for Programme country student – Intakes 1 and 2 only		4	11 600 €	23 200 €
2	Enrolment fees for Partner country student - Intakes 1 and 2 only		14	103 500 €	207 000 €
3	Enrolment fees for Programme country student – Intakes 3 and 4		5	14 500 €	29 000 €
4	Enrolment fees for Partner country student – Intakes 3 and 4		15	110 500 €	221 000 €
5	Joint thesis orientation and networking seminar, Cadarache (1 st year) Intakes 1 and 2	150 €	×18	2 700 €	5 400 €

6	Joint thesis orientation and networking seminar, Cadarache (1 st year) Intakes 3 and 4	150 €	×20	3 000 €	6 000 €
7	Joint Practicum, Cadarache (2 nd year) – Intakes 1 and 2	800 €	×18	14 400 €	28 800 €
8	Joint Practicum, Cadarache (2 nd year) – Intakes 3 and 4	800 €	×20	16 000 €	32 000 €
9	Joint Experimentation and Analysis Session, Prague (2 nd year) – Intakes 1 and 2	600 €	×18	10 800 €	21 600 €
10	Joint Experimentation and Analysis Session, Prague (2 nd year) – Intakes 3 and 4	600 €	×20	12 000 €	24 000 €
11	Summer event (1 st year and 2 nd year) – Intakes 1 and 2	1 000€	×18	18 000 €	36 000 €
12	Summer event (1 st and 2 nd year) – Intakes 3 and 4	1 000€	×20	20 000 €	40 000 €
13	Insurance cost – Intakes 1 and 2	1 000€	×18	18 000 €	36 000 €
14	Insurance cost – Intakes 3 and 4	1 000€	×20	20 000 €	40 000 €
15	Half salary of the Management Officer for 6 years*			25 000 € x 6 years	150 000 €
16	Participation to the Executive and Steering Committees (travel and subsistence) - student selection (Feb) 10 000 € × 4 Intakes - Summer Event (July) 13 500 € × 5 events				107 500 €
17	Participation to the Advisory Committee (travel and subsistence)			7 500 €	30 000 €
18	Summer Event: invited speakers (travel + subsistence) -			4 000 × 5 Summer Events	20 000 €
19	Invited Visits of Associated Partners (Joint Practicum + Summer Event including Master Theses Defenses)			2 500 × 4 + 8 500 × 5	52 500 €
20	Participation to the travel costs of the 76 students to attend Joint thesis orientation & networking seminar, Cadarache (1 st year) + Joint Experimentation and Analysis Session in Prague (2 nd year) + the Joint Practicum in Cadarache (2 nd year) + Summer Event (1 st and 2 nd year) (200 € / student / event)	1000 €	×76		76 000 €
21	Advertising			5 000 €	20 000 €
	TOTAL				1 206 000

The Consortium distinguishes between two types of students:

- students from Partner Countries: the participation cost is set to 9000 € / year;
- students from Programme Countries: the participation cost is set to 4500 € / year.

These programme fees can be adapted yearly on a proposal of the Steering Committee. A change must be approved by every partner university.

The programme fee is paid

- either directly by the student ;
- or by the EU contribution for students holding an EMJMD funded scholarship ,
- or by a financial contributor for students holding another (e.g. national) scholarship.

The amounts must be transferred into a special subsidiary bank account for the purpose of the FUSION-EP programme at the coordinating institution. Partners receive the payment of enrolment fees and administrative costs corresponding to the number of students taking part in the programme at their institution. The amounts are transferred by the coordinating institution.

If students need to be enrolled during one or more additional semester(s), they pay half of the full annual programme fee per additional semester.

Table 5: Consortium Management costs

The lump sum of 220 000 € (4 intakes x 50 000 € + preparatory year 20 000 €) allocated by the EACEA contributes to the management and academic staff mobility :

		/ intake	Total cost
1	Preparatory year: travel between Partners for meetings,		5 000 €
2	Website construction + software		15 000 €
3	Visiting Scholars (8 scholars x 1 weeks)	13 000 €	52 000 €
4	Management costs AMU/CEA INSTN	9 000 €	36 000 €
5	Management costs UGent	4 500 €	18 000 €
6	Management costs U Carlos III de Madrid/ U Complutense de Madrid	4 500 €	18 000 €
7	Management costs U Stuttgart	4 500 €	18 000 €
8	Management costs U Lorraine	4 400 €	18 000 €
9	Management costs IPP Prague	2 000 €	8 000 €
10	Management costs Cadarache (IRFM)	4 000 €	16 000 €
11	Management costs CTU	2 250 €	9 000 €
12	Participation in fairs, fusion industrial forum to promote the Master Programme		7 000 €
	TOTAL		220 000 €

ANNEX F : ENROLMENT FEES

Here is a simulation for the complete 2-year Master Course for 4 intakes. We assume that there are 15 EMJMD scholarship holders (12 students from Partner Countries + 3 from Programme Countries) per intake and 3 self-funded students in the first two intakes (2 from Partner Countries, 1 from Programme Countries) and 5 self-funded students in the last two intakes (3 from Partner Countries, 2 from Programme Countries). In total, we assume 76 students for 4 intakes.

Table 5: Assumed number and distribution of students

	Total	Programme Country	Partner Country
assumed number of EMJMD scholarship holders in 4 intakes	60	12	48
assumed number of self-funded students in 4 intakes	16	6	10
Total	76	18	58
Percentage	100	23,7	76,3

The Steering Committee will be responsible for ensuring that – considering the whole period of 4 intakes - students will be equally distributed among the partners.

Table 6: Enrolment fees and administrative cost – weighted average per student - Partner countries

For the students from Partner countries, 23 possible study tracks corresponding to enrolment fees and administrative costs are listed in table 3.4.2.

Different possibilities of study tracks offered for the European Master of Science in Nuclear Fusion and Engineering Physics (FUSION-EP)						
Partner Countries	Enrolment fees			Enrolment fees + administrative cost		
	year 1	year 2	sum	year 1	year 2	sum
AMU + UGent	3770	962	4732	3770	2000	5770
AMU + U Madrid	3770	5084	8854	3770	5084	8854
AMU + U Stuttgart	3770	1830	5600	3770	2000	5770
AMU + CTU	3770	50	3820	3770	2000	5770
UGent + AMU	962	3770	4732	2000	3770	5770
UGent + U Madrid	962	5084	6046	2000	5084	7084
UGent + U Stuttgart	962	1830	2792	2000	2700	4700
UGent + U Lorraine	962	3770	4732	2000	3770	5770
UGent + CTU	962	50	1012	2000	2000	4000
U Madrid + AMU	5084	3770	8854	5084	3770	8854
U Madrid + UGent	5084	962	6046	5084	2000	7084
U Madrid + U Stuttgart	5084	1830	6914	5084	2000	7084
U Madrid + U Lorraine	5084	3770	8854	5084	3770	8854
U Madrid + CTU	5084	50	5134	5084	2000	7084
U Stuttgart + AMU	1830	3770	5600	2000	3770	5770
U Stuttgart + UGent	1830	962	2792	2000	2000	4000
U Stuttgart + U Madrid	1830	5084	6914	2000	5084	7084
U Stuttgart + U Lorraine	1830	3770	5600	2000	3770	5770
U Stuttgart + CTU	1830	50	1880	2000	2000	4000
U Lorraine + UGent	3770	962	4732	3770	2000	5770
U Lorraine + U Madrid	3770	5084	8854	3770	5084	8854
U Lorraine + U Stuttgart	3770	1830	5600	3770	2000	5770
U Lorraine + CTU	3770	50	3820	3770	2000	5770
total			123914			145236
average						6314,61

Table 7: Enrolment fees and administrative costs – weighted average per student –Programme countries

Different possibilities of study tracks offered for the European Master of Science in Nuclear Fusion and Engineering Physics (FUSION-EP)						
Programme Countries	Enrolment fees			Enrolment fees + administrative costs		
	year 1	year 2	sum	year 1	year 2	sum
AMU + UGent	600	962	1562	1000	1000	2000
AMU + U Madrid	600	2743	3343	1000	2743	3743
AMU + U Stuttgart	600	330	930	1000	1000	2000
AMU + CTU	600	50	650	1000	1000	2000
UGent + AMU	962	600	1562	1000	1000	2000
UGent + U Madrid	962	2743	3705	1000	2743	3743
UGent + U Stuttgart	962	330	1292	1000	1000	2000
UGent + U Lorraine	962	600	1562	1000	1000	2000
UGent + CTU	962	50	1012	1000	1000	2000
U Madrid + AMU	2743	600	3343	2743	1000	3743
U Madrid + UGent	2743	962	3705	2743	1000	3743
U Madrid + U Stuttgart	2743	330	3073	2743	1000	3743
U Madrid + U Lorraine	2743	330	3073	2743	1000	3743
U Madrid + CTU	2743	50	2793	2743	1000	3743
U Stuttgart + AMU	330	600	930	1000	1000	2000
U Stuttgart + UGent	330	962	1292	1000	1000	2000
U Stuttgart + U Madrid	330	2743	3073	1000	2743	3743
U Stuttgart + U Lorraine	330	600	930	1000	1000	2000
U Stuttgart + CTU	330	50	380	1000	1000	2000
U Lorraine + UGent	600	962	1562	1000	1000	2000
U Lorraine + U Madrid	600	2743	3343	1000	2743	3743
U Lorraine + U Stuttgart	600	330	930	1000	1000	2000
U Lorraine + CTU	600	50	650	1000	1000	2000
Total			44695			61687
average						2682,04

These amounts can be adjusted before the start of each new academic year, in accordance with the institutional decisions relative to the amount of requested tuition fees. As long as it does not exceed a small increase (< 10%), an adjustment of the Consortium budget is not necessary. Large deviations may have implications on the budget. In that case, adjustments are required. The Steering Committee and the governing bodies of the institutions shall consider and validate these major changes for the efficient running of the FUSION-EP programme.

ANNEX G : ACCREDITATION PROGRAMME AND DEGREES AND DIPLOMAS AWARDED

European Master of Science in Nuclear Fusion and Engineering

After successful completion of the programme as decided by the Joint Examination Committee according to the provisions laid down in article 5.10, students will receive a joint diploma issued by the coordinating university, signed by the representatives of all partner universities. This joint diploma will mention all national degrees which will be thereby awarded to the students according to the national legislations on higher education of the respective partner universities,.

Countries	Universities	Name of the master's degree awarded	Accreditation of the programme	Diploma awarded
BE	Universiteit Gent (UGent)	Burgerlijk ingenieur (civil engineer)	European Master of Science in Nuclear Fusion and Engineering Physics	Joint diploma issued by Aix-Marseille Université
ES	Universidad Carlos III de Madrid (UC3M)		Master Universitario Erasmus Mundus en Física de Plasmas y Fusión Nuclear	Joint diploma issued by Aix-Marseille Université
ES	Universidad Complutense de Madrid (UCM)			
GE	Universität Stuttgart (UStuttgart)			Joint diploma issued by Aix-Marseille University
FR	Aix-Marseille Université	Master Mention Physique		Joint diploma issued by Aix-Marseille Université
FR	CEA/INSTN			
FR	Université de Lorraine			
CZ	České vysoké učení technické v Praze (CTU)	Inženýr Magisterský program Aplikace přírodních věd, obor: Fyzika plazmatu a termojaderné fúze (Engineer Master programme : applied Sciences, field : physics of plasmas and thermonuclear fusion)		Joint diploma issued by Aix-Marseille Université

<p>MASTER délivré par l'Université d'Aix-Marseille, CEA/INSTN et l'Université de Lorraine en partenariat international avec l'Université de Gand, l'Université Complutense de Madrid, l'Université Carlos III de Madrid, l'Université de Stuttgart et l'Université Technique de Prague</p> <p>EUROPEAN MASTER OF NUCLEAR FUSION AND ENGINEERING PHYSICS Awarding by Universiteit Gent (Belgium) in international partnership with Université d'Aix-Marseille (France), CEA/INSTN (France), Université de Lorraine (France), Universidad Complutense de Madrid (Spain), Universidad Carlos III de Madrid (Spain), Universität Stuttgart (Germany), and České vysoké učení technické v Praze (Czech Republic)</p> <p>INŽENÝR – AGISTERSKÝ PROGRAM APLIKACE PŘÍRODNÍCH VĚD Udělené Českým vysokým učení technickým v Praze v mezinárodním partnerství s Univerzitou v Aix-Marseille, CEA/INSTN, Lorrainskou univerzitou, Univerzitou v Gentu, Univerzitou ve Stuttgart, Univerzitou Complutense v Madridu, Univerzitou Carlos III v Madridu</p> <p>MÁSTER UNIVERSITARIO ERASMUS MUNDUS EN FÍSICA DE PLASMAS Y FUSIÓN NUCLEAR título otorgado conjuntamente por la Universidad de Complutense Madrid y la Universidad de Carlos III de Madrid en colaboración internacional con la Universidad d'Aix-Marseille, CEA/INSTN, la Universidad de Lorena, la Universidad de Gante, la Universidad de Stuttgart y la Universidad Técnica Checa de Praga</p>	<p>KONINKRIJK BELGIË UNIVERSITEIT GENT EUROPEAN MASTER OF NUCLEAR FUSION AND ENGINEERING PHYSICS BURGERLIJK INGENIEUR The diploma is given and this programme is accredited in accordance with the Higher Education Code dated 11 October 2013, ratified by the Decree dated 20 December 2013. The joint awarding of the diploma by the institutes involved is made to take place in due compliance with articles II.172§3 and II.151 of said code</p> <p>Gent, Signature Rector UGENT Rik VAN DE WALLE</p>	<p>ČESKÁ REPUBLIKA ČESKÉ VYSOKÉ UČENÍ TECHNICKÉ V PRAZE INŽENÝR – MAGISTERSKÝ PROGRAM APLIKACE PŘÍRODNÍCH VĚD OBOR : FYZIKA PLAZMATU A TERMOJADERNÉ FÚZE</p> <p>Praha Signature Rector CTU Vojtěch PETRÁČEK</p>	<p>ESPAÑA UNIVERSIDAD COMPLUTENSE DE MADRID Y UNIVERSIDAD CARLOS III DE MADRID MÁSTER UNIVERSITARIO ERASMUS MUNDUS EN FÍSICA DE PLASMAS Y FUSIÓN NUCLEAR Madrid, Signature Rector UCM Joaquín GOYACHE GOÑI Signature Rector UCSM Juan ROMO</p>
<p>RÉPUBLIQUE FRANÇAISE MINISTÈRE DE L'ENSEIGNEMENT SUPÉRIEUR, DE LA RECHERCHE ET DE L'INNOVATION Vu le code de l'éducation, notamment ses articles L. 613-1 et D. 613-6 ; Vu les textes réglementaires autorisant l'Université d'Aix-Marseille, l'Institut National des Sciences et Techniques Nucléaires et l'Université de Lorraine à délivrer le diplôme; Vu l'arrêté du 17 mai 2018 accréditant l'Université d'Aix-Marseille en vue de la délivrance de diplômes nationaux; Vu l'arrêté du 24 janvier 2019 accréditant l'Institut National des Sciences et Techniques Nucléaires en vue de la délivrance de diplômes nationaux; Vu l'arrêté du 19 février 2018 accréditant l'Université de Lorraine en vue de la délivrance de diplômes nationaux; Vu les pièces justificatives produites par M. YU-CHUN LIN, né le 18/04/1988 en vue de son inscription en master; Vu les procès-verbaux du jury attestant que l'intéressé a satisfait au contrôle des connaissances et des aptitudes prévues par les textes réglementaires ; Vu le parcours type Physique, "European Master of Sciences in Nuclear Fusion and Engineering Physics" (FUSION-EP) Le diplôme de MASTER de Sciences et Technologies, mention, Physique est délivré à M. Yu Chun LIN au titre de l'année universitaire 2020-2021, et confère le grade de Master, pour en jouir avec les droits et prérogatives qui y sont attachés</p> <p>Le Président de l'Université d'Aix-Marseille Eric GADET</p>	<p>Le Recteur de l'Académie d'Aix-Marseille, Chancelier des universités Bernard BEIGNIER</p>	<p>Le Président de l'Université de Lorraine Pierre MUTZENHARDT</p>	<p>Signature Rector U Stuttgart Wolfram RESSEL</p>