

Project Report



Title of the Project: Bridging Curricula: Mapping Compatibility for Academic International Collaboration (MACInAC)

Timeline: April, 10th 2025 – April, 15th 2026

Participants: Wrocław University of Science and Technology - Coordinator, Universitat Politècnica de Catalunya Barcelona, TU Darmstadt

Project Goal:

The project aimed to develop international collaboration by identifying the curriculum compatibility of selected master's degree programmes among three partner institutions. This effort was intended to pave the way for future double degree and joint degree programmes.

The consortium focused on analyzing three specific master's programmes at the participating universities. This process should prepare the institutions for potentially establishing new double degree agreements and enhancing existing ones. The project also includes a review of current collaborative efforts in delivering joint master's programmes.

As part of the evaluation, the project examined challenges faced by all partners, document's shared best practices, explored internal regulations and legal frameworks, and identified barriers to implementing double degree programmes. The consortium has elaborated the double degree agreement template, check-list for a new double degree programme, a formula tool for quickly analyzing the most important elements of programs compared to the future double degree programme.

Furthermore, the project may serve as a foundation for future collaboration, such as a building and implementation of the joint study programme.

Project Outcomes:

Curricular Integration: a comprehensive mapping of program similarities and differences to identify core and elective alignments, establishing a foundation for an online repository of double degree (DD) opportunities.

Program Development: new academic pathways within existing curricula, formalized through a pilot DD agreement between Wrocław Tech and TU Darmstadt.

Strategic Framework and Alignment: deepened cooperation among partners, resulting in aligned Master's curricula and the identification of solutions to implementation barriers, a "case study" model featuring a standardized DD template and mapping methodology to serve as a blueprint for the broader international network.

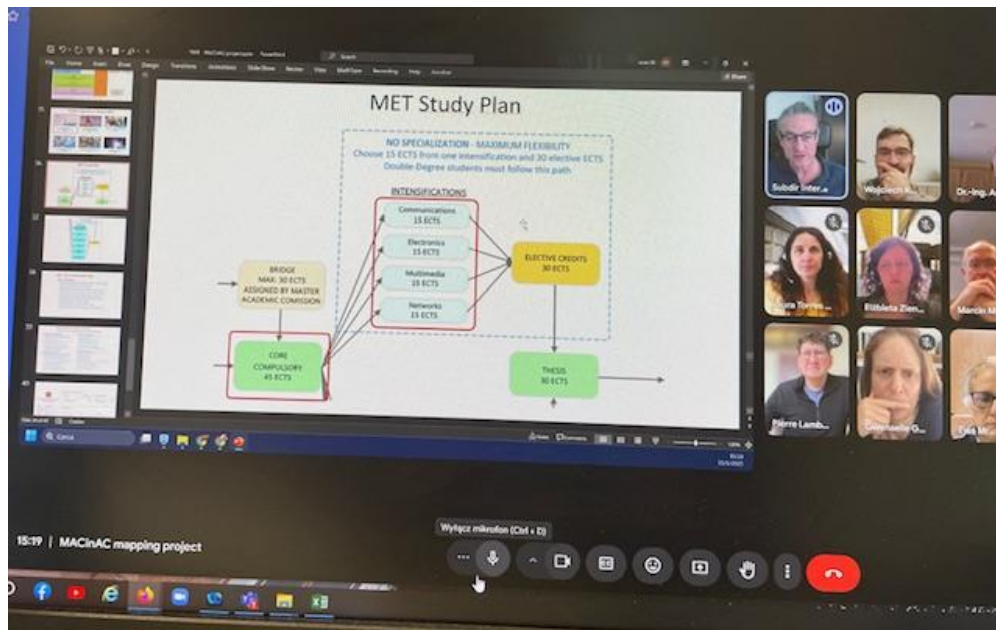
Operational Excellence: streamlined administrative practices for negotiating and managing joint programs, informed by a review of internal regulations and best practices.

Future Scalability: a sustainable framework for launching future double and joint degree initiatives across the partnership.

Project's meetings:

Dates: 2025 April 10 (kick off,)May 15, June 5, June 12–13 (in-person), July 3 (Group 2), July 10 (Group 2), July 17 (Group 1), July 24 (Group 2), July 31 (Group 1), September 16, November 4, December 2, 2026 January 1, February 17, March 03, 17.

One of the online meetings:



Meeting – June 12–13, 2025 (in-person, Wrocław)



Purpose: To conduct a preliminary comparison of study programmes and establish mapping criteria and content comparison the consortium concentrated on three existing master's degree programmes:

- **TU Darmstadt:** Master program: Information and Communication Engineering
- **UPC – ETSETB: Master program:** Telecommunications Engineering (MET)
- **Wrocław Tech:** Master program: Computer Engineering – Advanced Computer Science (ACS)

Preliminary analysis indicated strong similarities between the programmes at TU Darmstadt and Wrocław Tech, as well as TU Darmstadt and UPC. However, a double degree between Wrocław Tech and UPC was deemed unfeasible. Preliminary analysis indicated that a double degree between UPC's MET and Wrocław Tech's ACS would be difficult to implement in an attractive and efficient way. The two programmes differ significantly in academic profile and structure, particularly in duration, starting

semester, curricular flexibility, and thesis organization. As a result, the pathway appeared to have limited attractiveness for students and to require complex recognition with likely prolongation.

A proposal was made to explore the possibility of collaboration between the Faculty of Information and Communication Technology at Wrocław Tech and the Facultat d'Informàtica de Barcelona (FIB) at UPC. This is a computer science school offering masters much closer to ACS at Wrocław Tech. FIB declined the offer of exploring the possibility of signing a double degree for they have too many already and many more under negotiation. They suggested asking again in the mid-term (2-3 years).

Participants of the meeting at Wrocław Tech:

- **Wrocław Tech:** Assoc. prof. Marcin Markowski, Wojciech Kmiecik PhD Eng., Ewa Mroczek, Assoc. prof. Elżbieta Zienkiewicz
- **UPC:** Assoc. prof. Joan M. Gene
- **TU Darmstadt:** Dr Ing. Andreas Haun
- **T.I.M.E. General Secretary:** Gwenaëlle Guillerme

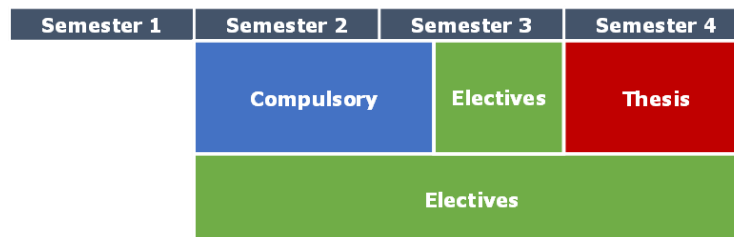
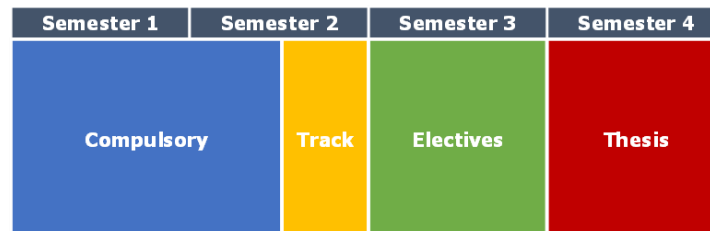
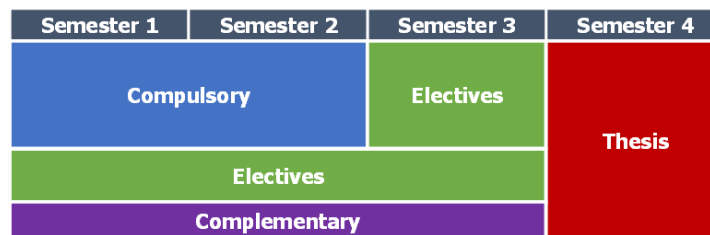
Meeting Summary: The meeting focused on comparing study programmes in computer science and telecommunications to assess their compatibility for future double degree initiatives. Topics discussed included differences in educational systems, ECTS credits for theses, structure of compulsory and elective courses, student mobility models, recognition of learning outcomes, and the development of model agreements for partner institutions.

Key challenges identified included limited availability of specializations for international students and a need for more English-taught courses. Proposed actions included the creation of working groups in the project team, at the faculty level: the development of flexible study paths, and the design of support tools for program's coordinators and academic staff. Better and clear promotion of DD programs for students is needed.

Participants also met with the Dean of the Faculty of Computer Science and Telecommunications of Wrocław Tech, reaffirming the partners' commitment to developing international study programmes in fields such as artificial intelligence, quantum computing, and data science. The importance of better promoting double degree options and clearly communicating their structure and benefits to students was emphasized.

During this meeting we elaborated the tool for quickly analyzing the most important elements of programs compared to the future double degree programme.

Programme Mapping: Structure of Curricula



In this graphical representation we show the master structure in terms of its duration, starting semester and curriculum.

5 different kind of subjects have been identified: compulsory (blue), track (yellow), electives (green), complementary (purple) and master thesis (red).

This allows for a quick visual on the master contents and structure.

In our case, UPC and TUDa are 2-year masters starting in fall while WUST is a 1.5-year master starting in spring.

Programmes Mapping : Example

We wish to explore the potential double degree programs taking as example the master programs.

Contents:

- UPC and TUDa show a large overlapping which suggests that a double degree should be

doable with little or none excess time.

- Due to the distance of the WUST program, a double degree would require a good amount of extra time.

Structure:

- UPC and TUDa have a very similar structure which suggests that a double degree should be fully compatible.
- Due to the different structure of the WUST program in terms of duration, starting semester and master thesis, the double degree requires a more complex planning.

We use time diagrams to show the structure of the double degrees for all 3 combinations:

UPC-TUDa, UPC-WUST and TUDa-WUST.

The time diagrams are intended to provide a compact visual representation of the temporal feasibility of a double degree between two master's programmes. Their purpose is not only to compare the curricula in abstract terms, but also to simulate how a student could progress through both programmes over time while satisfying the academic requirements of the two institutions. To this end, the diagrams place the programmes on a common semester-based timeline, organized in consecutive Autumn and Spring periods, so that differences in programme duration, semester of entry, and thesis location can be directly visualized.

Each row represents the study path followed by a student enrolled in one of the two partner institutions. The colored blocks correspond to the main curricular components of the programme, using the same code as in the structural curriculum diagrams: compulsory subjects, track subjects, electives, complementary subjects, and Master's thesis. In this way, the diagrams retain information not only about duration and sequencing, but also about the academic nature of each part of the programme. The top reference rows show the original structure of the programmes involved, while the lower rows illustrate possible double degree pathways obtained by combining study periods at the home and host institutions.

A central element of the diagrams is the explicit representation of recognition. Blocks marked with the letter "R" indicate parts of the curriculum that are recognized by the partner institution. This allows the diagrams to show not only where the student studies physically, but also how the achievements obtained at one institution are integrated into the requirements of the other. In this sense, the diagrams are both temporal and recognition-based: they describe when and where the student studies, and at the same time how the two curricula can be made compatible through mutual recognition.

The diagrams make it possible to explore different mobility scenarios for each pair of institutions. For example, they can reveal whether the double degree is symmetric or asymmetric depending on the direction of mobility, whether one direction can be completed without prolongation while the other requires an additional semester, or whether structural differences in starting semester, programme length, curricular rigidity, or thesis organization create bottlenecks. They are therefore particularly useful for identifying whether a proposed double degree is straightforward, feasible with some adjustments, or structurally cumbersome.

In addition, the diagrams provide the basis for defining simple quantitative indicators. Once a pathway is represented visually, it becomes possible to compute measures such as the total duration of the double degree, the amount of excess workload required, and the level of recognition achieved between the two programmes. These indicators make it easier to compare alternative pathways and to discuss their relative attractiveness in a more systematic way.

We define 2 metrics (mathematical equations using the number of ECTS credits of the programs):

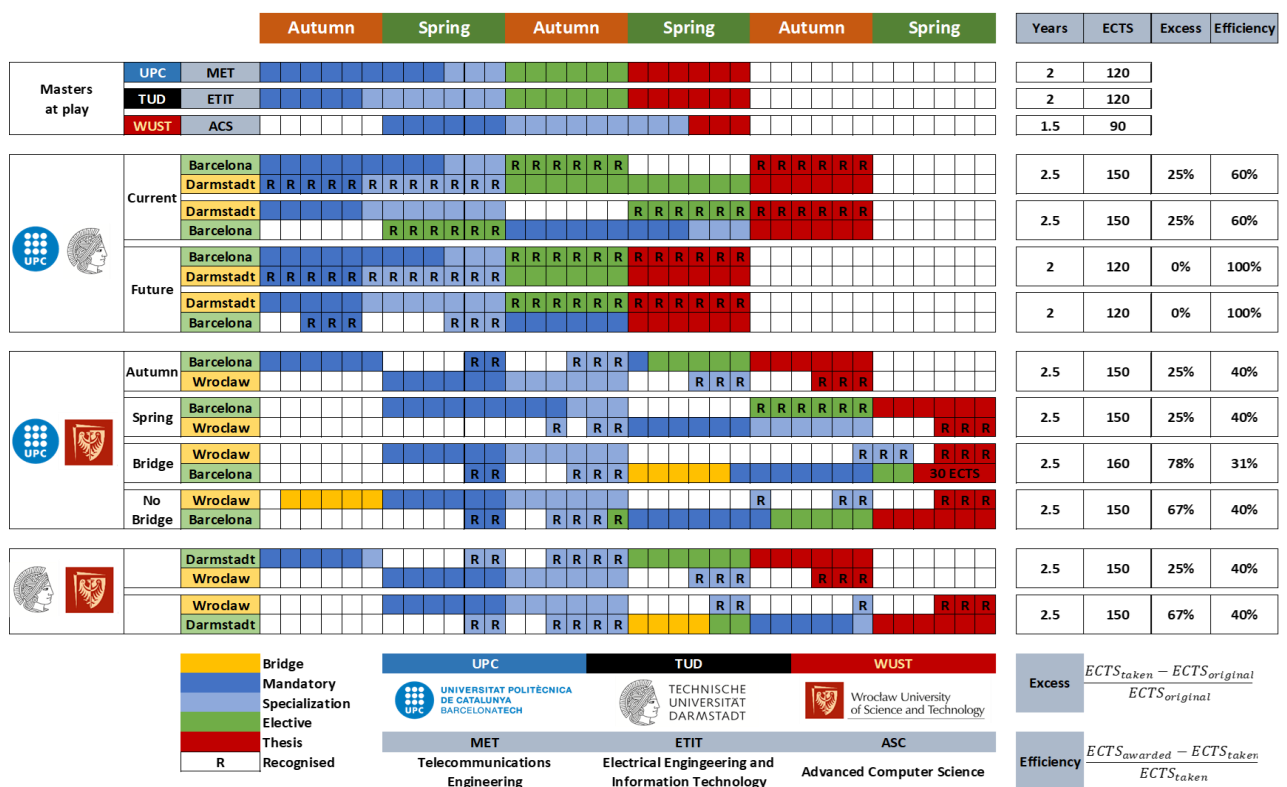
EXCESS: This metrics quantifies the excess credits (in %) required to obtain the double degree.

The ideal value would be 0% which means that no extra credits need to be taken.

EFFICIENCY: This metrics quantifies the extra credits (in %) awarded per credit taken. The ideal case would be that, e.g., after 2 years (120 ECTS) the student is awarded with 2 diplomas (240 ECTS).

This is a 100% efficiency, for every ECTS taken, 2 ECTS (one for each diploma) are awarded.

Overall, the time diagrams serve as a practical mapping tool that connects curriculum structure, academic calendar, mobility path, and mutual recognition in a single representation. Their main value lies in making visible, in an immediate and intuitive way, whether two programmes can be combined into a coherent and efficient double degree pathway.



Structures of Bachelor and Master programs

Especially: the number of semesters in Bachelor and Master curricula examples:

- TU Darmstadt: 6 semesters for Bachelor degree's + 4 semesters for Master degree's
- UPC, Barcelona: 8 semesters for Bachelor degree's + 4 semesters for Master degree's
- WUST, Wroclaw: many programs: 7 semesters for Bachelor degree's + 3 semesters for Master degree's

Conclusions:

- the combination of different structures may result in certain restrictions for the time line of a DD
- different structures may result in prolongation for students from one institution, e.g. WUST students must fulfill 90 ECTS credits for their Master program, but 120 ECTS credits for a Master at TU Darmstadt. In a DD between WUST and TUDa WUST students have to do a “semester 11” to gain the credits for the Master degree at TU Darmstadt. TU Darmstadt students have to follow a time line (Sem 1 at TU Da, Sem 2 and 3 at WUST for the first and second semester of the WUST curriculum, Sem 4 at TU Darmstadt), i.e. without a “semester 11”.

Content of curricula

The ACS master of WUST is mainly dedicated to Computer Science competencies. The MET master at UPC covers mainly the Telecommunication competencies. Students doing both master programs would have the best knowledge for future telecommunication systems, since both programs are complementary. The big disadvantage: they would have to study 7 semesters for both programs. A first discussion between WUST and Linda Frey from Computer Science department at TU Darmstadt resulted in this insight: the master programs of both partners correspond well. In addition the curriculum at TU Da consists of several optional areas and allows a good mapping with the ACS master at WUST. Linda expressed that we should start with enabling student exchange (1 and/or 2 semesters) and develop the DD after a certain time of experience with the exchange. Andreas Haun will discuss in his department the option to set up a DD with the MSc “Informationssystemtechnik” (iST; Information System Technology) which comprises Telecommunication modules as well as Computer Science modules. If it can be proven that student’s from both institutions can follow a DD scheme with a number of modules which would be mandatory in this combination, a DD between the ACS master and the iST master can be established.

- we covered more topics; more aspects are listed in the word document “TIME DD Agreement checklist – draft”

Specific Topic: How to map curricula

- Two partner institutions planning to set up a DD can follow the above-mentioned checklist to find out whether and how a DD can be established
- Looking up module descriptions is useful to ...
 - identify mandatory subjects to be done at the institutions and whether the other institution can give recognition
 - identify modules which can be recognized in optional areas. This opens the DD for a bigger flexibility. Students have a chance to select topics they are most interested in.
 - ...
- Comparing / mapping the 2 curricula is useful to :
 - Identify which parts of the 2 curricula can be easily mapped for a DD
 - Identify possible stumbling stones, e.g. if the number of credits for the thesis is not the same in both institutions, possibly differs remarkably
 - ...

To be thought about

To improve the visibility and the big number of already existing DD's a team from many (all) TIME partners could set up a matrix showing the status quo. (e.g. EXCEL file Double Degrees of TUDa etit). Before starting this work the following should be evaluated:

- Where and how can the information be displayed best?
- What information must be added to make it an appealing instrument for possible DD candidates?
- How can be linked this information to the web-sites of the TIME partners giving detailed insight about the respective DD program?
- Should testimonials support the value of the given information?
- ...

The DD between ACS at WUST and MET at UPC was deemed unfeasible due to significant discrepancies between curricula (see above).

New insight came after the meetings: we can improve the DD between MET at UPC and iCE at TU Darmstadt.

Since the MET master at UPC covers much of the telecommunication aspects the iCE master at TUDa also covers, it should be subject of further investigation to identify whether a new version of the existing double degree program can be elaborated which establishes a double degree without prolongation.

Development of best practices for double degree programme implementation

Our purpose was to identify opportunities and address challenges in establishing joint programmes or courses, including:

- Comparison of internal regulations
- Legal requirements
- Academic calendars
- Mobility pathways
- Coordination of student exchanges

The consortium discussed the creation of a general double degree agreement template, accompanied by a detailed appendix, which could be adopted by each university following legal and academic review. This template could also be shared within the T.I.M.E. network to guide other institutions.

A step-by-step guide for initiating a double degree agreement was proposed, offering a useful resource for institutions beginning international collaborations.

Table with a double degree agreement elements required by each partner

DD agreement elements	Wrocław Tech	TU Darmstadt	UPC Barcelona
guidelines on the elements of an DD agreement on Master level; DD template (internal regulations)	we have such a document	we have such a document	very practical if available
specific field of study (ISCED code) and the level of the European Qualification Framework	required	required	not important
number of semesters on Master level	3 or 4	4	4
academic calendar	winter semester starts 1.October and summer semester starts in March (mainly 1st semester of Master level)	winter: Oct 1st-Mar 31st, lectures from around Oct 20th-Feb 20th; summer:Apr 1 st - Sep 30th, lectures from ar.Apr 20th- Jul20th	september - january (1st semester) february - june (2nd semester)
level of language of study (English)	B2	B2	B2
ECTS number per semester	30	30	30
ECTS prerequisite for mobility	-	-	30 ECTS (in general, not DD)
ECTS number of Master Thesis	less than 30	30	6 to 30 ECTS

Comparison of study programmes; compulsory and elective courses;	mandatory at the Faculty level	mandatory at the Faculty level	mandatory at the Faculty level
admission requirements and procedures (for master studies):	students must meet the admission requirements at home and host university; decision of admission for full time studies required	CV, transcript, learning agreement, language certificate	students must meet the admission requirements at home and host university
selection of students	based on academic results by the Faculty coordinator	based on academic results by the Faculty coordinator	based on academic results; prerequisites and their motivation and language skills, in collaboration between the two institutions
diploma of BSc	required	can be handed in during the first semester	not important
transcripts of records	required	required	not important
(Individual) detailed plan of study for student	required	required	not important
study programme and study plan as addendum to the agreement	study plan should be in the appendix of the DD agreement	study plan should be in the appendix of the DD agreement	required
method of converting credit points and grades	required	ECTS	important
graduation procedure and conditions for obtaining a professional title	recommended to be a part of the agreement	part of the agreement	noi important
diploma examination	mandatory	mandatory	does not exist

evaluation process of the DD programme; conducted with the participation of students	accreditation is made by local ac. committee and evaluation with students recommended	accreditation is made by local ac. committee and evaluation with students recommended	parties implement their local evaluation systems; any comments and future improvements discussed at the annual meetings by the programme's academic coordinators
coordinator of the DD agreement at the faculty	mandatory	mandatory	mandatory
financing system for students	usually Erasmus grant	usually Erasmus grant	usually Erasmus grant
tuition fee (if needed)	at home university	at home university	at home university
personal data protection	required at the agreement	required at the agreement	required at the agreement
intellectual property and confidentiality	required in the agreement	required at the agreement	required at the agreement
scheme of mobility	required and at least 2 semesters at WrocławTech	at least 1 semester in TU Darmstadt	minimum ECTS at UPC: 42 ECTS (master of 60 ECTS) 54 ECTS (master of 90 ECTS) 60 ECTS (master of 120 ECTS)
number of places for students/limits	3-5 each way	5 each way	to be defined in the agreement
visas/legalization of stay (if students out of Europe)	IRO helps with information	IRO helps with information	general info
accommodation	offered in dormitories	offered in dormitories (not enough)	not offered

Check list for a new double degree

1. **Is a cooperation** (student exchange) between the partner institutions **already active**?
significance/impact:
 - a. having good experience with student exchange between the partners planning to enter a DD, usually is an indicator for a good foundation for a DD
2. Shall a DD be set up on **Bachelor or Master level**?
significance/impact:
 - a. on Bachelor level the challenge may be bigger than on Master level since Bachelor programs typically consist of more mandatory and less optional modules which may complicate the construction of the DD;
 - b. in addition, many Bachelor programs are taught in mother tongue of the respective country and not in English, high language barrier
 - c. special cases:
 - i. in one of the 2 partner institutions is no consecutive course of study (e.g. 5 year diploma curriculum)
 - ii. the structure and/or content of curricula or other reasons are cause for sending students in the last Bachelor and first Master year to the partner institution; with the result of recognition of the last Bachelor year from the achievements in the partner institution and awarding of the Master diploma of both partner institutions.
3. **Prerequisites**
When examining the option of a DD, the academic coordinators should check whether students entering the part at the partner institution have gained the relevant competence they need for successful studies at the partner institution.
Note: check whether lack of relevant knowledge may be compensated by module(s) taken during exchange at host institution.
4. **Structure of consecutive programs**
Duration of Bachelor and Master programs at both institutions should be identical.
significance/importance:
If the structure in HEI1 is 6+4 semesters (Bachelor+Master) and in HEI2 is 7+3 semesters, special aspects occur, e.g.: start of DD program (time and location), prolongation possible for students of HEI2 but not for students of HEI1, special aspects/obstacles might occur in setting up the pathway for DD students
5. **Language of instruction**
It is highly recommendable that the language of instruction in both partner institutions is English to attract students to the program.
Important aspect: which language and which language level must be defined in the annex as prerequisite for being admitted to the DD?
6. **Prolongation**
A prolongation must not but may be necessary or recommendable in case of a DD.
Prolongation may be 0, 1 or 2 semesters.
Aspects, significance / impact:

- a. Without prolongation (prolongation of 0 semesters), mutual recognition of all achievements in HEI1 and HEI2 is indispensable.
- b. Prolongation of 1 semester typically facilitates recognition of achievements; Possible obstacle: structures at one or at both partner institutions are determined by/in form of complete academic years. In this case the agreement must be done either without prolongation or with 2 semesters prolongation.
- c. Prolongation of 2 semesters should be questioned in case of 2 master programs; may make sense e.g. in case of systems like “diplôme d’ingénieur” in France

Prolongation may be subject of negotiation of different aspects. Aspects are for example but not exclusively:

- d. An exchange period of 3 or 4 semesters abroad will strengthen the soft skills, language proficiency in the foreign language, and intercultural competence remarkably more than an exchange of 2 semesters.
- e. The availability of graduates on the labor market after 5 years of education is better than after 5.5 or 6 years of education.
- f. Students prefer DD programs without prolongation.

7. Finances

Relevant aspects (as given in the contract)

- a. No tuition fee at the host institution
- b. Semester fee (or social fee) at home and host institution
- c. Both partners look for scholarships to support their own students in doing a DD
- d. Health insurance (in the responsibility of a student) – usually in country of home institution, which covers also the exchange period abroad
- e. Students bear costs for travel, housing, living, ...

8. Pathway, **academic** **year(s)**

During negotiation of possible DD agreement, the partners check/discuss the possible pathway. Special aspects may result from the differences in academic years of the two partner institutions. E.g.

- a. Germany:
 - + begin of lecture period in winter semester: midst of October
 - + end of lecture period in winter semester (begin of exam period): midst of February
 - + begin of lecture period in summer semester: midst of April
 - + end of lecture period in summer semester (begin of exam period): midst of July
- b. Other **country** **(example):**
 - + begin of lecture period in winter semester: midst of September
 - + end of lecture period in winter semester (including exams): before Christmas or in January
 - + begin of lecture period in summer semester: midst or end of January
 - + end of lecture period in summer semester (including exams): end of June or in July
- c. Note:
 - take into account the timing of welcome weeks or weekends, preparatory language

courses and other important activities designed especially for incoming students at the partner institution

Possible obstacles arising from differences in academic years:

- d. German students meet conflicts between exam dates and the obligation to be at the host institution already in August or September special negotiation of exam dates or remote exam is indispensable
- e. Incoming students to Germany must leave early in winter or summer semester; special negotiation of exam dates or remote exam is indispensable

Mapping of the programs

- Check: Do at least 50% of the program contents match each other? This makes the chance to agree on a DD likely.
- Check mandatory modules at both institutions
 - The number of ECTS credits of mandatory modules at each institution should be less than 30 CP (in sum less than 60 CP); otherwise, it might be difficult to set up a DD
 - check whether both programs have identical or close mandatory modules which can be recognized mutually
 - Make sure that mandatory modules of the first year can be done by DD students in the 2nd year if necessary or define which module from the partner institution can be done in the 1st year to be recognized.
- Check how modules and thesis passed at the host institution can be recognized at the home institution and vice versa.

Note:

- A mandatory module in one program might be a module which can be recognized as an optional module in the other program and vice versa
- A module of the partner institution may be recognized directly in an optional area of the other institution. There is no need to search for the exact equivalence to another module at the other institution.
- In programs without prolongation, it must be possible to recognize the first (Master) year in the curriculum at the host institution and the second (Master) year in the curriculum at the home institution or vice versa.

- Master Thesis
Co-supervision is standard in a DD. Recognition at both institutions is mandatory.

Note:

- Duration and ECTS credits of thesis must fit both programs
- If a Master thesis at one of the two partner institutions is less than 30 CP, consider which modules can be taken into account to make a similar amount of credits. Modules shall strengthen the ability to do own research/project work on the level of the Thesis, e.g. preparatory projects or seminars.

Informational paths

Make sure that administrative coordinators communicate mutually the results of students in a DD program to ensure that after fulfillment of the requirements DD graduates receive their diploma within a reasonable time span.

If availability of results prior to a board session is mandatory to receive the decision of awarding the degree, clarify the deadlines to ensure that the delay between passing the last exam necessary for graduation and awarding of the degrees can be minimized. A possible delay due to the differences of academic calendars shall never exceed 1 year. If a significant delay cannot be avoided, the graduate shall receive a notification (in English) stating that the requirements for graduation have been fulfilled and the candidate is subject for graduation in the next cohort.

Setting up the agreement

Use the general agreement (without changes)

Put all specific information into the annex, use the template and make all necessary changes or additions keeping the same structure as in the general agreement. Use subheadings and note the referenced paragraph in the general agreement.

We have elaborated the DD agreement template (attached). Remember to put the right content in the right place! Do not repeat matters in the agreement and in the annex.

Example of mapping master programmes of Wrocław Tech and TUDa:

1. Programmes:

TU Darmstadt: Master program: Information and Communication Engineering (AIML)

	Type	ECTS
I, II, III semesters		
Foundations of AI	E	18-30
AI Models and Methods	E	18-30
AI Systems	E	12-24
AI Domains and Applications	E	12-24
Seminars, Labs, Practical Labs in Teaching	E	12-24
General Education	S	6-18
IV semester		
Master Thesis	T	30

Wrocław Tech: Master program: Computer Engineering – Advanced Computer Science (ACS)

	Type	ECTS
I semester - summer		
Physics	M	1
Social Communication	M	2
Computer Project Management (GK)	M	5
Optimization Methods: Theory and Applications (GK)	M	5
IT Applications in Business and Commerce (GK)	M	5
Information Systems Modeling (GK)	M	3
Discrete Mathematics (GK)	M	5
Research Skills and Methodologies (GK)	M	3
Foreign Language I	E	1
II semester- winter		
Secure systems and networks (GK)	M	3
Foreign Language II	E	2
Research Project	S	3
ACS Seminar 1	S	2
Modeling and Optimization of Computer Networks (GK)	S	6
Information and Storage Management (GK)	S	2
Neural Networks (GK)	S	6
Machine Learning (GK)	S	6
III semester - summer		
Final Project	T	11
Entrepreneurship	M	3
ACS Seminar 2	S	3
Introduction to Computer Vision in Quality Control (GK)	S	5
Natural Language Processing (GK)	S	4
Research Project 2 (GK)	S	4

2. Mapping outcome (case studies):

3. Process of analyzing master programmes of Wrocław Tech and TUDa:

Most Important Findings and Comments on the AIML (TUDa) ↔ ACS (WUST) Alignment

The comparative analysis of TU Darmstadt's **M.Sc. Information and Communication Engineering (AIML)** and Wrocław University of Science and Technology's **M.Sc. Computer Engineering – Advanced Computer Science (ACS)** revealed a **high degree of structural and content-based compatibility**, making this combination a **promising candidate for a double degree (DD) without significant prolongation**. It can serve as a **blueprint for the T.I.M.E. network's DD initiatives**.

1. Structural Alignment

Both master's programs share core characteristics that facilitate the design of flexible student mobility pathways:

- **Duration and Credit Load:**
 - AIML (TUDa): 4 semesters (120 ECTS)
 - ACS (WUST): 3 semesters (90 ECTS).
 - **Compatibility Insight:** While the absolute duration differs by one semester, the **modular design** of both programs allows for **partial overlap** (e.g., recognition of 60 ECTS from ACS toward AIML). This reduces prolongation for ACS students to a minimum of **one additional semester** (totaling 4 semesters), while AIML students may complete the DD in **4 semesters without prolongation**.
- **Start of Academic Year:**
 - TUDa: Winter semester (October–February) and summer semester (April–July).
 - WUST: Spring semester (March–July) and fall semester (October–February).
 - **Compatibility Insight:** The **staggered semesters** require careful scheduling but are manageable with **pre-defined mobility windows** (e.g., ACS students begin their DD year at TUDa in October, while TUDa students start at WUST in February).
- **Master Thesis and ECTS points:**
 - AIML (TUDa): Full semester dedicated to Master Thesis (30 ECTS).
 - ACS (WUST): Master Thesis along other courses in the last semester. Courses related to Master Thesis (Final Project and ACS Seminar 2) have 14 ECTS combined.
 - **Compatibility Insight:** despite the difference in ECTS points, if Master Thesis has cooperating supervisors from both universities, TUDa can recognize ACS Master Thesis courses for 30 ECTS to match TUDa's requirements.
- **Scheme of mobility requirements:**
 - AIML (TUDa): at least one semester in Darmstadt.
 - ACS (WUST): at least two semesters in Wrocław.
 - **Compatibility Insight:** TU Darmstadt's flexibility allows for a number of different scenarios for their students to do a Double Degree with various number of semesters abroad with no significant prolongation.

2. Content-Based Compatibility

Key Findings:

- **Core Competencies:**
 - Wrocław Tech's **ACS compulsory courses** find **direct or close equivalents** in TU Darmstadt's curriculum → *Result:* Students from TU Darmstadt can fulfill Wrocław Tech's requirements at Wrocław Tech and get all courses recognized in various elective areas at TU Darmstadt.
 - TU Darmstadt's structure – with **fewer strict compulsory courses** and **clearly defined elective areas** – allows for **flexible recognition** of ACS's mandatory components. → *Result:* Students from Wrocław Tech can fulfill their home institution's requirements at TU Darmstadt **without significant gaps or forced module repetitions.**
- **Methodological Compatibility:**
 - Both curricula deploy **mixed teaching methods** (lectures, labs, projects) and assess via **exams, presentations, and research-based assignments**, facilitating cross-institutional recognition.
- **Language and Accessibility:**
 - **Strengths:** Both programs are **fully taught in English**, eliminating linguistic barriers. TUDa's **pre-sessional German courses** (optional) could benefit WUST students for professional integration.

3. Mobility Scenarios:

- **“spring” TUDa -> Wrocław Tech**
 - first semester in Darmstadt: 1.04.202X
 - second semester in Wrocław: 1.10.202X
 - third semester in Wrocław: 1.03.202X
 - final semester in Darmstadt: 1.10.202X
 - **Excess: 0%**
 - **Efficiency: 75%**
- **“autumn #1” TUDa -> Wrocław Tech**
 - first semester in Darmstadt: 1.10.202X
 - second semester in Wrocław: 1.03.202X
 - third semester in Wrocław: 1.10.202X
 - final semester in Darmstadt: 1.04.202X
 - **Excess: 0%**
 - **Efficiency: 75%**
- **“autumn #2” TUDa -> Wrocław Tech**
 - first semester in Darmstadt: 1.10.202X
 - second semester in Wrocław: 1.03.202X
 - third semester in Wrocław: 1.10.202X
 - final semester in Wrocław: 1.03.202X
 - **Excess: 0%**

- **Efficiency: 75%**
- **“spring” Wrocław Tech -> TUDa**
 - first semester in Wrocław: 1.10.202X
 - second semester in Wrocław: 1.03.202X
 - third semester in Darmstadt: 1.10.202X
 - final semester in Darmstadt: 1.03.202X
 - **Excess: 33%**
 - **Efficiency: 75%**

Presentation of Project Outcomes - promotion

- Project presentation during the General Assembly of T.I.M.E. – Lappeenranta, Finland (October 1–3, 2025) made by Ewa Mroczek and Andreas Haun
- Project presentation during the conference *Joint and Double Programmes in Europe* organised by Polish National Agency of Erasmus+ (Łódź University of Technology), 26-27 November 2025, made by Ewa Mroczek and Elżbieta Zienkiewicz
- Project presentation during the International Staff Week at Wrocław Tech (18 November 2025) made by Ewa Mroczek and Andreas Haun
- Project presentation during the Final Conference – Wrocław Tech (March 31, 2026) made by Ewa Mroczek, Andreas Haun, Linda Frey, Wojciech Kmiecik, Marcin Markowski, Joan Gene
- The webpage of the project was created by Wrocław Tech: <https://crm.pwr.edu.pl/en/international-staff/bridging-curricula--mapping-compatibility-for-international-academic-collaboration>
- The logotype of the project was created by Wrocław Tech.

Final project meeting in Wrocław :March 31st 2026



Attachment 1: DD agreement and annex templates to be accepted by each partner

DOUBLE DEGREE AGREEMENT

BETWEEN

[NAME OF HEI¹ 1]

AND

[NAME OF HEI 2]

[Name of HEI 1], [address, country of HEI 1]

hereafter referred to as **[short form of HEI 1]**

and

[Name of HEI 2], [address, country of HEI 2]

hereafter referred to as **[short form of HEI 2]**

[short form of HEI 1] and **[short form of HEI 2]** are referred to as “the parties”.

¹ HEI: Higher Education Institution

Preamble

This agreement has been concluded by and between [Short form of HEI 1]) and [Short form of HEI 2]) in order to specify the terms for implementing double degree programmes in the field of [ISCED code(s) "Broad field", and names].

Detailed specifications of programmes and degrees are given in the annexes to this agreement.

This agreement is compiled in accordance with:

9. [list of essential rules and regulations (HEI's country or HEI's law) at the HEI's if necessary and applicable].²

In this document:

10. "Home Institution" is the institution that sends its students to the other institution to pursue a degree program.
11. "Host Institution" is the institution that accepts the students from the other institution to pursue a degree program.

Article 1 - Purpose and Scope of the Agreement

The purpose of this agreement is to record the intention of the parties to implement in cooperation a degree programme in the fields specified in the annexes leading to a double degree, and to outline the principles and terms of the implementation. This agreement defines the requirements and obligations of the parties in establishing the double degree programme. The programme, developed and organized jointly by the parties, leads to the recognized certificates, one from the student's home institution and one from the host institution.

This agreement shall be implemented within the legal requirements at the participating HEI's. Nothing shall diminish the fully autonomous position of the HEI's, nor will any constraints be imposed by either institution upon the other in carrying out the intentions of this agreement.

In addition to this agreement, annexes describing a clear equivalence of courses and grading systems between the institutions must be signed by both parties prior to students entering the double degree program.

Article 2 - Management of the Programme, Commitment and Responsibilities

2.1 Academic and administrative representatives

² Delete paragraph if no regulations must be mentioned here

Each institution will nominate an academic and an administrative representative for the programme. The representatives will be responsible for following the programme and for ensuring that measures are taken in accordance with this agreement. The representatives will provide advisory and other academic and administrative services to the students participating under this agreement. Names and contact details of these representatives are in the annexes to this agreement.

The representatives of the host institution will ensure that in case of difficulties, leading to the “grace period” (see Article 3.7) or exceeding the “grace period” measures will be discussed with the student and the representatives of the home institution and decisions will be taken suitable to the personal and academic situation of the student.

2.2 Commitment, Responsibilities

The parties to this agreement shall

- organize teaching in the joint programme according to the jointly developed/accepted curriculum
- be responsible individually and collectively for the quality of the programme and for the high standards of degrees
- provide academic support and tutoring to the double degree students, ensuring that appropriate library and computer facilities are available for students
- provide supervision for Thesis work for the double degree students of both institutions
- keep accurate records of courses/credits completed and provide the double degree students an official transcript of their records
- provide information for students on admission, student services and accommodation
- collect feedback from double degree students, teachers, and other relevant stakeholders, analyze it and use it for the further development of the programme as part of the quality assurance

Each party shall bear their own costs that may incur in the implementation of this agreement.

2.3 Number of students

The number of students to be admitted under this agreement will be specified in each annex. The numbers may be negotiated each year, prior to the new application period. Additional applications may be considered on a case-by-case basis.

The balance in number of students exchanged is sought over the agreement period.

Article 3 - Terms for Implementing the programmes

3.1 Extent and Structure

Xxx

Double degree programmes implemented under this agreement will normally not prolong the duration of the master program at the home or host institution. Any prolongation must not exceed 2 semesters (one year). In each annex the duration of the double degree must be clearly expressed. The structure and content fulfil the requirements that the parties have established for their programmes, in accordance with national regulations. The parties have officially approved the programmes according to national legislation and local regulations.

The parties have agreed to the mutual recognition of credits for incoming students from the partner institution participating in the double degree program. Credit recognition is based on internal rules and regulations of partner institutions and documents proving the correspondence with the content, ECTS credits and period of study, stated at the transcript of records, provided by the partner institution.

The maximum credit transfer between the participating HEI's is typically 60 ECTS credits. The thesis is under supervision of professors from both partner institutions. The thesis is assessed according to local practices and regulations at the HEI's.

The structure and contents of the programmes can be found in the links to web-sites given in the corresponding annexes.

3.2 Application and Admission Requirements

The home institution will first nominate students according to their suitability for the exchange programme.

Applications to the host institution must include a curriculum vitae, their transcripts of records including courses and marks, and a letter of motivation. The host institution reserves the right to make a final judgement on admission of nominated students.

The deadline for submitting applications to the host institution is communicated by both partners each year.

The double degree combines the requirements of the programmes as can be seen in the annexes.

It is strongly recommended that all compulsory courses at the home institution are completed prior to the student's mobility. Thus the mobility may be dedicated to advanced courses and additional compulsory courses required by the host institution.

Each institution is free to define the language proficiency required. The host institution will propose language courses to incoming students.

Admission requirements will be described in the Annexes.

3.3 Rights and obligations of the students

Each student has to comply with the rules and regulations of the host country and host institution.

Students participating in this programme will have the same rights and obligations as the students of the host institution. They will be entitled to participate in any introductory program that may customarily be arranged for foreign students.

3.4 Study Plan and Thesis

An individual study plan for the total duration of the mobility program, including the Thesis, must be set up and approved by both institutions, usually before admission of the student, and not later than upon arrival at the host institution. The individual study plan may be revised at any time with consent from both home and host institutions.

The Thesis may be carried out in the host institution, a research lab or an enterprise, but always under the supervision of a faculty member of the host institution and a faculty member of the home institution. Deviations from this provision may be decided by mutual and written consent between the two institutions on a case-by-case basis.

If possible, the thesis will be defended in front of a jury composed of faculty members from both institutions.

If an “internship agreement” must be signed by the parties, it must be mentioned in the corresponding annex.

3.5 Control of Results and Transcript of Records

The parties agree that exams/courses will be graded, and credits awarded according to the rules of the institution where the exam/course is carried out.

The host institution will communicate the results of each student in terms of credits and grades (transcripts of records) to the home institution at regular time intervals.

Each institution will ensure that credits can be transferred according to its own set of rules and regulations.

3.6 Awarding of Degrees

Each institution takes the final decision to award its own degree to each double degree student, based on its internal set of rules and regulations.

Each home institution ensures that credits from the host institution are transferred according its own set of rules and regulations.

The successful completion of the programme after all requirements have been fulfilled will lead to the awarding of a double degree, i.e. the diploma of the two institutions as specified in the respective annex.

The degree certificates of both universities will be accompanied by a diploma supplement and the transcript of records, which will give detailed information on the structure, contents, and implementation of the double degree programme.

3.7 Exceptional prolongation

Students exceeding the standard duration of the programme, may be given upon request one or maximum two semester grace period to complete their studies and graduate from the programme, provided that successful completion of the programme is feasible in that time frame.

Requests for extensions are examined on a case by case basis by both home and host institutions.

After the grace period, or in cases where the conditions of the grace period are not applicable, students are no longer covered by the terms of this agreement.

Article 4 - Tuition Fees, other fees, insurance and other expenses

4.1 Tuition Fees, Other Fees

The HEI's will follow their national policies and regulations regarding tuition fees. Students admitted to the programme will enrol for and pay the corresponding fees at their home university. The host university will not charge these students any fees for enrolling credits. Students enrolled in an international double degree must pay the fees for the provision of non-academic services in each academic period at both institutions according to the respective rules at the HEI's.

4.2 Insurance

Health, civil liability and repatriation insurance are mandatory for all students.

12. [specific information of both HEI's]³

4.3 Other expenses

All travel, living, and miscellaneous expenses incurred in attending host institution, including above mentioned fees, health insurance, meals, transportation, and lodging, shall be at the responsibility of the student.

Article 5 - Data Protection, Intellectual Property Rights, Limitation of Liability

5.1 Data Protection

The collaboration of which these double-degree pathways are the object may entail the communication of personal data, as well as their subsequent processing. In this regard, the signatory parties undertake not to make use of the data obtained as a result of managing the programme for a purpose other than that which motivates the signing of this agreement, not to communicate these data to third parties without the consent of the interested parties and to comply with the security measures and other obligations resulting from legislation on personal data protection.

The processing of personal data is protected by the legislation on protection of personal data of each country. In the event that communicating data involves transferring the data internationally, and no decision to adapt to the General Data Protection Regulation (GDPR) or other appropriate guarantee is in place, the data may only be transferred if the interested party has explicitly given their consent or the transfer is necessary for the execution of a contract between the interested party and the person responsible for the processing or for the execution of pre-contractual measures adopted at the request of the interested party in relation to this agreement.

³ Delete paragraph if there is no information

The confidentiality article will continue to be in force even after the termination of this agreement, regardless of the cause of termination.

5.2 Intellectual Property Rights

This agreement does not affect the institutions' or the student's ownership to any intellectual property and does not constitute or give rise to any transfer of ownership or user rights, unless specifically otherwise agreed in connection with a program or a course. If there is a patentable invention, the parties shall always make separate agreement on the subject matter in writing.

The intellectual and industrial property rights over the master's thesis correspond to students.

If results requiring protection have been generated in writing the master's thesis, the parties will inform the other party. If the results have been generated by the students in conjunction with the staff of any of the parties or of both parties, the ownership and the use rights of the results will correspond to the students and that party or parties, in the due proportion. Prior to the application of the corresponding registration of the results, the parties will agree the distribution, ownership, exploitation of the rights and the economic conditions on a separate document.

In any case, the parties will respect the authorship of the students as inventors or authors, as the case may be, in proportion to their participation.

In the framework of the courses of study, the parties will guarantee the right of students to defend their master's thesis, to have it assessed and to have it archived in the institutional repository. However, in the event of confidentiality obligations to one of the parties, the other party will put procedures in place to guarantee the confidentiality without harming students' academic interests. Parties acknowledge that usually the thesis is always a public document and any confidential information must be left in the background material.

5.3 Limitation of Liability

Neither party shall be responsible to any other party for neither any direct nor indirect or consequential loss or similar damage such as, but not limited to, loss of profit, loss of revenue or loss of contracts, provided such damage was not caused by a willful act or by gross negligence.

Each party shall be solely liable for any loss, damage, or injury to third parties resulting from the performance of the said party's obligations by it or on its behalf under this agreement or from its use of data or intellectual property rights. For the sake of clarity, neither institution is responsible for student's acts or neglects.

No party shall be considered to be in breach of this agreement if it is prevented from fulfilling its obligations under this agreement by the force majeure. Each party will notify the other party/parties of any force majeure without undue delay.

Article 6 - Application of Law and Dispute Resolution

The parties agree to solve in a friendly manner any controversy rising from the interpretation of the present agreement.

In case the controversy cannot be resolved, the claim will be submitted for informal arbitration by a panel where each party appoints a member, and both parties choose a member by mutual consent.

If informal solution is not possible, the forum for the dispute shall be defendant's court. In case of dispute about interpretation of terms which has not been resolved amicably, this agreement shall be interpreted by the laws of the defendant (excluding its choice of law provisions). For the sake of clarity, students must always abide by the host university's laws and regulations.

Article 7 - Effective Date, Renewal, Termination, Amendments

7.1 Effective Date

This agreement shall take effect on the date of its signing by representatives of both parties and shall continue in effect for an initial period of five (5) years unless terminated earlier by either institution.

7.2 Renewal

This agreement is renewable in a formal manner for another period of five (5) years after assessment of the partnership six (6) months before the expiration of the agreement.

7.3 Termination

Termination by one institution shall be effected by giving the other institution at least six (6) months advance written notice of its intention to terminate. If such notice is given, this agreement shall terminate when all students enrolled in a course of study pursuant to the agreement at the time the notice is given have completed their respective courses of study.

7.4 Amendments

Amendments to this agreement may be made by mutual agreement and confirmed through an exchange of letters in hard copies.

Article 8 - Original copies of the agreement, dates and signatures

This agreement may be signed electronically.

Date: [date]

Date: [date]

[town of HEI 1]

[town of HEI 2]

[Name of director / president HEI 1]

[Name of director / president of HEI 2]

[Position, HEI 1]

[Position, HEI 2]

[HEI 1] [HEI 2]

- Annexes

ANNEX 1
TO
DOUBLE DEGREE AGREEMENT
BETWEEN
[NAME OF HEI⁴ 1]
AND
[NAME OF HEI 2]

⁴ HEI: Higher Education Institution

Preamble

This annex refers to the double degree agreement of [Short form of HEI 1]) and [Short form of HEI 2]) from [date] and specifies in detail the implementation of the double degree programmes in the field of [ISCED code(s) “detailed field”, and names]⁵.

Curricula of this double degree (referring Article 1)

The [name of school/department at HEI1] offers the curriculum [name of curriculum] leading to the degree [degree], a [duration] year program of [number of CP] ECTS credits. The description of the academic programme can be found on [programme web-site @HEI1]

The [name of school/department at HEI2] offers the curriculum [name of curriculum] leading to the degree [degree], a [duration] year program of [number of CP] ECTS credits. The description of the academic programme can be found on [programme web-site @HEI2]

Academic and administrative representatives (referring Article 2.1)

Academic coordinators

- At [short form HEI1 and name of school/department at HEI1]:
[name of coordinator]
[position, office/lab]
[email-address]
- At [short form HEI2 and name of school/department at HEI2]:
[name of coordinator]
[position, office/lab]
[email-address]

Administrative coordinators

- At [short form HEI1 and name of school/department at HEI1]:
[name of coordinator]
[position, office/lab]
[complete postal-address]
[email-address]
[phone number]
- At [short form HEI2 and name of school/department at HEI2]:
[name of coordinator]

⁵

<https://egracons.eu/sites/default/files/Isced%202013%20fields%20of%20education%20code%20list.pdf>

[position, office/lab]
 [complete postal-address]
 [email-address]
 [phone number]

Number of students (referring Article 2.3)

A maximum of 5 applications from each institution will be selected each year to enter the Double Degree program described in this annex. Upon mutual agreement the number of students can be enhanced.

Extent and Structure (referring Article 3.1)

Students from [short form HEI1] follow this scheme:⁶

Year	Year 1		Year 2		Year 3		Year 4		Year 5	
[short form HEI1]	1	2	3	4	5	6	7	8		
[short form HEI2]									9	Thesis

Having passed the “Bachelor of Science” and the first year of the master curriculum at their home institution, they do the last year of the Master curriculum at the host institution.

Students from [short form HEI2] follow this scheme:

Year	Year 1		Year 2		Year 3		Year 4		Year 5	
[short form HEI2]	1	2	3	4	5	6	7	8		
[short form HEI1]									9	Thesis

Having passed the “Bachelor of Science” and the first year of the Master curriculum at their home institution, they do the last year of the master curriculum at the host institution.

Application and Admission Requirements (referring Article 3.2)

Regularly, the deadline for application to the host institution is:

⁶ The example is given for a double degree without prolongation. The description below is based on a 3 years Bachelor and 2 years Master. The information must be adapted to the real curricula.

- [date] for students from [short form HEI1] applying to [short form HEI2] as host institution.
- [date] for students from [short form HEI2] applying to [short form HEI1] as host institution.

Changes in deadlines must be communicated timely between the parties by the administrative coordinators.

Language proficiency (referring Article 3.2)

The language of instruction in the [degree] [name of curriculum] at [name of school/department at HEI1] is in [language(s)]. Therefore applicants must prove proficiency in [language] on B2 level.⁷

The language of instruction in the [degree] [name of curriculum] at [name of school/department at HEI2] is in [language(s)]. Therefore, applicants must prove proficiency in [language] on B2 level.⁸

Study Plan (referring Article 3.4)

In addition to the Learning Agreement, students must set up an individual study plan of both curricula to facilitate the consulting process, processes of revision, and in order to receive the consent from the academic advisors to the planned module selection and to the planned recognitions.

Thesis (referring Article 3.4)

Regularly, the Thesis will be written in English. Deviation from this provision must be communicated and agreed by the parties on a case-to-case basis in advance. Both supervisors must receive an electronic or printed version of the Thesis, according to the valid rules at the institutions.

Grade Conversion (referring Article 3.5)

For grade conversion for modules passed at [short form HEI1] which are subject of recognition at [short form HEI2] applies:

[insert information]

For grade conversion of modules passed at [short form HEI2] which are subject of recognition at [short form HEI1] applies:

[insert information]

Signatures

⁷ B2 level is recommended as basis for successful studies. Add more details, if necessary.

⁸ B2 level is recommended as basis for successful studies. Add more details, if necessary.

This annex may be signed electronically.

Date: [date]

[town of HEI 1]

Date: [date]

[town of HEI 2]

[Name of responsible of school at HEI1]
[Position]

[Name of responsible of HEI2]
[Position]

[school at HEI 1] [school at HEI 2]