NeurotechEU

The European University of Brain and Technology

[D4.4]

[Guidelines and agreement for transfer of learning credits]

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Executive summary

Neurotech^EU aims to create an ecosystem to support education, research, innovation, and foster (societal) impact. Based on feedback from our students, we design Neurotech^EU programmes to cross disciplinary borders across our universities, creating a unique organisation unconstrained by faculty, institutional and geographical boundaries.

Neurotech^EU's vision for 2040 comprises
- seamless mobility for students, research, and staff to study, train, teach, do research and innovate, reaching 50% of Neurotech^EU students through *innovative mobility programmes*, including physical, virtual, and blended mobility programmes.
- flexible curricula tailored to each student's needs and *not constrained by institutional capabilities and borders*

Based on the vision and action plan of Neurotech^EU, several scenarios need to be considered when discussing how Neurotech^EU students can receive recognition of learning outcomes achieved in the context of Neurotech^EU for the degree programme they are enrolled in at their home university.

The partners of Neurotech^EU agree on a set of guiding principles concerning the transfer and recognition of learning outcomes in the context of Neurotech^EU.

1. Preamble

From health and healthcare to learning and education, Neuroscience plays a key role in addressing some of the most pressing societal challenges. Neuroscience shows great promise to become an applied science, to provide brain-centred or brain-inspired solutions that could benefit society and kindle a new economy in Europe. *NeurotechEU aims to be the backbone of this new vision by creating an ecosystem to support education, research, innovation, and foster (societal) impact.*

Based on feedback from our students, we design NeurotechEU programmes to cross disciplinary borders across our universities, creating a unique organisation unconstrained by faculty, institutional and geographical boundaries. *NeurotechEU students across the three cycles (Bachelor, Master, Doctoral) will receive comprehensive multidisciplinary, international and intersectoral training designed to develop a European identity in a multicultural and multilingual setting.* NeurotechEU will actively promote life-long learning via structured but flexible, scalable, and personalised programmes, to remove obstacles to access education, bridge inequalities in employment, and maximize human potential in an atmosphere in which inclusion and diversity are celebrated.

1.1. Extract from the NeurotechEU mission statement with respect to mobility and education

NeurotechEU's vision for 2040 comprises
- seamless mobility for students, research, and staff to study, train, teach, do research and innovate, reaching 50% of NeurotechEU students through *innovative mobility programmes*, including physical, virtual, and blended mobility programmes.
- flexible curricula tailored to each student's needs and *not constrained by institutional capabilities and borders*

The **action plan for Phase 1 (2020-2023)** will establish the necessary *digital infrastructure*, initiate *collaborative inter-campus programmes*, form sustainable *exchange and mobility programmes*, launch joint educational programmes (starting with *summer schools* and *certificate programmes*), and lay the foundations for the outlined vision, starting among others with:

- **NeurotechEU Campus+** will create a shared virtual space, an extension of the partnering organizations, where students across the three cycles (bachelor, master, and doctoral), teachers, and administrators work together without administrative, cultural, and societal obstacles to provide physical, virtual and blended training. NeurotechEU will empower students to *customize their curriculum from the well-structured and comprehensive course catalogues of the partnering universities*. Benefiting from the strengths of each university and taking advantage of the best traditions in each country's culture, it will integrate popular, disciplinary, and academic cultures, creating a collective European academic identity.

- **NeurotechEU Life-long Learning Centre** will support the continued training of its graduates and society at large. It will provide the necessary knowledge, skill sets, competencies, and values for individuals to adapt to the changing personal, civic, societal, and employment-related needs and provide them opportunities in brain research and technologies. It will help to develop public engagement, redress the inequalities that exist, e.g., due to past educational background and lack of inclusive higher education, and to attract new talent.

1.2. Learning and mobility scenarios

Based on the vision and action plan of Neurotech^{EU}, several scenarios need to be considered when discussing how Neurotech^{EU} students can receive recognition of learning outcomes achieved in the context of Neurotech^{EU} for the degree programme they are enrolled in at their home university.

Scenario 1. Study period abroad:

Students are additionally enrolled at a partner university, where they attend and take exams for educational components that are part of an existing and accredited programme at HEI. *The hosting university can issue an official certificate*, e.g., Transcript of Records (ToR), specifying ECTS credits. Based on the Lisbon convention and for those partners using the [European Credit Transfer and Accumulation System (ECTS),](#) the student's home university is required to recognize achieved learning outcomes towards the student's degree if no substantial differences between learning outcomes etc. exist (see Step 3 below).

a) Example "**Standard KA1 SMS Erasmus+ exchange**": Students from UBO study an entire semester at UMF. Procedures, principles, and tools like *Learning Agreements* and *Transcript of Record* exist to facilitate the recognition of learning outcomes.

b) Example "**Erasmus BIP Winter School in Elche**": Students from BOUN attend the winter school offered and organized by UMH. They are visiting students at UMH. UMH will issue a ToR with ECTS credits.

c) Example "**Radboud Summer School**": Students from KI attend the summer school offered and organized by RU. RU will issue a certificate that states that a student has met the programme requirements, the number of credits as well as the number of study hours. Faculty members of Neurotech^{EU} partners may contribute as lecturers.

d) Example "**Bogazici Summer school**": All summer school courses are equivalent to regular courses at BOUN for which ECTS credits are given. Students from UMH attend classes in the summer school offered by BOUN and receive ToR with ECTS credits.

e) Example "**Study abroad at Oxford**": Students from UMF attends classes at OXF. OXF will issue an official certificate that states that a student has met the programme requirements as well as the number of study hours.

Scenario 2. Customized curriculum and virtual mobility:

Students attend (virtual) classes across all Neurotech^{EU} universities in the same semester. They attend educational components that are part of an existing and accredited programme at an HEI and of the ECTS. As *full enrolment and membership at all universities will be inexpedient for both the students and the partners' administration*, the legal status of students may differ between universities. This in turn, might affect the options for certificates, including awarding ECTS credits.

a) Example "**Virtual mobility in Bonn**": Students from KI attend classes at KI as well as virtual seminars at UBO, BOUN, and OXF. In order to take exams at UBO and receive a ToR with ECTS credits, students currently need to be fully enrolled in Bonn, paying ~350 € for non-academic student services. If not, UBO can issue only a "statement of attendance".

Scenario 3. Collaborative Neurotech^{EU} educational components for students:

Students attend educational components that are collaboratively organized and offered by more than one Neurotech^{EU} partner. *These educational components are new and innovative, and not part of an existing accredited programme*. Content, format, and requirements will be decided by Neurotech^{EU} WP4. Quality assurance is based on procedures developed by Neurotech^{EU} WP2. They are therefore closer to non-formal than formal educational components.

Neurotech^{EU} currently cannot issue certificates including specifying ECTS credits for these educational components, as Neurotech^{EU} is not an accredited HEI. (See Step 1& 2 below)

If one of the NeurotechEU partners acts as the official host of such an educational component, it depends on its status as well as the local regulations on what kind of certificate, including specifying ECTS credits, can be issued. *(See Step 1& 2 below)*

If certificates like "statement of participation" are issued and again, depending on national regulations, students' home universities might be able to recognize them towards a student's degree programme. Students' home universities that are using ECTS might be able to allocate and award ECTS credits for these educational components. *(See Step 3 below)*

a) Example "***Lecture series on Current Methods in Neurotechnology***" on Campus+: Faculty members from all NeurotechEU partners create 1-hour video lectures covering a range of different topics. Content and structure of the lectures are coordinated by UBO as the WP4 lead. Students from UMH will watch these videos on Campus+ and will be assessed. Participation will be registered by the online platform Campus+.

b) Example "***NeurotechEU Summer school***": All eight partners provide educational components (seminar, lectures, lab visits etc.) across the eight campuses, and students from all partners attend these together. Students will receive a certificate stating that the programme requirements, the curriculum as well as the number of study hours have been met.

Scenario 4. Educational components at the NeurotechEU Lifelong Learning Centre:

Educational components that are offered by NeurotechEU partners or associates. Quality assurance is based on procedures developed by NeurotechEU WP2. In contrast to courses on Campus+, these educational components are not aimed at students, and some may be provided by private companies. *They may be organized as MOOCs and only include limited assessment of individually achieved learning outcomes.*

NeurotechEU currently cannot issue certificates, including ECTS credits, for these educational components, as NeurotechEU is not an accredited HEI. *(See Step 1& 2 below)*

If one of the NeurotechEU partners acts as the official host of such an educational component, it depends on its status as well as the local regulations on what kind of certificate, including specifying ECTS credits, can be issued. *(See Step 1& 2 below)*

If certificates like "statement of participation" are issued and again, depending on national regulations, students' home universities might be able to recognize them towards a student's degree programme. Students' home universities that are using ECTS might be able to allocate and award ECTS credits for these educational components. *(See Step 3 below)*

a) Example "***Neural Data science***": Faculty members of NeurotechEU partner as well as from other universities or private companies provide an online course. Anyone will be able to take this course. The course is organized by NeurotechEU central office. Students from UMH will take this course and will be assessed. Participation will be registered by the online platform Lifelong Learning Centre.

b) Example "***Matlab***": MathWorks provides a MOOC course on how to use Matlab. The course is organized by NeurotechEU central office. Students from KI will take the course, and an automatically generated certificate of attendance is issued.

2. Guidelines for the transfer and recognition in Neurotech^EU

The partners of Neurotech^EU agree on the following guiding principles concerning the transfer and recognition of learning outcomes in the context of Neurotech^EU. They act as *guidelines for the collaborative development of procedures and tools* concerning the certification, transfer, and recognition of credits *and for any future modification*. They refer *solely to educational components offered and learning outcomes achieved in the context of Neurotech^EU*. Also, each partner may provide a *list of its degree programmes* in order to clarify to which students these guidelines apply.

These principles are based on ideas outlined in the Bologna Process, the Lisbon Recognition Convention, the ECTS User's Guide, the ECHEs of the partners, and other interinstitutional as well as Neurotech^EU agreements.

1. The recognition of achieved learning outcomes towards the students' own degree programme at their home university is a central pre-requisite for the *success of mobility and collaborative education, and thereby Neurotech^EU*.

2. We strive to *transfer and recognise all learning outcomes* achieved during a study or traineeship period abroad, a blended or a virtual mobility with a partner, a collaborative Neurotech^EU programme, or during a course offered on Neurotech^EU digital learning platform towards the student's degree programme.

3. Collaborative and innovative education, including the transfer and recognition of learning outcomes, rests on *mutual trust* between the Neurotech^EU partners.

4. We recognise that there will always be *differences in learning outcomes* between different educational systems, given the rich and diverse educational history and culture across partners and countries. We consider this as an *enriching aspect* of the internationalisation of higher education rather than being an obstacle to recognition and mobility.

3. Procedures and tools

In order to facilitate the administration and organisation of different education components in the context of Neurotech^EU, our aim is to make the following procedures *as similar as possible for the different learning and mobility scenarios* in Neurotech^EU. They are based on principles of each partner's *Erasmus Charter for Higher Education (ECHE)* and tools used for Erasmus+ mobility, which for most Neurotech^EU partners are binding for the transfer of learning outcomes achieved in the context of Scenario 1.

● Their **implementation** will occur **concurrently** with the implementation of the different learning and mobility scenarios described above.

● They are **adaptive** and may be **collaboratively modified** according to changes in the learning and mobility scenarios, national regulations, or other circumstances.

STEP 1: PROVIDING EDUCATIONAL COMPONENT
As long as Neurotech^EU is not an accredited HEI, a Neurotech^EU partner will act as a **hosting university** for any kind of educational component in Scenario 1-4.

- For educational components on the Lifelong Learning Centre (Scenario 4), in particular, for MOOCs, the Neurotech^{EU} central office might act as the hosting partner. This will reduce the administrative burden for a potential hosting university, as they do not have to issue certificates for a large number of participants. However, this instigates additional steps at the home university of any student who applies for transfer and recognition; see Step 3.4.

The hosting partner is responsible for the **quality assurance** of the educational components, in line with procedures developed by Neurotech^{EU} WP2 and national regulations.

In order to allow *evaluation of possible recognition before mobility (Learning Agreement before)*, any educational component will be described on Campus+ **Course Inventory** or the **Lifelong Learning Centre** and will include, at a minimum, the following information:
- Title
- Learning outcomes
- Total workload: in ECTS credits or hours
- Level of Qualification: bachelor, master, post-master, doctorate, post-doctoral
- Study programme: Is this part of an existing programme?
- Hosting university
    - If Scenario 3-4: additional information on the actual learning provider
- Type of certificate that can be obtained:
    - Statement of Participation
    - Certificate of Achieved Learning Outcomes
    - Transcript of Records specifying ECTS credits

STEP 2: CERTIFYING PARTICIPATION AND ACHIEVEMENT OF LEARNING OUTCOMES

The hosting partner is responsible for the **certification of participation and achievement of learning outcomes**.

Each partner will provide a *list of responsible persons and/or examples of valid certificates* in order to facilitate their verification.

SCENARIO 1-2
- The certification of learning outcomes achieved in Scenarios 1 and 2 will follow the standards set out by the ECHE of those partners in Erasmus+ and other existing exchange agreements and recognition procedures.

SCENARIO 3-4
- We will explore options *like micro-credentials, badges etc., preferably certified by Neurotech^{EU}* as an accredited institution, as the long-term solution to certify collaborative educational components and award ECTS credits for educational components in Scenario 3-4. The development of digital certificates for Campus+ will be aligned with the Europass data model.

These certificates aim to increase
1. the likelihood of *recognition outside Neurotech^{EU}* and therefore increased value for students and life-long learners
2. *visibility* of Neurotech^{EU}.

Until such a solution is available and to allow recognition of achieved learning outcomes at Neurotech^{EU} partners, the *hosting partner will issue a certificate* that includes the following information: logo and name of the partner institution hosting the educational component, i.e., the awarding body

- logo and name of Neurotech^{EU}
- type of certification
    - o Statement of Participation
    - o Certificate of Achieved Learning Outcomes
- name and details of the student
- title of the educational component
- weblink to the description on Campus+ or Lifelong Learning Centre or description of learning outcomes
- workload: number of ECTS credits awarded; if not possible: workload expressed in hours
- study and exam dates (start and finish)
- student performance/results, plus
    - o description of the assessment and grading system
    - o grade distribution information for the educational component
- date of issue and signature of the responsible person

A template for such a certificate will be provided by Neurotech^{EU}. Additional information can be added by the host if needed (e.g., internal course/class identifiers).

STEP 3: RECOGNITION & TRANSFER

1. Verification of the certificate: The partners agree to recognize *certificates provided by another partner* in the context of Neurotech^{EU} for *an educational component in any scenario described above*.

2. Quality of the Educational Component:

- The partners agree to recognize any learning outcomes achieved in an educational component *in any learning mobility scenario offered and hosted by another partner* in the context of Neurotech^{EU}.
- The partners agree to recognize the educational component *as described by the hosting partner*.

3. Comparability of learning outcomes:

- The partners agree not to expect equivalence in learning outcomes. Instead, recognition should be granted unless there is a *substantial difference* that is so significant that recognition would most likely prevent the applicant from succeeding in further study or research activities.
- The *burden of proof* of a substantial difference lies with the home university, not the student.
- If there is substantial difference, the home university agrees to provide the opportunity for the students for *partial recognition* of the corresponding educational component in their degree programme.

4. Assessment & Grading:

- *Recognition* of a student's degree programme *relies on the assessment* of the achieved learning outcomes.
- When only a *statement of participation* is provided by the hosting partner, both the home and hosting university will work together to provide an opportunity for the student to be *assessed* with respect to the achieved learning outcomes in order to allow awarding of ECTS credits for and/or recognition of the achieved learning outcomes.
- When possible, learning outcomes should be transferred and counted as *non-graded.* This addresses students' concerns about the higher unpredictability of course requirements in the context of a mobility and minimizes the risks of credit mobility for students.
- When necessary, grades are converted based on comparing the *grade distribution table* from the student's reference group at the home university with the one developed by the hosting partner for the parallel reference group.

5. Workload:

- The partners agree that a *difference in workload* alone is not a sufficient reason for refusing recognition altogether. If there is a substantial difference, the home university strives to provide the opportunity for the students for *partial recognition* of the corresponding educational component in their degree programme and/or the option to combine it with other educational components.
- If the hosting partner is not able to award ECTS credits for achieved learning outcomes in the context of *Scenario 2-4 and if the home university is using ECTS*, home universities using ECTS will award ECTS credits based on the workload described in the certificate

4. Relevant definitions & concepts adopted from the ECTS user's guide

https://ec.europa.eu/assets/eac/education/ects/users-guide/glossary_en.htm#ectsTop

Assessment
The whole range of written, oral and practical tests/examinations, projects, performances, presentations, and portfolios that are used to *evaluate the learner's progress and ascertain the achievement of the learning* outcomes of an educational component (unit/module).

Award of ECTS credits
The act of formally granting students and other learners the credits that are assigned to the qualification and/or its components if they achieve the defined learning outcomes. *National authorities should indicate which institutions have the right to award ECTS credits.* If students and other learners have achieved learning outcomes in other formal, non-formal, or informal learning contexts or timeframes, *credits may be awarded through assessment and recognition of these learning outcomes*.

European Credit Transfer and Accumulation System (ECTS)
A learner-centred system for credit accumulation and transfer, based *on the principle of transparency of learning, teaching, and assessment processes*. Its objective is to facilitate planning, delivery, and evaluation of study programmes and student mobility by recognising learning achievements and qualifications, and periods of learning.

Educational component
A self-contained and formally *structured learning experience* (such as course unit, module, traineeship, work placement).

Formal learning
Learning typically provided by an *education or training institution*, structured (in terms of learning objectives, learning time, or learning support), and leading to certification. Formal learning is intentional from the learner's perspective.

Non-formal learning
Learning which takes place through *planned activities* (in terms of learning objectives, learning time) where some form of learning support is present (e.g., learner-teacher relationships); it may cover programmes to impart work skills, adult literacy, and basic education for early school leavers; very common cases of non-formal learning include in-company training, *structured online learning* (e.g., by making use of open educational resources), and *courses organised by civil society organisations* for their members, their target group or the general public (Ibid.).

Credit (ECTS)

ECTS credits express the volume of learning based on the defined learning outcomes and their associated workload. ECTS credits are generally expressed in whole numbers.

Grade distribution table

Grade distribution tables show how the existing national or institutional scale is being used in the institution – whether in open access or selective systems – and allow for comparison with the statistical distribution of grades in a parallel reference group of another institution. They represent the statistical distribution of positive grades (pass and above) awarded in each field of study in a specific institution.

Recognition of credits

The process through which an institution certifies that learning outcomes achieved and assessed in another institution satisfy (some or all) requirements of a particular programme, its component, or qualification.

Recognition of non-formal and informal learning

The process through which an institution certifies that the learning outcomes achieved and assessed in another context (non-formal or informal learning) satisfy (some or all) requirements of a particular programme, its component, or qualification.

Transcript of Records (TOR)

An up-to-date record of the students' progress in their studies: the educational components they have been enrolled in, the number of ECTS credits they have achieved, and the grades they have been awarded. It is a vital document for recording progress and for recognising learning achievements. Most institutions produce the Transcript of Records from their institutional databases.

Massive open online courses (MOOCS)

Courses which are open access, free to sign up for, and delivered online, usually with peer or automated support. They often have large enrolment numbers.

Workload

An estimation of the time learners typically need to complete all learning activities such as lectures, seminars, projects, practical work, work placements, individual study required to achieve the defined learning outcomes in formal learning environments. It should be recognised that this represents the normal workload and that for individual learners, the actual time to achieve the learning outcomes will vary.