ENHANCE
European Universities of Technology Alliance

WP2	
D 2.3	**Name: Subjects Mapping for pilot degree programmes and pilot certificates BSc. Mechanical Engineering MSc Computer Science MSc Energy Engineering**

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Subjects Mapping for pilot degree programmes

Developing the ENHANCE *European Education Pathways* constitutes the main objective of the One Campus WorkPackage (WP) within the ENHANCE project. Working groups responsible for planning and implementing the EEPs have investigated the most efficient way to reach the objectives of this WP, objectives that have been stated in previous deliverable documents.

The ENHANCE project envisions specific steps to reach these objectives (mainly enhancing the teaching offer at each partner Institution while increasing and simplifying mobility thanks to automatic recognition of the courses taken within the Alliance). One of the leading and starting steps and responsibilities that the project has foreseen for the involved working groups is establishing a Framework of Learning Goals (LGs) and Outcomes (LOs) for each pilot programme. A following relevant responsibility of the working groups is the object of this deliverable document, i.e., producing subject mapping for pilot programmes. The working groups, relevantly subdivided per pilot programme, have designed three different strategies to come up with frameworks for LGs and LOs. Below is a brief reminder of the three strategies, followed by a description of how each pilot programme has tackled the subject mapping following its chosen method.

The **three strategies** designed by the relevant pilot programmes are the following:

- The Top-Down Approach. This is the Mechanical Engineering and Energy Engineering's strategy. It foresees agreeing *ex-ante* on a list of LOs and LGs common to all partner Universities.

- The Bottom-Up Approach. This is the Computer Science's strategy. This approach foresees agreeing on a list of LOs and LGs common to all partner Universities *ex-post*, namely, after mapping each of the courses offered within the Alliance.

- The Hybrid Approach. This is the Urban Planning's strategy. This model combines the two approaches described above. In addition, this programme has decided to subdivide the enriched teaching offer according to 4 thematic clusters.

Following these three different strategies, the working groups responsible for each of the four pilot programmes involved has completed the **subject mapping** of the courses that each Institution aims to offer within the Alliance (i.e., ENHANCE courses).

- Energy Engineering's results: Subject mapping completed. All partner Universities have listed the courses they aim to offer within the Alliance and have characterized them through

a few relevant information (e.g., the number of ECTS the course counts, the semester in which the course is offered, the language, etc.). The result can be found at: Enhance_Energy_Engineering_v1.1-1 2.xlsx, sheet n. 3, "Courses offered - ENHANCE". Each partner University is currently matching each ENHANCE course with the relevant LOs from the common list to select the final ENHANCE offer (sheet n. 2, "Learning Goals and Outcomes"). The listing of the final course offer that each partner University has decided to take from other Institutions to give to its prospective ENHANCE students (i.e., the ENHANCE course offer) is near completion. It can be found in sheet n.4, "ENHANCE PLATFORM".

- Mechanical Engineering's results: Subjects mapping completed. The result can be found at: Enhance_Mechanical_Engineering_1.xlsx, sheet n. 3, "Courses offered - ENHANCE". Sheets n. 4 and 5, respectively, "ENHANCE PLATFORM BSc" and "ENHANCE PLATFORM MSc", indicate the ENHANCE course offer for each partner Institution.

- Computer Science's results: Subjects mapping completed. The result can be found at: Enhance_Computer Science_new.xlsx, sheet n. 2, "Courses offered - ENHANCE". Moreover, this programme has also envisioned and listed in a separate sheet (cf. sheet n.4, "ENHANCE PLATFORM") a number of: a) "Equivalent courses", i.e. courses that are similar in content to the ones already offered at one's Institution; b) "Additional" or "new courses", i.e. courses offered by an ENHANCE partner University (not already included in one's teaching offer) and deemed appropriate to enrich one's teaching offer (for the courses are complementary, specific, or specializing). These lists constitute the ENHANCE course offer.

- Urban Planning's results: Subject mapping completed. The result can be found at: Enhance_Urban Planning3.xlsx, sheet n. 2, "Courses offered - ENHANCE". Regarding the ENHANCE course offer, most partner Universities have followed the Computer Science's example and subdivided the lists into additional or equivalent courses (cf. sheet n.4, "ENHANCE PLATFORM").

We have developed a flexlible approach not just to allow for fresh and innovative perspectives but also to adjust, where needed, future subject mapping for courses according to the relevant context. All approaches help one another reach the goal of selecting the final ENHANCE offer and increasing mobility.