

Work package type and ref.nr	DEVELOPMENT	2
Title	Development of new courses in the field of architecture and civil engineering	
Related assumptions and risks	<p>Assumptions</p> <p>High engagement of academic staff</p> <p>Willingness of universities and academic staff to participate</p> <p>Available technical and functional capacity of partner universities</p> <p>Available pool of qualified local stakeholders and business willing to share practices</p> <p>Risks</p> <p>Unpredictable changes of relevant bodies at partner country universities</p> <p>Insufficient understanding of curriculum changes and its effects on national level among key decision makers (institute for accreditation, ministry for education etc.)</p> <p>Lack of adequate and continuous support from industry</p>	
Description	<p>After having thorough analysis on Current programmes in EU at partner HEIs - State of the Art that resulted with final reports, new courses in curricula at BSc and MSc is planned to be developed at each partner university.</p> <p>They will be defined through overarching philosophy of the program that will effectively address relevant practices in architectural education.</p> <p>Involvement of new courses will describe content expectations presenting:</p> <ul style="list-style-type: none"> - target groups, set of course goals and objectives, intended learning outcomes, content of course, resource materials to ensure program implementation, adequate time for students per course - time spend on learning 	

- number of ECTS credits, admission and specific requirements, suggested instructional techniques for teaching, presented assessment instruments to measure progress

In order to reach continuity of education program that goes in line with labor market needs, this project is treating both, BSc and MSc study programs at partner countries.

There will be modernized and developed **two groups of courses** on BSc and MSc level - **architectural courses** and **civil engineering courses**.

Since in the project are included **3 Faculties of Architecture** and **3 Faculties of Civil Engineering** from partner countries list of courses to be modernized and newly created are presented according to these groups and not study programs.

According to needs, objectives and structure of study program of partner countries each HEIs will develop certain number of courses from these two groups (architectural and civil engineering) of courses. Number of ECTS credits and status of courses (prerequisite, obligatory or elective) will be defined within the project implementation since institutions from partner countries have different study programs.

Moreover, **modernization** and **creation of new of courses** during the project time life will be supported by project activities such as analysis of study programs, benchmark on market needs, defined learning outcomes, visits to participating EU HEIs, trainings, workshops etc.

TACEESM is organized in 8 WP and activities are planned according to participant's role, needs and expertise. Two groups of courses (architectural and civil engineering) at BSc and MSc level will be modernized and designed. Based on needs, objectives and structure of program, partner HEIs will develop certain number of courses from these groups. Number of ECTS credits and status of courses will be defined within the project. The revision of BSc and MSc curriculum of partner HEIs will introduce upgrading existing courses or/and design of new courses. The new courses will be officially recognized by University authorities and accredited by the National Agencies at partner HEIs.

10 ARCHITECTURAL courses modernized - BSc and MSc

1. Computer Literacy in Architecture
2. Architectural Structures
3. Construction material science
4. Architecture
5. Freehand Drawing
6. Contemporary Architectural Discourse
7. Urban Design
8. Architecture Landscape and Technology
9. Multifunctional Space Design
10. Critical Theory/ Culture and Architecture

10 CIVIL ENGINEERING courses modernized - BSc and MSc

1. Construction materials
2. Introduction to engineering informatics
3. Statics in civil engineering
4. Planning and construction of specific road facilities
5. Construction modelling
6. Reinforced concrete and masonry structures
7. Timber and plastic structures
8. Advanced Structural Analysis
9. Advanced Construction Technology and Management`
10. Civil Engineering Materials

13 ARCHITECTURAL courses designed - BSc and MSc

1. Professional Practice

2. Studies in light and materials
3. Ornament Theory and Design
4. Contemporary Architectural Discourse
6. Techno-Sensation Architecture
7. Green Design and Interior
8. BIM Technology
9. Architectural projection of contemporary construction systems
10. Territory Improvement and engineering development of area
11. Sustainable architecture
12. Project management for architects
13. Contemporary methods of preservation of historical environment

10 CIVIL ENGINEERING courses designed - BSc and MSc

1. Structural Stability
2. Advanced Structural Analysis
3. Construction Machinery and Equipment's
4. Road maintenance and repair
5. Construction plant and equipment
6. Waste management
7. Operations Research and Linear Programming
- 8 Computer-Aided Design for Construction
9. Applied Hydraulics
10. Actions on Structures

International Burch University, Department of Architecture, will modernize 2 courses (architectural group) on BSc level. Further, IBU Architecture will design 10 new courses at BSc and MSc level from which 7 are from architectural group of courses and 3 are from civil engineering group.

Technical faculty of University of Bihać, Department of Civil Engineering planned to introduce 3 new courses at BSc level, and 2 new courses at MSc level. In addition, UNBI Civil Engineering will modernize 3 compulsory courses at BSc level and 2 courses at MSc level. All courses are in civil engineering group of subjects.

Dzemat Bijedic University of Mostar (UNMO) Civil Engineering Faculty (BSc – General, Geodesia; Msc – General, Construction, Urban infrastructure) and Design of interiors (BSc and MSc) will modernize 4 courses in BSc and MSc level. Further on, UNMO will design 6 new BSc and Msc courses from which 4 are architectural and 2 civil engineering courses.

National University of Architecture and Construction of Armenia plans to design 6 courses at BSc and MSc Levels. NUACA will design 3 courses (architectural group) at BSc level and 3 courses at MSc level.

The Belarussian National Technical University (BNTU) will improve 5 courses (architectural group) at BSc level and 2 courses (civil engineering group) at BSc and MSc level and design 2 civil engineering courses.

Brest State Technical University (BrSTU) will introduce 1 new course at BSc level and upgrade 5 courses (civil engineering and architectural group) at BSc and MSc level.

Course content is planned to be widely validated by business community with the adequate involvement industry in creation of course content.

Effectiveness of the programme content will be further nurture through collaboration with industry and creation of student's internship program at BSc level.

The curriculum review and evaluation will be provided to get feedback on relevance and quality of program. Effective curriculum quality check, according to internal quality control procedures on each partner university, examines suggested changes and benefits

	<p>of newly formed program. Final decision on new courses will be discussed on the University Council and Senate separately for each partner country by the M15.</p> <p>To ensure process of recognition/accreditation of new courses/program by the National Accreditation Agency, each partner country will work on all documents needed. Support for this activity will be given from administrative and office for quality control. Under assumption that period of accreditation will take approx. two months this activity could be completed by the end of M22.</p> <p>Following modernization of BSc courses and creation of new courses at BSc and MSc level in M11 workshop 2 will be organized at University G. D'Annunzio - Chieti-Pescara, on which two persons from each institution (partner and EU) will be participate.</p> <p>The process of modernization of existing courses at BSc and MSc level and design of new courses at BSc and MSc level will follow two short visits of partner universities in M6 and M8 (two members from each partner university) to one of EU partners. In that way partner universities, will be introduced to learning and teaching methodologies, form of practical training schemes regarding the modern technologies and real-life cases.</p>		
Tasks	<p>ACT 2.1 Modernization of existing courses at BSc and MSc level</p> <p>ACT 2.2 Design of new courses / curricula at BSc level</p> <p>ACT 2.3 Design of new courses/ curricula at MSc level</p> <p>ACT 2.4. Accreditation of the programme at the partner universities</p>		
Estimated Start Date (dd-mm-yyyy)	01-03-2021	Estimated End Date (dd-mm-yyyy)	01-07-2022
Lead Organisation	<p>University G. D'Annunzio - Chieti-Pescara, Italy</p> <p>Co-Leader - University of Bihać (UNBI), BiH</p>		
Participating Organisation	All institutions		
Costs <i>Please explain the necessary costs for this WP: What travels are necessary? If equipment is requested, explain why it is required. If subcontracting is necessary, explain why the task cannot be performed by the partner.</i>	<p>Total Costs for DEVELOPMENT - WP2, WP3, WP4, WP5 (EUR): 512,691.00</p> <p>Total Costs for WP 2: 104,846 EUR</p> <p>1. Staff Costs: 36,786.00 EUR</p> <p>2. Travel Costs: 11,300.00 EUR</p> <p>The process of modernization of existing courses at BSc level will follow visits of partner universities (two members from each partner university) to one of EU partners for 7 days in M6. Visits will be planned according to partner HEIs needs and different group of courses that they have (architectural and civil engineering).</p> <p>The process of establishment of new courses will follow visits of partner universities (two members from each partner university) in M8 to one of EU partners. In that way partner universities, will be familiar with the infrastructure of EU university needed for implementation of their programmes.</p> <p>Following modernization of BSc courses and creation of new courses at BSc and MSc level in M11 workshop 2 will be organized at University G. D'Annunzio - Chieti-Pescara, on which two persons from each institution (partner and EU) will be participate.</p> <p>3. Costs of Stay: 26,760.00 EUR</p> <p>4. Subcontracting Costs: 30,000.00 EUR</p> <p>5,000.00 EUR for 6 partner HEIs is planned for accreditation of new courses by the national accreditation institution at partner universities</p>		