Prot. n. 0041709 del 29/10/2026 - UOR: ARI - Classif. VII/1

università degli studi mediterranea di reggio calabria

(ALLEGATO B2 - TRAINEESHIP)

Da compilare e presentare solo da parte del Docente

Bando Erasmus+ TRAINEESHIP Short Term a.a. 2026-2027

SCHEDA PROGETTO DI MOBILITÀ

Dipartimento	DICEAM		
Titolo del Progetto di Mobilità per Traineeship	**ASSESSMENT OF EXISTING CONCRETE STRUCTURES FOR ENGINEERING STUDENTS**		
Docente Proponente del Progetto	RAFFAELE PUCINOTTI		
Paese di destinazione	POLONIA		
Ente ospitante	PK Krakow University of Technology (Poland), Faculty of Civil Engineering and Transport, Department of RC and PC Structures		
Eventuale numero massimo degli studenti			
Periodo previsto per la realizzazione delle attività in presenza (escluso il viaggio) *	**Data inizio attività** Non antecedente al 1° marzo 2027	**Data fine attività** Il rientro deve avvenire entro il 30 giugno 2027	**Durata (giorni) ***
	12.04.2027	16.06.2027	5
Periodo previsto per la realizzazione della mobilità virtuale	**Data inizio attività** Non antecedente al 1° marzo 2027	**Data fine attività** entro il 30 giugno 2027	
	19.04.2027	20.04.2027	

Descrizione delle attività in presenza

1. Concept and Rationale

The proposed International Student Training Week will provide an interdisciplinary and practice-oriented learning experience focused on the assessment, monitoring, sustainable management and potential reuse of existing concrete structures.

The program responds to the growing need to extend the service life of existing buildings and infrastructure, reduce the environmental impact of construction, and support circular economy principles through the informed maintenance, rehabilitation, adaptation and reuse of existing structural assets.

The training will combine lectures delivered by academic staff from all three partner universities with practical workshops, laboratory sessions, technical visits and collaborative case-study assignments. It will complement existing Master's-level courses by introducing advanced assessment techniques, contemporary structural monitoring methods and integrated approaches to evaluating structural safety, remaining service life and future use.

An important feature of the program will be international collaboration in culturally diverse and gender-inclusive student teams, fostering knowledge exchange and the development of professional and interpersonal competences.

2. Scope and Thematic Areas

The programe will cover the following topics:

- Principles and procedures for assessing the technical condition of existing concrete structures.
- Deterioration mechanisms, material degradation, defects and damage identification.
- Structural analysis and ULS and SLS verification of existing structures, including uncertainty in material properties, actions and structural models.
- In-situ investigation methods, including visual inspection, non-destructive testing, semi-destructive testing and material sampling.
- Modern measurement technologies and structural health monitoring, including sensors, data acquisition, displacement and strain measurements, vibration-based methods and digital data interpretation.
- Case studies involving existing buildings and civil engineering structures.
- Assessment of structural reliability, residual capacity, durability and remaining service life.
- Decision-making regarding continued use, maintenance, strengthening, rehabilitation, adaptation and reuse.
- Sustainability assessment, life-cycle considerations and circular economy principles in the management of existing

structures.

3. Proposed Weekly Program

Day 1 – Introduction to the Assessment of Existing Structures

- Welcome session and introduction to the three partner universities.
- Lectures on the principles of assessing existing concrete structures, deterioration mechanisms and condition assessment.
- Workshop on inspection, damage classification and preliminary assessment of a selected structure.
- Formation of international student teams and introduction to the group assignment.

Day 2 – Structural Analysis and Safety Verification

- Lectures on modelling existing structures and ULS and SLS verification of existing concrete structures.
- Assessment of material properties, structural actions, uncertainties and the reliability of existing structures.
- Team-working on the group assignment (based on case study).

Day 3 – Testing, Measurement and Structural Monitoring

- Lectures on non-destructive and semi-destructive testing, modern measurement systems and structural health monitoring.
- Laboratory sessions involving selected concrete testing methods, sensor technologies, measurement acquisition and data interpretation.
- Team-working on the group assignment (based on case study).

Day 4 – Technical Visits and Real-Life Case Studies

- Technical visit to a selected existing building, infrastructure asset or rehabilitation project in Kraków or the surrounding region.
- On-site inspection and identification of damage, structural risks and potential investigation needs.
- Discussion with practitioners, where feasible, on structural assessment, rehabilitation and the practical constraints of working with existing structures.
- Collection and interpretation of information supporting the group case study.

Day 5 – Sustainable Management, Reuse and Project Presentations

- Lectures on remaining service life, strengthening, adaptation, reuse, life-cycle thinking and circular construction.
- International team workshop: integrated assessment and development of recommendations for the future use of a selected structure.
- Student presentations and discussion with academic staff from all three universities.
- Final evaluation, feedback, certificates of participation and closing session.

The program will be finalised jointly by the partner institutions, taking into account the availability of laboratory facilities, suitable structures for technical visits and the expertise of participating academic staff.

4. Learning Outcomes, Workload and ECTS Equivalence

The training programme is designed to correspond to a workload equivalent to **2 ECTS credits**, subject to recognition in accordance with the regulations and procedures of the three participating universities.

Descrizione delle attività virtuali
Drawing on personal experience, this meeting is proposed as an opportunity to share individual stories and reflect on the importance of international exchanges—involving students and universities from diverse educational and cultural backgrounds—thereby fostering intercultural understanding through the comparison of personal experiences.

Attività del piano di studi in cui è previsto il riconoscimento	ALTRI CREDITI
Numero dei crediti previsti per il riconoscimento (minimo 2)	2

*La durata massima del periodo di mobilità compresi i giorni di viaggio è fissata comunque in giorni 7.