



Co-funded by  
the European Union



Project title                      International Cooperation Framework for Next Generation Engineering Students  
Project acronym                NextGEng  
Project contract no.            2022-1-RO01-KA220-HED-000088365

# **NextGEng Project**

## **WORK PACKAGE 4**

### **CASES FOR EXPERIENTIAL LEARNING PROJECTS**

#### **R4.1.a**

#### **Brochure for marketing the CEL projects**

March, 2023



WP4	R4.1.a Brochure for marketing the CEL projects
<b>Authors</b>	Silvia Satorres-Martínez & José Ignacio Jiménez-González
<b>Short Description</b>	The report presents the developed CEL Brochure and marketing documents for promoting the CEL projects
<b>Status</b>	Final
<b>Distribution level</b>	Public
<b>Date of delivery</b>	31/03/2023
<b>Contributions by:</b>	
<b>Project website</b>	<a href="http://www.nextgeng.eu">www.nextgeng.eu</a>

#### Document History

Version	Date	Author/Reviewer	Description
0.1	31/03/2023	Silvia Satorres/José Ignacio Jiménez	First Draft
0.2	03/04/2023	Ciprian Lapusan	Review
Final	03/04/2023	Silvia Satorres	Final Version

*Funded by the European Union. Views and opinions expressed are however those of the author(s) only and do not necessarily reflect those of the European Union or the European Education and Culture Executive Agency (EACEA). Neither the European Union nor EACEA can be held responsible for them.*



## Table of Contents

1. Introduction.....	4
2. Brochure for marketing the CEL projects .....	4
3. Description of a CEL project .....	6
4. Annex.....	7

## 1. Introduction

The aim of the report is twofold. First, it is provided screenshots of the distributed brochure to companies and research groups for marketing the idea of what cases for experiential learning projects are about. The first actions to be done, and a planning proposal for the first round of CEL projects is also available in the brochure.

Second, companies and research groups are asked to provide some information that will be used by the HEIs in order to assess the adequacy of the CEL proposals to the participant's profile.

This report is one of the results of the activity: *A4.1. List of companies and research groups for CEL projects*. In particular, this report is the result: *R4.1.a Brochure for marketing the CEL projects*.

## 2. Brochure for marketing the CEL projects

The following brochure (Figure 1), result R4.1.a of the activity A4.1, has been developed for marketing the idea of CEL projects to companies and research groups. By the end M9 (06/2023), companies and research groups should provide a list of CEL projects. Three of them need to be planned from M11 (08/2023) to M15 (12/2023).

The main information contained in the brochure is:

- Goal of a CEL project.
- Information that should be provided by companies and research groups for detailing their CEL project proposals.
- Schedule for the first round of CEL projects

Companies and research groups have to use the table available in the following section of this report to describe a CEL project proposal.



Co-funded by  
the European Union



Technical University of Cluj-Napoca  
ROMANIA, [www.utcluj.ro](http://www.utcluj.ro)



JAMK University of Applied Sciences  
FINLAND, [www.jamk.fi](http://www.jamk.fi)



University of Jaén  
SPAIN, [www.ujaen.es](http://www.ujaen.es)



Integración Sensorial y Robótica  
SPAIN, [www.isr.es](http://www.isr.es)



Valmet Technologies Oyj  
FINLAND, [www.valmet.com](http://www.valmet.com)



**BOSCH** Robert Bosch SRL  
Invented for life ROMANIA, [www.bosch.ro](http://www.bosch.ro)



International Cooperation Framework  
for  
Next Generation Students  
[www.nextgeng.eu](http://www.nextgeng.eu)



#### Contact:

University of Jaén (Spain):  
Silvia Satorres Martínez, email: [satorres@ujaen.es](mailto:satorres@ujaen.es)  
José Ignacio Jiménez González, email: [ijgnacio@ujaen.es](mailto:ijgnacio@ujaen.es)

Technical University of Cluj Napoca (Romania):  
Ciprian Lapusan, email: [ciprian.lapusan@mdm.utcluj.ro](mailto:ciprian.lapusan@mdm.utcluj.ro)

JAMK University of Applied Sciences (Finland):  
Anneli Kakko, email: [Anneli.Kakko@jamk.fi](mailto:Anneli.Kakko@jamk.fi)



Co-funded by  
the European Union

[www.nextgeng.eu](http://www.nextgeng.eu)

SCAN WITH  
YOUR MOBILE  
DEVICE TO  
LEARN MORE



## NextGEng

International Cooperation Framework for  
Next Generation Engineering Students



Co-funded by  
the European Union

### ABOUT PROJECT

The International Cooperation Framework for Next Generation Engineering Students project, NextGEng, is an international consortium with the aim of creating new international teaching models in close collaboration with companies. It comprises three types of activities:

- **Training.** Experts in pedagogy and teacher training sustain the skill improvement of HEIs partners in new/innovative teaching methods.
- **Team Teaching.** Upgrade a set of engineering courses, belonging to the HEI partners curricula, in close collaboration with companies' partners.
- **CEL projects.** Type of projects where students learn by doing in an international and multidisciplinary environment.


















### Cases of Experiential Learning CEL projects

CEL projects focuses on bringing students, HEI staff and companies to work together. The idea is that students from different study programs and nationalities are brought together to form mixed groups in order to solve a research or industry topic.

During implementation of a CEL project, three groups of students compete in solving the proposed topic over one academic semester. Their work is supervised by teachers from participant universities and representatives from the company or research groups. The work on problem solving involves one intensive week at the start of the project and distance working and virtual meetings during the semester. At the end of the project virtual seminars are organized where the three student groups present their results to the company/research group representative and academic supervisors. After the presentations the winning solution is chosen and students receive grades for the activity.

In the course of the NextGEng, 6 CEL projects will be developed in two rounds. The schedule of the project follows the academic semesters in all HEIs.

One CEL Project → At least 25 participants			
At least one Company or research group supervisor		6 supervisors from HEIs (2 UJA + 2 JAMK + 2 TUCN)	
18 STUDENTS	INTERNATIONAL & MULTIDISCIPLINARY TEAMS		
	Group-A	Group-B	Group-C
	 UJA	 UJA	 UJA
	 JAMK	 JAMK	 JAMK
	 TUCN	 TUCN	 TUCN
	 UJA	 UJA	 UJA
	 JAMK	 JAMK	 JAMK

#### • Selection of the project topic

A list of potential topics for the CEL projects is created at the beginning of each round. The potential topics are collected by all partner HEIs by contacting the partner companies and HEI research groups in their universities. After contacting and having meetings, a report of the offered CEL proposals is created and the topics are analysed. From the proposal list, the partner HEIs choose together three companies or research groups and their CEL proposals for the first-round projects. The selected companies or research groups nominate a contact person, who tutors the student teams, answers their questions and analyse the final reports. The company/research group tutor also participate in the final seminar and chooses the winning team. Rejected CEL project proposals are reserved for future use in the second round.

#### • Description of a CEL project

A CEL project description should include:

- Topic (CEL project name)
- Project Objectives
- Methodologies
- Working hours estimation
- Students and supervisors profiles
- Potential activities for the intensive week. Topics for the seminars and expected results after the intensive week.

#### • Schedule for the first round

Activity	Start	End
List of CEL projects	03/2023	07/2023
Detailed plan for the first round	08/2023	12/2023
Participants selection	01/2024	02/2024
Intensive weeks (TUCN, JAMK, UJA)	03/2024	03/2024
Distance working, reports and evaluation	03/2024	07/2024

The second round follows the same schedule.

- Starting date: 08/2024
- End date: 07/2025

Figure 1. CEL project brochure





### 3. Description of a CEL project

Companies and research groups should fill out one table for each of the CEL project proposals (Table 1, Annex 1). It is required at least one proposal for each of the HEIs' research groups and companies. It is advisable for companies and research groups to provide more than one CEL project proposal. A detailed plan of how the information about the CEL project description has to be collected is detailed hereafter:

- Each of the project local managers has to contact with the company whose facilities are located in their respective country and with the research groups of their respective HEI. Deadline: M7 (04/2023).
- Companies and research groups provide this information to the local manager, fulfilling one table (Table 1, Annex) for each CEL project proposal. Deadline: M9 (06/2023).
- The local manager has to provide the collected CEL project proposal to the WP4 leader. M9 (06/2023).
- The WP4 leader makes a report of all the CEL project proposals. Deadline: M10 (07/2023).

## 4. Annex

### Annex 1 - CEL project proposals form

Topic	<i>CEL project name.</i>
Project objectives	<i>Detail the project objectives</i>
Methodologies	<i>What is needed to achieve the project objectives</i>
Working hour estimation	<i>Realistic estimation of the working load</i>
Students and supervisors profiles	<i>Student's bachelor and HEIs supervisors background</i>
Potential activities for the intensive week	<i>Topics for the seminars and expected results after the intensive week</i>

Table 1. Description of a CEL project

Procedure for filling in the table:

- Consult the brochure to get a clear picture of a CEL project
- Fill in a table for each CEL project proposal. It is advisable that the CEL project topic is related to one or several of the NextGEng upgraded courses (C1 – Strength of Materials, C2 – Industrial Automation, C3 – Design Projects, C4 – Quality Assurance and Applied Methods, C5 – Computer Aided Design, C6 – Manufacturing Technology).
- Send this information **before the end of 06/2023** to the **NextGEng project local manager** (Local manager contact information is available in the brochure).





**Technical University of Cluj-Napoca**  
ROMANIA, [www.utcluj.ro](http://www.utcluj.ro)



**JAMK University of Applied Sciences**  
FINLAND, [www.jamk.fi](http://www.jamk.fi)



Universidad de Jaén



**Integración Sensorial y Robótica**  
SPAIN, [www.isr.es](http://www.isr.es)



**Valmet Technologies Oyj**  
FINLAND, [www.valmet.com](http://www.valmet.com)



**BOSCH**  
Invented for life

**Robert Bosch SRL**  
ROMANIA, [www.bosch.ro](http://www.bosch.ro)



**International Cooperation Framework  
for  
Next Generation Students**  
[www.nextgeng.eu](http://www.nextgeng.eu)



## Contact:

**University of Jaén (Spain):**  
Silvia Satorres Martínez, email: [satorres@ujaen.es](mailto:satorres@ujaen.es)  
José Ignacio Jiménez González, email: [jignacio@ujaen.es](mailto:jignacio@ujaen.es)

**Technical University of Cluj Napoca (Romania):**  
Ciprian Lapusan, email: [ciprian.lapusan@mdm.utcluj.ro](mailto:ciprian.lapusan@mdm.utcluj.ro)

**JAMK University of Applied Sciences (Finland):**  
Anneli Kakko, email: [Anneli.Kakko@jamk.fi](mailto:Anneli.Kakko@jamk.fi)



Co-funded by  
the European Union

[www.nextgeng.eu](http://www.nextgeng.eu)

SCAN WITH  
YOUR MOBILE  
DEVICE TO  
LEARN MORE





# NextGEng

International Cooperation Framework for  
Next Generation Engineering Students



Co-funded by  
the European Union

## ABOUT PROJECT

The International Cooperation Framework for Next Generation Engineering Students project, **NextGEng**, is an international consortium with the aim of creating new international teaching models in close collaboration with companies. It comprises three types of activities:

- **Training.** Experts in pedagogy and teacher training sustain the skill improvement of HEIs partners in new/innovative teaching methods.
- **Team Teaching.** Upgrade a set of engineering courses, belonging to the HEI partners curricula, in close collaboration with companies' partners.
- **CEL projects.** Type of projects where students learn by doing in an international and multidisciplinary environment.

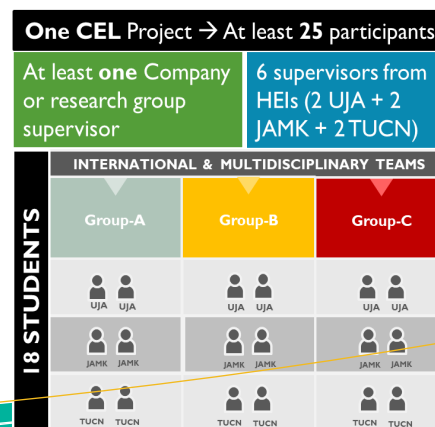


In the course of the NextGEng, **6 CEL projects** will be developed in **two rounds**. The schedule of the project follows the academic semesters in all HEIs.

## Cases of Experiential Learning CEL projects

CEL projects focuses on bringing students, HEI staff and companies to work together. The idea is that students from different study programs and nationalities are brought together to form mixed groups in order to solve a research or industry topic.

During implementation of a CEL project, three groups of students compete in solving the proposed topic over one academic semester. Their work is supervised by teachers from participant universities and representatives from the company or research groups. The work on problem solving involves one intensive week at the start of the project and distance working and virtual meetings during the semester. At the end of the project virtual seminars are organized where the three student groups present their results to the company/research group representative and academic supervisors. After the presentations the winning solution is chosen and students receive grades for the activity.



### • Selection of the project topic

A list of potential topics for the CEL projects is created at the beginning of each round. The potential topics are collected by all partner HEIs by contacting the partner companies and HEI research groups in their universities. After contacting and having meetings, a report of the offered CEL proposals is created and the topics are analysed. From the proposal list, the partner HEIs choose together three companies or research groups and their CEL proposals for the first-round projects. The selected companies or research groups nominate a contact person, who tutors the student teams, answers their questions and analyse the final reports. The company/research group tutor also participate in the final seminar and chooses the winning team. Rejected CEL project proposals are reserved for future use in the second round.

### • Description of a CEL project

A CEL project description should include:

- Topic (CEL project name)
- Project Objectives
- Methodologies
- Working hours estimation
- Students and supervisors profiles
- Potential activities for the intensive week. Topics for the seminars and expected results after the intensive week.

### • Schedule for the first round

Activity	Start	End
List of CEL projects	03/2023	07/2023
Detailed plan for the first round	08/2023	12/2023
Participants selection	01/2024	02/2024
Intensive weeks (TUCN, JAMK, UJA)	03/2024	03/2024
Distance working, reports and evaluation	03/2024	07/2024

The **second round** follows the same schedule.

- Starting date: 08/2024
- End date: 07/2025



jamk



ISR  
www.isr.es



BOSCH  
Invented for life

Valmet