FROM SENSORS TO DATA: INDUSTRY 4.0 IN ENGINEERING EXPERIMENTAL TESTING

Ferrol Industrial Campus
Summer Blended Intensive Programme

University of A Coruña
Ferrol, Spain

Online: To be defined
Face to Face: 13th to 17th July, 2026

APPLICATION:
8th—29th May, 2026
COORDINATION:
Prof. Francisco González
CONTACT:
internacionalizacion.campus.industrial@udc.gal

UNIVERSIDADE DA CORUÑA CAMPUSINDUSTRIAL CITENI

PROGRAM OVERVIEW

- The objective of this BIP course is to provide the students with the capability of applying Industry 4.0 tools within experimental analysis in engineering problems.
- Entirely tought in English.
- 3 ECTS awarded after final presentation, including 26 face to face hours and 4 online hours.
- Delivered by 5 different universities.

LOCATION & SCHEDULE

LOCATION. The course will take place in the Ferrol Industrial Campus of the University of A Coruña (Ferrol, Spain).

SCHEDULE. The course includes both face to face and online phases.

- The initial online phase will take place during the first week of July (to be confirmed).
- The face to face part will be done between the 13th and 17th of July, 2026.

WHO SHOULD ATTEND?

Bachelor, master or PhD students and staff in the fields of naval architecture, mechanical engineering, materials, polymers, robotics or associated backgrounds, with interest in experimental methods, additive manufacturing and Arduino applications in data acquisiton and sensing.

CONTENTS & MODULES

This course focuses on the application of Industry 4.0 techniques (Additive Manufacturing and Arduino Sensoring and Data Acquisition) into experimental testing, with a fully practical approach.
It is divided into three modules. Two of them are common and one is elective, depending on the student´s interest and background:

Common modules:

- Additive Manufacturing.
- Arduino Sensoring and Data Acquisition.

Elective modules (EMM):

- Experimental methods in naval architecture (towing tank applications).
- Experimental methods in mechanical engineering (test bench sensoring).
- Practical underwater robotics (Blue Robotics ROVs).
- Experimental methods in polymer development.
- Experimental methods in aerodynamics (wind tunnel applications).

APPLICATION

Interested students should contact their own International Relations Offices or Erasmus coordinators, apply for related mobility funding and fullfill BIP learning agreement.
Application should also be done using the following link between **8th and 29th of May, 2026**:

BIP "From Sensors to Data: Industry 4.0 in Engineering Experimental Testing": Application

TRAVELING AND HOUSING

The course face to face phase will take place in the Ferrol Industrial Campus of the University of A Coruña:

- Campus de Esteiro s/n, 15403, Ferrol, A Coruña, Spain.

Students should apply for related Erasmus mobility funding in their host institutions.
Housing opportunities and additional scholarships are available from University of A Coruña Industrial Campus.

CONTACT INFORMATION:
University of A Coruña Ferrol Industrial Campus
https://campusindustrial.udc.es/en/
Tel.: +34 881 01 3694
internacionalizacion.campus.industrial@udc.gal

COURSE SCHEDULE

<table>
<tr><th rowspan="3"></th><th colspan="2">Monday</th><th colspan="2">Tuesday</th><th colspan="2">Wednesday</th><th colspan="2">Thursday</th><th colspan="2">Friday</th></tr>
<tr><th colspan="2">13th July</th><th colspan="2">14th July</th><th colspan="2">15th July</th><th colspan="2">16th July</th><th colspan="2">17th July</th></tr>
<tr><th>Group A</th><th>Group B</th><th>Group A</th><th>Group B</th><th>Group A</th><th>Group B</th><th>Group A</th><th>Group B</th><th>Group A</th><th>Group B</th></tr>
<tr><td>9:30 - 10:00</td><td></td><td rowspan="5">Additive Manufacturing</td><td rowspan="5">Additive Manufacturing</td><td></td><td rowspan="5">Elective EMM</td><td rowspan="5">Elective EMM</td><td rowspan="5">Elective EMM</td></tr>
<tr><td>10:00 - 10:30</td><td rowspan="4">Arduino D/A</td><td rowspan="4">Arduino D/A</td></tr>
<tr><td>10:30 - 11:30</td></tr>
<tr><td>11:30 - 12:30</td></tr>
<tr><td>12:30 - 13:30</td></tr>
<tr><td>13:30—15:00</td><td colspan="2">Lunch</td><td colspan="2">Lunch</td><td colspan="2">Lunch</td><td colspan="2">Lunch</td><td colspan="2">Closing & Lunch</td></tr>
<tr><td>15:00 - 16:00</td><td rowspan="3">Additive Manufacturing</td><td rowspan="3">Arduino D/A</td><td rowspan="3">Arduino D/A</td><td rowspan="3">Additive Manufacturing</td><td rowspan="3"></td><td rowspan="3"></td><td rowspan="3"></td></tr>
<tr><td>16:00 - 17:00</td></tr>
<tr><td>17:00 - 18:30</td></tr>
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MODULE DISTRIBUTION

	Module Distribution	Involved Institutions	Hours
Common Modules	*To be confirmed* 10:00—12:00 h. ONLINE MODULE - Freecad 3D Design Pretraining	UDC	2
	To be confirmed 10:00—12:00 h. ONLINE MODULE - Arduino D/A Pretraining	UDC	2
	Additive Manufacturing + Freecad 3D Design	UDC	7.5
	Arduino Programming. Sensoring & Data Acquisition	UDC	7
Elective Modules (EMM)	Experimental Methods in Naval Architecture. Towing Tank Experiments	UDC / TBD	11.5
	Experimental Methods in Mechanical Engineering. Test Bench Sensoring	Tampere / TBD	11.5
	Practical underwater robotics (Blue Robotics ROVs).	UDC	11.5
	Experimental methods in polymer development.	UDC / TBD	11.5
	Experimental methods in aerodynamics. Wind tunnel applications	UDC	11.5
	Total Hours		30