ECOGT
Engineers Communicating & Collaborating Internationally for the Green Transition

ECO-GT Summer School 2026: Designing Communication for Green Transition Engineering

Dates: 20–24 July 2026
Credits: 3 ECTS (75 hours total)
Format: Blended (45 hours online pre-course + 30 hours in-person summer school)
Location: UTAD, Portugal
Target Group: Bachelor's/master's students in engineering, environmental science, and related disciplines. International and multidisciplinary participation is essential.

Overview

The ECO-GT Summer School immerses students in project-based, interdisciplinary learning that positions communication not merely as a set of auxiliary skills, but as an integral part of engineering practice. Using real-world case studies, students collaboratively explore how communication is embedded in technical workflows, stakeholder processes, and public engagement. They will analyse and design communication strategies that are essential to the successful implementation, coordination, and social legitimacy of green transition engineering projects.

Learning Objectives

By the end of the course, students will be able to:

- Formulate clear communication guidelines to support coherent and professional exchanges across technical and public-facing dimensions of engineering projects.
- Evaluate stakeholder and communication requirements over the full lifecycle of a green-tech project.
- Design purpose-driven communication artefacts (e.g. infographics, press releases, social media posts, policy briefings) using a purpose- and audience-driven approach.
- Collaborate effectively in international, multidisciplinary teams and reflect on communication challenges in such settings.
- Demonstrate a range of communication competencies (as per the competency framework)

Project Assignment

Your Task:

In your assigned group, you will design a **Communication Plan** for your designated green transition engineering project. This plan must address both internal coordination between engineering teams and external engagement with stakeholders. The goal is to ensure that communication throughout the project is purposeful, coherent, and professionally managed.

Your plan must:

- Establish internal communication guidelines for collaboration among technical disciplines (e.g. structural, electrical, environmental engineering) and project partners.
- Map key stakeholders, communication goals, channels, and expected interactions across the full lifecycle of the project.
- Identify critical communication tasks and risks, including legal, regulatory, and community-facing elements.
- Design and produce three audience-specific communication artefacts aligned with your stakeholder and task analysis (e.g. press release, policy briefing, infographic).

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- Present and defend your communication plan and artefacts at the summer school in front of peers and instructors.

Examples to Help You Get Started:

1. **Internal Coordination Prompt:**
   How should a team of engineers share and update technical design information via email?
   a. What subject lines and formatting ensure clarity?
   b. What version control procedure ensures the latest design files are easily accessible?
   c. How are responsibilities or updates confirmed and tracked?
2. **Stakeholder Engagement Prompt:**
   How would you communicate a construction delay to local residents or community stakeholders?
   a. What medium is most appropriate (e.g. community bulletin, press release, public meeting)?
   b. How should the message be framed to maintain trust?
   c. Who should sign or deliver the message?

Course Structure

Stage	Activities
Pre-Course Phase (25 hours) **Timeline:** May–July 2026 **Format:** Self-directed group work + 2–3 online tutorials	You will be placed in a multidisciplinary team and receive your project dossier. • Tasks include: o Analysing technical content and stakeholder dynamics. o Drafting internal communication guidelines. o Conducting stakeholder and communication task analysis. o Preparing a short report on your draft findings. • You will receive feedback during 2–3 online tutorials and participate in team collaboration sessions.
Summer School (30 hours in person) **Dates:** 20–24 July 2026 **Format:** Daily workshops, tutorials, and collaborative sessions	The summer school includes live workshops on a range of communication skills (selected competencies from the framework, together with groupwork, group tutorials, and peer and instructor feedback sessions. Students also participate in the ECO-GT conference and engage with industry experts from a range of fields. **Tasks:** • Students attend at least 6 live workshops. • Teams further deveop their projects: finalising their communication plan. • Teams create targeted communication artefacts in line with their communication plan (e.g. infographics, press releases, social media posts, policy briefings) using a purpose- and audience-driven approach. • Students prepare and deliver presentations of their final communication plan (communication guidelines, stakeholder analysis, task analysis, communication design) as well as a "defence" of three communication artefacts (e.g. press release, infographic, recorded townhall pitch, social media campaign, policy briefing, etc.)

Deliverables

Each group must submit:

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1. **Communication Plan Document** including:
    a. Internal communication guidelines
    b. Stakeholder and communication task analysis
2. **Three Communication Artefacts** tailored to different audiences
3. **Team Presentation and Defence** of the strategy and artefacts (delivered at UTAD)
4. **Individual Reflection** (500–750 words on communication learning and team experience)

Assessment

Assessment will be based on:

Component	**Weight**
Final Communication Plan & Artefacts Portfolio (group)	30%
Team Presentation & Defence (group)	40%
Peer and Self-Assessment (individual)	15%
Individual Reflective Log (individual)	15%

Teaching Team

The summer school is delivered by experts in technical communication, engineering education, and international collaboration. The core design draws from the Erasmus+ ECO-GT project, which developed a comprehensive competency framework for engineers in the green transition.

Social Activities

To be discussed

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	Mid May?	20.7 (Mo)	21.7 (Tu)	22.7 (We)	23.7 (Th)	24.7 (Fr)	By End of July?
9:00-10:30	ONLINE KICK-OFF & PRE-COURSE Putting teams together	ARRIVAL	Applied Comm Tasks 1 | Applied Comm Tasks 2	Speaker on Science Communication (e.g. Fabian Schipfer)	Speaker on Science-Policy Interface (i.e. from the EU)	Applied Comm Tasks 3 | Applied Comm Tasks 4	POST-COURSE WORK AND ONLINE CLOSING TBC
11:00-12:30	Lecture on interdisciplinary communication and collaboration	Stakeholder Identification and Analysis	Applied Comm Tasks 1 | Applied Comm Tasks 2	CONFERENCE	CONFERENCE	Applied Comm Tasks 3 | Applied Comm Tasks 4	
14:00-15:30	Pre-course reading (call for proposals) Students identify and report on specific technologies in their discipline that could contribute to project objectives.	COM1 | COM2	COM3 | COM4	CONFERENCE	Student Group Work Consortium Meeting CONFERENCE DELEGATES / STUDENTS COME TOGETHER?	Student presentations (to 16:30)	
16:00-17:30	**Catch-up sessions with a supervisor**	COM1 | COM2	COM3 | COM4	CONFERENCE	Student Group Work Consortium Meeting		
Evening		Evening Programme	Evening Programme	CONFERENCE DINNER	Evening Programme		
Workload (1 Unit = 45 min.) 80 Units in Total	18 units	8 Units	8 Units	8 Units	8 Units	8 Units	18 units

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	Assessment?	Assessment?
Formulate clear communication guidelines to support coherent and professional exchanges across technical and public-facing dimensions of engineering projects.		
Evaluate stakeholder and communication requirements over the full lifecycle of a green-tech project.		
Design purpose-driven communication artefacts (e.g. infographics, press releases, social media posts, policy briefings) using a purpose- and audience-driven approach.		
Collaborate effectively in international, multidisciplinary teams and reflect on communication challenges in such settings.		
Demonstrate a range of communication competencies (as per the competency framework)		

APPENDIX: Sample project dossier; 10-15 different project dossiers will be required

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APPENDIX: ELWIND Project Outline

Overview

ELWIND is a joint offshore wind initiative between Estonia and Latvia, aiming to strengthen regional energy markets by investing in offshore wind electricity production and hybrid interconnection between the two countries. Plans include 20–100 turbines, each with a capacity of 10–25 MW, totalling between 400 MW and 1,000 MW. ELWIND aims to contribute to the acceleration of the green transition in the region by increasing offshore wind energy production capacity.

Location

The proposed site is west of Saaremaa's west coast (Sõrve Peninsula), covering approximately 200.44 square kilometres.

Engineering Team

The ELWIND offshore wind project brings together a broad consortium of engineering disciplines and stakeholders across Estonia and Latvia. The technical execution is supported by specialist teams in the following domains:

Structural Engineering: Responsible for the design of all load-bearing offshore structures, including turbine foundations (monopiles or jackets), substations, and supporting platforms. Ensures integrity under dynamic marine loading conditions.

Geotechnical Engineering: Leads seabed investigations and soil-structure interaction analyses to inform safe and stable foundation design. Evaluates anchoring solutions and designs scour protection for variable seabed conditions.

Electrical and Power Systems Engineering: Designs the internal electrical infrastructure, including power collection systems, offshore substations, and cross-border grid connections—potentially using HVDC technology—for integration with Estonia and Latvia's national grids.

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Marine and Offshore Engineering: Coordinates the offshore construction process, including cable installation and turbine erection. Manages vessel operations and ensures logistical feasibility within narrow weather windows.

Environmental Engineering: Conducts Environmental Impact Assessments (EIA) and develops mitigation strategies to protect marine life, including seals and migratory bats. Balances energy development goals with biodiversity and habitat protection.

Mechanical Engineering: Designs rotating machinery such as turbines and gearboxes, ensuring performance and longevity under harsh environmental conditions. Oversees systems for corrosion protection and HVAC in offshore installations.

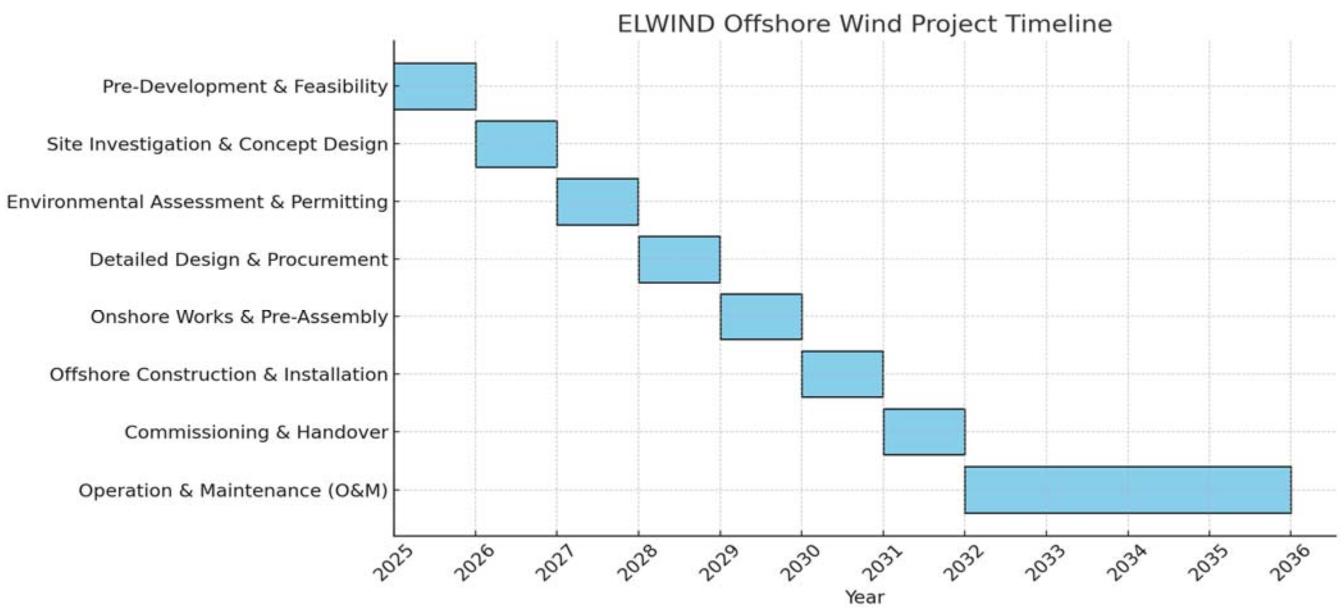
Hydraulic and Coastal Engineering: Models wave and current effects on offshore structures and analyses sediment transport. Contributes to foundation design through assessment of hydrodynamic loading and erosion risk.

Transport and Logistics Engineering: Plans the international logistics of component delivery, including port operations, heavy-lift transport, and cross-border coordination of offshore assembly activities.

Control and Instrumentation Engineering: Implements SCADA systems and condition-monitoring technologies for remote performance tracking. Ensures real-time operational control and early fault detection**.**

Civil Engineering: Oversees all onshore infrastructure development, including access roads, substations, control centres, and cable landfalls. Ensures integration with existing utilities and minimizes disruption to local communities.

Project Timeline



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Main Stakeholders

The ELWIND offshore wind project is a collaborative initiative between Estonia and Latvia, aiming to enhance regional energy independence and contribute to the green transition. The project's success relies on the coordinated efforts of various stakeholders across both countries.

Estonian Stakeholders

- **Ministry of Economic Affairs and Communications**: Oversees national energy policy and co-leads the ELWIND initiative.
- **Environmental Investment Centre (KIK)**: Responsible for project development activities, including environmental impact assessments and permitting processes.
- **Consumer Protection and Technical Regulatory Authority (CPTRA)**: Manages licensing procedures and supervises compliance with technical regulations.
- **Elering AS**: Estonia's transmission system operator, involved in planning the grid connection for the wind farm.

Latvian Stakeholders

- **Ministry of Economics**: Leads national energy strategy and co-manages the ELWIND project.
- **Investment and Development Agency of Latvia (LIAA)**: Coordinates project development, including stakeholder engagement and procurement processes.
- **Augstsprieguma tīkls (AST)**: Latvia's transmission system operator, responsible for integrating the wind farm into the national grid.
- **Ministry of Environmental Protection and Regional Development**: Oversees environmental assessments and maritime spatial planning related to the project.

Cross-Border and Supporting Stakeholders

- **Ventolines**: An international consultancy firm providing technical and environmental expertise for the project.
- **European Union**: Supports the project through funding mechanisms like the Connecting Europe Facility (CEF) and includes ELWIND in its list of priority cross-border renewable energy projects .
- **Local Authorities and Communities**: Municipalities and local stakeholders in regions like Saaremaa (Estonia) and Kurzeme (Latvia) are engaged in consultations to address regional interests and concerns.

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Phase	Timeframe	Milestones	Key Activities	Disciplines Involved
1. Pre-Development & Feasibility	Year 0 – Year 1	• Site screening completed • Initial stakeholder consultations • Pre-feasibility report submitted	• Desktop studies (wind, waves, seabed) • Maritime spatial planning • Draft grid connection feasibility • Community engagement initiated	Environmental, Civil, Electrical, Marine, Geotechnical
2. Site Investigation & Concept Design	Year 1 – Year 2	• Geotechnical survey complete • Metocean data collection begins • Preliminary design options presented	• Borehole and geophysical seabed surveys • Conceptual foundation designs • Preliminary environmental impact scoping • Hydrodynamic modelling of site	Geotechnical, Structural, Environmental, Hydraulic
3. Environmental Assessment & Permitting	Year 2 – Year 3	• EIA submitted and approved • Cross-border consultations held • Marine permits granted	• Full EIA and Natura 2000 assessments • Modelling of noise, sediment and species impact • Mitigation strategy development • Public hearings and revisions	Environmental, Civil, Marine
4. Detailed Design & Procurement	Year 3 – Year 4	• Final design frozen • Main suppliers and EPC contracts awarded • Grid connection plan approved	• Detailed engineering (foundations, turbines, substations) • Grid connection agreements (Elering & AST) • SCADA and monitoring system specs • Onshore infrastructure planning	Structural, Mechanical, Electrical, Control, Civil
5. Onshore Works & Pre-Assembly	Year 4 – Year 5	• Cable landfalls installed • Onshore substations and access roads complete	• Port upgrade and logistics set-up • Delivery and pre-assembly of components • Civil works on substations and control centers	Civil, Electrical, Transport, Mechanical
6. Offshore Construction & Installation	Year 5 – Year 6	• Foundation installation complete • Turbines installed and energized • System commissioning begins	• Heavy-lift and transport operations • Offshore cable laying and jointing • SCADA testing and operational trials	Marine, Structural, Electrical, Mechanical, Control
7. Commissioning & Handover	Year 6 – Year 7	• Grid compliance confirmed • Commercial operation date (COD) reached • Performance baseline report completed	• Turbine monitoring and adjustments • Performance tuning • Maintenance planning initiated	All disciplines (esp. Control, Mechanical, Electrical)
8. Operation & Maintenance (O&M)	Year 7 onward	• Year 1 performance report • First major service interval planned	• Condition-based monitoring • Preventive maintenance • Marine ecology monitoring continues	Mechanical, Control, Electrical, Environmental

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Project Risks and Controversies

1. Environmental and Ecological Risk: The ELWIND project faces significant risk from its environmental footprint, particularly its overlap with habitats of grey seals, ringed seals, and migratory bats. Construction noise, habitat disruption, and long-term operational impacts could provoke legal or regulatory action if not adequately mitigated. **Concerns have been raised about how the project may affect sensitive marine species**, making environmental acceptance both a technical and social challenge. **This is a politically sensitive issue**, as it pits biodiversity protection against renewable energy targets.

2. Technical and Engineering Risk: Complex offshore engineering tasks—including foundation design in variable seabed conditions, HVDC transmission across borders, and SCADA system reliability—pose substantial risks to project performance and cost. The marine environment increases vulnerability to corrosion, fatigue, and installation delays due to narrow weather windows. Unresolved technical issues can lead to cascading effects on structural integrity, energy delivery, and long-term operational reliability.

3. Logistical and Infrastructure Risk: The project involves the coordinated transport and assembly of large-scale components across Estonia and Latvia, both offshore and onshore. Risks include port congestion, vessel and equipment availability, and heavy-lift complications. Onshore infrastructure projects (e.g. substations, cable landfalls, roadworks) may trigger **opposition from local communities**, particularly where land use or environmental disruption is perceived as excessive. Poor integration with existing networks can further delay implementation.

4. Regulatory and Governance Risk: Operating across two national jurisdictions with differing permitting frameworks, environmental standards, and administrative procedures introduces a significant governance risk. Misalignment between Estonian and Latvian institutions could slow decision-making or create legal uncertainty. **The implementation of the ELWIND project involves navigating complex legal frameworks**, which may not align smoothly. **Differences in permitting procedures and governance structures are a known source of delay and frustration** for stakeholders.

5. Stakeholder and Reputational Risk: The project's success depends on stakeholder trust and political support. **Past offshore wind proposals in the region have encountered controversy due to national governments prioritizing certain collaborative sites over others**, leading to **tensions between public authorities and private developers**. If similar perceptions of exclusion or political interference arise in the ELWIND project, trust could erode. **Public backlash over perceived environmental harm or unfair development processes** could lead to reputational damage, legal challenges, or loss of investor confidence.

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Risk Category	**Description**	**Likelihood**	**Impact**	**Mitigation Measures**
Environmental and Ecological Risk	Concerns have been raised about how the project may affect sensitive marine species, including grey seals, ringed seals, and migratory bats. This creates political and legal risks.	High	High	Conduct comprehensive Environmental Impact Assessments (EIA), implement robust mitigation plans (e.g. seasonal timing, noise reduction), and maintain transparent communication with environmental authorities and local communities.
Technical and Engineering Risk	Offshore structures face harsh conditions including dynamic loading, seabed variability, and long-distance HVDC transmission complexities.	Medium	High	Perform advanced geotechnical surveys, dynamic simulations, and design redundancy into structural and power systems. Engage experienced engineering consultancies.
Logistical and Infrastructure Risk	Component transport, offshore assembly, and land-based construction may encounter delays due to weather, equipment availability, or local resistance.	Medium	Medium	Develop a detailed logistics plan including buffer periods, multi-port options, and early stakeholder consultation on onshore infrastructure.
Regulatory and Governance Risk	The project spans two national jurisdictions with differing permitting frameworks and environmental regulations. This has historically caused friction.	High	High	Establish a bilateral regulatory coordination taskforce, streamline shared permitting processes, and engage legal experts familiar with both Estonian and Latvian frameworks.
Stakeholder and Reputational Risk	Tensions have arisen in previous projects due to political prioritisation of sites and exclusion of private developers. Environmental and procedural transparency are also under scrutiny.	Medium	High	Ensure transparent, inclusive stakeholder engagement. Proactively address local and developer concerns. Use consistent messaging and public consultation frameworks.

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Engineering Team Disciplines

Structural Engineering

- **Role:** Design of turbine foundations, offshore substations, support structures (e.g. jackets, monopiles), and load-bearing elements.
- **Challenges:** Harsh marine conditions, dynamic loading from wind and waves.

Geotechnical Engineering

- **Role:** Seabed investigation, soil-structure interaction analysis, design of pile foundations and scour protection.
- **Challenges:** Varying seabed conditions in the Baltic Sea; deep water anchoring.

Electrical and Power Systems Engineering

- **Role:** Design of internal power collection systems, offshore substations, grid connection to Estonia and Latvia.
- **Challenges:** High-voltage transmission (likely HVDC), long-distance energy transfer.

Marine and Offshore Engineering

- **Role:** Logistics of offshore construction, installation of turbines and cables, vessel coordination.
- **Challenges:** Weather windows, wave action, specialized marine equipment.

Environmental Engineering

- **Role:** Environmental Impact Assessments (EIA), mitigation strategies for marine life (e.g. bats, seals), noise and habitat protection.
- **Challenges:** Balancing renewable goals with ecosystem preservation.

Mechanical Engineering

- **Role:** Design and maintenance of rotating machinery (turbines, gearboxes), corrosion protection, HVAC systems in offshore platforms.
- **Challenges:** Fatigue from cyclic loading; saltwater corrosion.

Hydraulic and Coastal Engineering

- **Role:** Assessment of wave and current impacts, modelling hydrodynamic forces on structures, sediment transport analysis.
- **Challenges:** Wave-structure interaction; potential erosion around foundations.

Transport and Logistics Engineering

- **Role:** Planning of component transport, port logistics, heavy-lift operations, offshore assembly.
- **Challenges:** Coordinated scheduling of large-scale components across two countries.

Control and Instrumentation Engineering

- **Role:** Turbine performance monitoring, SCADA systems for remote operation, condition-based maintenance systems.
- **Challenges:** Real-time data transmission; system reliability in offshore conditions.

Civil Engineering

- **Role:** Onshore infrastructure (access roads, substations, control centres), landfall works for cables.
- **Challenges:** Integration with existing utility networks and minimizing local disruption.

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