

UTC

Upcycled Loudspeaker Design Workshop

Happy Sound



January 19-23, 2026
Inter-semester: Winter 2026

at UTC (Pierre Guillaumat 1): rooms J102,
J116, J118, Mechanical Engineering Hall
 20 participants maximum

**Credits
 2 ECTS**

DESCRIPTION

The Happy Sound workshop invites students to design new portable loudspeakers from used desktop speakers through an upcycling approach. This workshop is intended for students who are curious to discover the design principles of loudspeakers and committed to the upcycling of technological products. This activity introduces participants to the entire design process, integrating technical, aesthetic, and sustainability dimensions, as well as manufacturing, all within 5 days. This activity is part of the Erasmus Plus SUSEE project (Smaller Universities for Sustainability in Engineering Education <https://susee-project.eu/>) and will host 5 students from each partner university: Université de technologie de Compiègne (France), University of Information Technology and Management in Rzeszow (Poland), TU Ilmenau (Germany), and Unibz in Bolzano (Italy).

After an introduction to loudspeakers and different types of acoustic enclosures, students will develop a design that meets desired specifications while respecting budgetary and technical constraints. The creations will then be manufactured by the students at the UTC workshop. The sustainability dimension will also be introduced by means of a visit to a recycling center and the realization of an environmental impact assessment of the upcycled product. The workshop will end with a comparative listening test to evaluate acoustic quality and a cultural event at the Imperial Theater in Compiègne.



ASSESSMENT

- Oral presentation of preliminary design (30%)
- Oral presentation of final creations (30%)
- Final report (40%)



PROGRAM

Monday 19th January	Tuesday 20th January	Wednesday 21th January	Thursday 22th January	Friday 23th January
<p>9h - 9h30 Mechanics Hall Welcome</p> <p>10h - 11h Mechanics Hall Introduction to loudspeakers, different types of enclosures, and design principles</p> <p>11h - 12h Mechanics Hall History and aesthetics of loudspeaker enclosures</p>	<p>8h - 12h Pont Ste Maxence Visit to TRID3E Paprec recycling center</p>	<p>8h - 10h Mechanics Hall Room J116-J102 Eco-innovation course Introduction to Life Cycle Assessment tool</p> <p>8h - 10h All rooms Manufacturing / Reporting</p>	<p>8h - 12h All rooms Manufacturing / Reporting</p>	<p>8h - 10h All rooms Final adjustments and speakers testing</p> <p>10h - 12h Mechanics Hall Presentation and comparative listening test of final creations</p> <p>12h - 13h All rooms Conclusion and clean-up</p>
Lunch	Lunch	Lunch	Lunch	Lunch
<p>13h - 14h Corridor J Facilities tour and presentation of available resources</p> <p>14h - 16h30 Workshop Safety briefing and workshop operations & Speaker disassembly and inventory at the workshop</p> <p>17h - 18h 30 City center J City Hall visit</p> <p>19h Bistrot du terroir Dinner at the restaurant</p>	<p>13h - 16h Mechanics Hall Creative workshop</p> <p>16h - 18h30 J102 Presentation and validation of preliminary designs</p>	<p>13h - 18h30 All rooms Manufacturing / Reporting</p>	<p>13h - 19h All rooms Manufacturing / Reporting</p> <p>19h - 20h Mechanics Hall Dinner</p> <p>20h - 22h All rooms Manufacturing / Reporting</p>	<p>14h - 19h Free time</p> <p>19h - 22h Imperial Theater Cultural outing</p>