

Educational Transformation: Institut Mines-Télécom announces the winners of its IMT Awards for “Commitment, Teaching and Education”

[Institut Mines-Télécom](#) (IMT) fosters the exploration and emergence of new, student-centric educational practices. The 2022 edition of the IMT Awards for “Commitment, Teaching and Education” rewards projects developed by the educational community (faculty, educational engineers, educational advisors etc.) at Institut Mines-Télécom and its partner schools. These awards, presented at Institut Mines-Télécom’s summer school on “Teaching in an Age of Global Challenges,” highlight the importance of transforming education in order to equip 21st-century engineers and managers with the skills and knowledge they need to tackle the challenges of the ecological, digital and industrial transitions.

These awards are a way to share and disseminate the most effective educational practices and teaching methods among faculty and the broader Institut Mines-Télécom community. They reward new initiatives that meet emerging needs and are suited to rapidly changing social contexts (health crises, ecological transition etc.).

The jury assessed projects based on a range of criteria including educational quality, their competency-based approach, replicability of the method, how it can be adapted to digital transformations, and assessment by students.

Winners of the 2022 IMT Teaching Awards for "Commitment, Teaching and Education"

Emerging Method Award

“Negotiating a territorial industrial ecology project” - Mines Saint-Étienne, Valérie Laforest, Director of Research, Head of the Environmental Engineering and Organizations Department, Head of the Industrial and Territorial Ecology Learning Unit.

In the TAMO LAVIVA role play, students must negotiate between the various stakeholders within a tourist area to find solutions for an issue related to industrial and territorial ecology. Students prepare for their roles in advance by participating in tutorials, a MOOC, and writing a letter inviting stakeholders to a meeting to discuss the issue.

These different activities allow students to apply the theoretical knowledge they have acquired in their courses and introduces them to negotiation techniques, an essential skill for all engineers and managers. The TAMO LAVIVA MOOC and role play therefore place students in a situation where they have to negotiate with stakeholders in response to a territorial issue.

Background on the MOOC and role play: The peak tourist season has just come to an end on the island of TAMO LAVIVA. It was the busiest season yet, with 20,000 tourists coming to visit this small island with 6,400 inhabitants, but it can hardly be considered successful. At the end of the season, a video made by a tourist went viral on social media, creating a scandal. The video shows the island's most famous beach full of trash. An image of a dead bird with plastic in its stomach received international media coverage. The video ends with a question: "Is this the paradise you want to visit?" A representative of the municipal government has invited you to a "Meeting to discuss the waste crisis" and help find a solution. Four other stakeholders will also be involved in finding a solution: an environmental NGO, the Agricultural Cooperative, the Municipal Waste Management Service and the hotel and restaurant owners' union on the island.

"Digital Method" Award

"Serious Games and Virtual Reality" MOOC - IMT Nord Europe, Jean-Luc Wojkiewicz, Professor of Chemistry and Material Physics



A MOOC and two serious games, one based on virtual reality, were created to teach fluid mechanics, promoting innovative, student-centered learning. In a flipped classroom approach, students complete a MOOC to study curriculum concepts and attend in-person classes to supplement what they have learned. They work in small groups on serious games based on case studies applied to a hydraulic dam. The serious games help students consolidate their knowledge, develop key skills

(teamwork, communication, report writing, modeling situations etc.) and profoundly change students' behavior since they must actively seek solutions to real-life problems. The use of virtual reality adds another dimension to the serious game by immersing students in industrial facilities.

This virtual reality MOOC was acclaimed by the entire jury.

Tie for the Jury Award

"Rhetoric and Technical Debating – Aristotle Meets Elon Musk" - IMT Mines Albi, Jon Dunderdale, Professor of English and Head of the Languages Department, and Louis Adam, Instructor in Mechanics and Materials.



This approach based on technical debating in English has been extremely popular with students. The "Rhetoric & Technical Debating" course has a threefold mission: meet students' demands for specific training in technical English, facilitate scientific and technical knowledge integration (industrial engineering, energy engineering, pharmaceutical and agri-food engineering,

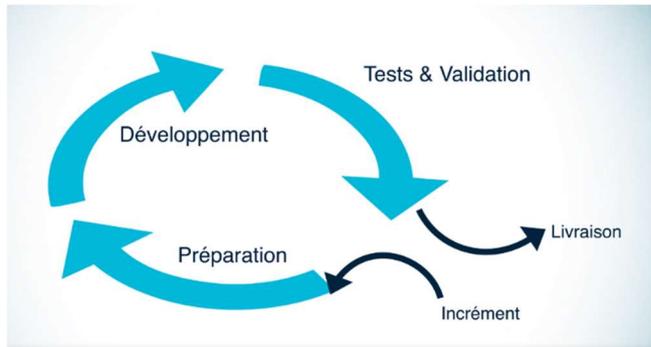
and material and structure engineering), and improve students' English-speaking skills.

Debate topics are specially chosen to encourage students to conduct research on topical issues in their technical fields.

The teams prepare for the technical debates in advance and only find out on the day of the debate whether they will be arguing for or against the assigned topic. On the day of their assessment,

students debate against the teaching teams.

“Transmission System” software workshop - IMT Atlantique, Eric Cousin, research professor in the IT department.



Students must develop software to simulate digital signal transmission. This multidisciplinary approach enables students to develop skills and knowledge in software engineering, signal processing and digital communications. For each iteration, a new notion is integrated into the simulator, corresponding to concepts students have learned about signals, and enabling them to improve their expertise. This decompartmentalization of disciplines is highly motivating for students, improving their

engagement and having a positive impact on their learning.

The 2023 edition of the Awards will feature a new category: “Teaching Ecological Transition”.

Angelo Montoni, Educational Change Coordinator at Institut Mines-Télécom: *“Educational practices are being revolutionized, not only to meet the demands of students, who are seeking methods in which they can play an active role, but also to equip them with the soft skills they need in a world that must achieve several transitions: ecological, industrial, and digital. The educational teams at our schools are all highly creative. This award honors them and puts educational engineering back in the spotlight.”*

About Institut Mines-Télécom www.imt.fr

Institut Mines-Télécom is France’s leading public group of engineering and management graduate schools, under the supervision of the French Ministry for the Economy, Industry and Digital Affairs. The public higher education and research institution is made up of eight public graduate schools: IMT Atlantique, IMT Mines Albi, IMT Mines Alès, IMT Nord Europe, Institut Mines-Télécom Business School, Mines Saint-Étienne, Télécom Paris and Télécom SudParis and two subsidiary schools: EURECOM and InSic. It leads and develops a rich ecosystem of partner schools, economic, academic and institutional partners, and players in training, research and economic development. Created in the 19th century to meet France’s economic and industrial development needs, Institut Mines-Télécom graduate schools have accompanied every revolution in industry and communications. Through research and training of engineers, managers, and PhDs, Institut Mines-Télécom takes up the major industrial, digital, energy and ecological challenges in France, Europe and around the world. Nowadays, with its schools Institut Mines-Télécom is working to imagine and create a world that combines science, technology and economic development with respect for the planet and for the women and men who live on it. It is recognized by 2 Carnot

Institute accreditations and trains over 13,300 students each year.



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