

VI. Annexe : Présentation en anglais

Graduate Program “Logistics and Resilience”

**Université Le Havre-Normandie,
ISEL, Logistics Engineering Institute**

France

Graduate Program “Logistics and Resilience”

I. General Presentation

ISEL is one of the first engineering French institutes specialized in logistics. Founded in 1994, ISEL is the engineering institute of Le Havre Normandie University, and it has been associated to the Polytech network since 2020. The institute was created with a main graduate program of logistics engineering, in order to overcome the logistics challenges found in industry, commerce and services, in national and international contexts. ISEL has diversified its graduate programs, with new courses focused on Mechanics and Production, and Industrial Engineering. Our institute has a strong identity based on transdisciplinarity and logistics systems.

This *Diplôme Universitaire* (D.U.) is a Master's level degree course in one semester taught in English by experienced university lecturers from our school, as well as by visiting researchers and lecturers from all around the world. The course takes place in the city of Le Havre, in Normandy, which is the second biggest port in France.

Le Havre City is situated at the mouth of the River Seine, the port city of Le Havre was almost completely rebuilt after World War II. The unusual concrete architecture of Le Havre, designed by architect Auguste Perret, has resulted in the city centre becoming a UNESCO World Heritage Site in 2005. Le Havre is a dynamic port city, open to the sea with a remarkable quality of life, an economic and industrial hub, a university campus in the city centre, and only a 2h30 train ride from Paris. It is also an important cross-Channel ferry port and the largest container port in France.

This program is therefore a great opportunity to further your knowledge and skills in the field of logistics, to explore a new region, to add an international dimension to your education region in a pleasant school, located in the heart of the city of Le Havre, the leading French port for container traffic. At the end of this D.U., students will obtain a certificate that ensures that 30 ECTS, which can be awarded at the end of the semester as well as a certificate of achievement.

Keywords: risk management, optimization after major disasters, port resilient strategies.

II. Program

a. Curriculum

i. Applied Sciences

Crisis and Global Risk Management. Dr. Sophie Cros.
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Sophie Cros holds a PhD from the Ecole Normale Supérieure Paris-Saclay on "Pre-Crises and Decision Logics: an application to Public Health Risks". Professor of Management Sciences at ISEL - Normandie University. She is Director of the NIMEC laboratory. She was also an auditor for the 68th National "Defence Policy" session.

Sophie Cros specialises in crisis management and global risks applied to the supply chain. The course will open with a serious game: "Resilience: Managing facing crisis" before moving on to a more theoretical approach to the subject.

Case studies on major natural disasters. Dr. Andrea Duhamel.

Andréa Duhamel is a full professor of computer science at the University of Le Havre Normandie, and has received a productivity grant (PEDR) from the French Ministry of Higher Education, Research and Innovation M.E.S.R.I. since 2016. She has been director of ISEL since 2022. Her research is dedicated to optimisation problems in logistics networks, with applications in humanitarian disasters and crises such as technological, natural and health crises, and in sustainable cities. The methods developed in her scientific research form part of industrial decision-making systems. She has led a number of innovative, multidisciplinary research projects and has done over 155 international publications.

The growth of urban population and the proximity of such areas to industrial ones complexify operations after major disasters. This course focuses on operational research which is a very relevant field to improve operations after major technological, natural, and health crises. In these courses, several case studies appearing in technological and natural disasters will be focused. For instance, dismantling of factories after technological disasters, cleaning SEVESO areas in Ports, reestablishing the urban network connectivity after earthquakes, etc. In such situations, data treatment is a key issue. Therefore, the course will

give an overview on data treatment, followed by a focus on optimization models for some case studies. New issues, challenges, and perspectives will also be discussed.

Building a resilient urban logistics. Dr. Marie-Laure Baron.

Marie-Laure-Baron holds a PhD in economics from the University of Paris 13 and is a lecturer in management science at ISEL-Université du Havre. She participated in the development of the GIS (Groupement d'Intérêt Scientifique) Institut de la Logistique intelligente de la Vallée de la Seine, member of the steering committee. She also contributes to the SFM project, *Service ferroviaire de navettes modulaires*, financed by ADEME (French Environment and Energy Management Agency).

Marie-Laure Baron's research focuses on logistics, corporate social responsibility and short circuits. She also works on port strategies with a particular interest in the port of Le Havre. Her research interests include building resilient urban logistics, short food supply chains and port strategy with a special interest for Le Havre.

Sustainable management. Dr. Frank Guérin.

Frank Guérin is a lecturer in management science at ISEL-Université Le Havre Normandie. He is a member of the NIMEC laboratory and has published numerous articles and a book on logistics. His research focuses on innovation and ecological transition. He is the Director of Research and Development of ISEL.

Process improvement and seaport competition strategy. Dr. Douglas Hales, visiting professor, The University of Rhode Island College of Business, US.

Douglas N. Hales has a PhD in management. He is Professor of Operations & Supply Chain Management, Lean Six Sigma (LSS) Programs Coordinator at the University of Rhode Island. His primary teaching expertise is Global Supply Chain Management and Lean Six Sigma. His research interests include Global Port Competitiveness and Applied Process Improvement. He has won numerous awards in both areas including the Beta Gamma Sigma Professor of the Year Award, the Best Graduate and Undergraduate Teacher Awards, and the Researcher of the Year Award, among others. Since 2004, he has 26 referred publications and 40 conference international papers and presentations in seven countries.

Prof. Hales is an avid researcher in Operations and Supply Chain Management and a dedicated teacher in Supply Chain strategy and Transportation Performance. He previously served as Associate Dean in the College of Business at the University of Rhode Island.

Douglas Hales teaches operations and supply chain management. He will teach the basics of Lean Six Sigma methods for process improvement in Global Supply Chain Management using computer simulations. His research areas are process improvement and seaport competition strategy. He will also analyse port improvement and competitiveness strategies using the transition of the port of Le Havre to cruise tourism as an example.

Disaster Management, mathematical modelling, optimisation and practical operations planning in humanitarian logistics. Dr. Douglas Alem, visiting professor, University of Edinburgh-Business School, UK.

After getting a Phd at Universidade de São Paulo, Douglas Alem has been working as an Associate Professor at University of Edinburgh Business School & Director, MSc Data & Decision Analytics (Online)

Douglas Alem's research focuses mostly on humanitarian logistics. His research interest relies on practical operations planning problems that arise in humanitarian crises such as the distribution of emergency commodities in post-disaster situations. This course will also use mathematical modelling and optimisation techniques for a variety of problems including transportation, production and planning/manufacturing.

Cases Studies.

Students will work in groups on real engineering projects, which will provide them with a realistic context for exploring the themes, theories and tools studied in class. Case studies are a highlight of the semester.

ii. Humanities

French Culture and visit of the port.

Introduction to French and Normandy culture. The students will visit the port by boat.

French as a Foreign Language.

Introduction to French for beginners.

Intensive DELF preparation week.

In order to promote the acquisition of French, an intensive DELF preparation week will be an opportunity to deepen mastery of the language through reinforced courses. Students who so wish can take the DELF exam (at their own expense) after this week.

Intercultural Competence.

The world of the 21st century is highly connected. Logistics is, by definition, about exchanges, flows and movements. It is therefore crucial for students to develop the intercultural skills that will enable them to become aware of and adapt to the different cultures with which they will be dealing.

iii. Project

Industrial and Logistics Project.

The industrial and logistics project is designed to put students in a professional situation. Working on real projects, or even projects proposed by companies, students will work in groups and independently throughout the semester to propose a solution to the problem presented, applying the theories and tools acquired in class. At the end of the semester, the groups will present their solution to a jury in front of their class.

Methodology.

In order to successfully complete their Industrial and Logistics Project, students will follow a methodology course on interpersonal management, project management and oral presentation skills.

iv. Environnement et société

Climate Fresk and Biodiversity Fresk.

Climate change is now a reality that future engineers and managers need to take into account. As part of a degree on resilience, it is necessary to consider the consequences of climate change on logistics. The students will therefore be taking part in the Climate Fresco and the Biodiversity Fresco.

Student involvement.

As well as the professional and linguistic advantages of a semester spent abroad, it is also a personal experience, an opportunity to meet others, discover new ways of thinking, other organisations, etc. To help students integrate and make the most of their experience at the University of Le Havre, they will have to prove their commitment to their host university and city by taking part in various activities of their choice: tutoring, involvement in associations, participation in school events, the integration weekend, etc.

1. Objectives

To deepen your knowledge and skills in logistics,

- to discover or further your knowledge on logistics and port logistics in one of the main port cities in Europe,
- to learn about humanitarian logistics and resilience,
- to reflect on logistical evolutions in a changing world,
- to discover the French language, learn about French history and Normandy,
- a real asset in your CV,
- an international experience.

III. Organisation and admission

1. Key Information

Status	Student, attendance is mandatory
Start of application	Febr.1, 2024
End of application	June 20, 2024
Beginning of the program	Sept. 1, 2024
Organisation	One semester Classes might take place every day of the week.
Campus	Université Le Havre Normandie site de l'ISEL

NB: The program will only take place if more than 5 students are admitted.

2. Admission Process

The applicants will be selected by a commission after reviewing the following documents provided beforehand:

- a full Curriculum Vitae,
- a cover letter,
- a copy of your Bachelor's Degree.

The commission will inform the selected candidates.

3. Prerequisites

No prerequisites are required except a diploma allowing you to pursue a Master's degree: a bachelor in sciences, management, logistics or another subject related to the topic of the program (« logistics and resilience »).

4. Methods of Evaluation

One exam will be organised in each course. The teacher will choose to either give an oral or written exam and will inform the students at the beginning of the semester.

To graduate, an overall average mean of 10/20 must be reached (20 being the highest score and 0 being the lowest score).

There will be only one session per course per semester.

5. Tuitions and administrative fees

- For students outside and outside the European Union: 5000 €.
- For any person coming from a university benefiting from an agreement with ISEL-Université Le Havre-Normandie: it is possible that you will be exempted from all or part of the registration fees depending on the agreement with our partners. Please contact your international office for more information.