



STUDY GUIDE

Giving a second life to our electrical waste

Organised by

Université Polytechnique
Hauts-de-France (UPHF)





1. IDENTIFYING DATA.

• Course Name.	Giving a second life to our electrical waste
• Coordinating University.	Université Polytechnique Hauts-de-France
• Partner Universities Involved.	none
• Course Field(s).	Sustainable Development
• Related Study Programme.	<i>Polytechnical module</i>
• ISCED Code.	4433
• SDG.	12 (https://sdgs.un.org/goals)
• Study Level.	The course is part of a Bachelor, Master or Doctorate study program.

• Number of ECTS credits allocated.	4 ECTS
• Mode of Delivery.	Online self-study
• Language of Instruction.	English
• Delivery Period.	Semester 1
• Course Dates.	From October 1st to December 15, 2023
• Precise Schedule of the Lectures.	Total duration of the course: Approximate work load is 4 hours per week
• Key Words.	e-waste, recycling, law, valorisation, circular economy, international traffic, impact of environment and health
• Catchy Phrase.	With the exponential growth of electronic waste, its impact on environment and health is becoming a clear issue for populations

• Prerequisites and co-requisites.	Sensibility of environment issues, ecological awareness, social link
• Number of EUNICE students that can attend the Course.	30
• Course inscription procedure(s).	Eunice Application Portal

2. CONTACT DETAILS.

• Department.	Institut Universitaire de Technologie Valenciennes (IUT Valenciennes)
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• Name of Lecturer.	El Hadj Dogheche
• E-mail.	elhadj.dogheche@uphf.fr
• Office.	IUT

3. COURSE CONTENT.

The ubiquity of electronic devices in our daily lives makes us aware of the danger of recycling them. Recycling old computers, mobile phones and other electronic device is now a reality in Europe. With the exponential growth of electronic waste (about 8% / year), the impact is clear on environment as well as on health for population. The omnipresence of these electronic devices in our daily life and their batteries, makes us aware of the danger associated with their recycling process. This course covers 2 interacting disciplinary areas related to technological aspects and those dedicated to related services, in particular on existing recycling methods and the prospects for the development of future less polluting industries. We need to be able to better understand how these objects are designed and fabricated, the advanced technologies that need to be implemented, and the detection of toxic elements they contain.

4. LEARNING OUTCOMES.

1. Understanding the electronic manufacturing environment
2. Identify the toxic and valuable elements that exist during manufacturing
3. Understanding recycling technologies
4. The jobs of the future in the environment and recovery

5. OBJECTIVES.

Raising awareness of environmental issues, better knowledge of recycling technologies, identification of negative impact of health and ecology

6. COURSE ORGANISATION.

UNITS

1.	Definition of recyclable waste <i>National & international regulations</i>
2.	How is electronic waste produced? Study case of e-wastes in hospitals Recycling techniques: illustration with industrial actor as Veolia Producer responsibilities
3.	Waste recovery: waste disposal, pollution control, risk prevention, waste reduction Study case of battery
4.	International Traffic, Health and social role, Circular economy: Illustration with the Computer Village @ Lagos, Nigeria





Raising awareness among the younger generation

LEARNING RESOURCES AND TOOLS.

Use of digital communication tools, survey production

PLANNED LEARNING ACTIVITIES AND TEACHING METHODS.

Learning activities for this course: general lectures, quiz, group work for establishment of a survey on a selected item

7. ASSESSMENT METHODS, CRITERIA AND PERIOD.

This course will be assessed by means of an oral exam for the group (maximum 4 persons).

OBSERVATIONS.

8. BIBLIOGRAPHY AND TEACHING MATERIALS.

Reports from United Nations and UE relative to e-waste

