

## Environment

Pinch analysis, Carbon balance, Life Cycle Assessment, GIS

### IDENTIFICATION

CODE : GEN-5-S1-EC-METH  
ECTS : 2.0

### HOURS

Lectures : 2.0 h  
Seminars : 17.0 h  
Laboratory : 0.0 h  
Project : 0.0 h  
Teacher-student  
contact : 19.0 h  
Personal work : 0.0 h  
Total : 19.0 h

### ASSESSMENT METHOD

Validation on attendance

### TEACHING AIDS

### TEACHING LANGUAGE

French

### CONTACT

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### AIMS

#### COMPETENCIES :

This CE falls under the teaching unit Tools and methods for energy and environmental analysis [GEN-5-ue-ENV] and contributes to the following competences:

- A1 Analyse a real or virtual system [or problem] [level 2]
- C5 Use management systems and analysis tools within the framework of a Sustainable Development and Corporate Social Responsibility approach: normative, socio-economic, financial and technical aspects [level 2]
- B5 Act responsibly in a complex world [level 2]

In addition, it requires the mobilisation of the following skills

- C1 Design, size, manage and optimise energy systems in complex and varied contexts [city, industry, transport]
- C2 Design, size and optimise process engineering installations

By allowing the student to work and be assessed on the following knowledge:

- To know the main principles of the method and the carbon balance tool
- Knowledge of the main principles of LCA and the SimaPro tool
- Know the main principles of GIS and the QGIS tool

By allowing the student to work and be assessed on the following abilities:

- To be able to use the ADEME's Bilan Carbone method at the beginner level
- Be able to use the SimaPro tool at a beginner's level
- Be able to use the QGIS tool at a beginner level

### CONTENT

- 6 hours of practical training on the SimaPro tool and LCA
- 4 hours of tutorial on the Bilan Carbone tool
- 4 hours of tutorial on the QGIS tool