



École des Ponts

ParisTech

# Sustainable and Green Finance Program

Since 1747, the École des Ponts ParisTech has been training high-level engineers, future leaders and researchers able to tackle the challenges of their time. To support the transition to a low-carbon economy, the department of Economics, Finance and Management proposes a cutting-edge one-semester program dedicated to Sustainable and Green Finance.

## PROGRAMME'S OBJECTIVES

Lasting one semester, this program prepares you to become **green finance specialists** who can contribute to the development of Green Finance within banks, international institutions and companies. The Sustainable and Green Finance program will provide you with all the knowledge and skills in order to :

### Duration

1 semester from September to January

### Public

The program is entirely taught English. It caters for any students with an engineering background wishing to master the financing mechanisms of the energy transition and looking for rewarding opportunities in this field.

### Opportunities

The program positions you for a stellar career in

- Banks, financial institutions and asset managers
- International Organizations
- Management Consultancy Firms
- Companies involved in energy transition projects
- Strategy Department of large companies

### Contact

Pierre BERTRAND, Academic Director of the Department of Economics, Finance and Management  
(pierre.bertrand@enpc.fr)

- **Understand the challenges of energy and ecological transitions**, from the point of view of "physical" phenomena addressed by engineering sciences (climate, biodiversity, tc.) but also from an economic and financial point of view (carbon market, etc.).

- **Analyze the different technical, economic and financial dimensions associated with the implementation of sustainable projects** (and in particular the measurement of positive spin-offs associated with them).

- **Measure and evaluate the risks associated with projects**, at the project level and also at the macro-economic level.

- **Master the standard financial framework** as well as the tools (green bonds, impact investing, ESG reporting, etc...) and the specific dimensions relating to sustainable and green finance.

## COURSES

The unique feature of the program is to combine rigorous courses along the three dimensions that are necessary to gain an in-depth understanding of sustainable and green finance issues and the strategic challenges they raise: engineering science, economics and finance



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Engineering  
Sciences

# Sustainable and Green Finance Program

## Climate Change Science

Understand what climate sciences tell us about climate changes and the basic physical phenomena that explain these changes.

## Climate Risk Assessment and Management

Implement a methodology to measure the carbon footprint of a firm or a project and propose solution to integrate and management climate risk within firms and financial institutions.

## Life Cycle Assessment

Understand LCA methodology, identify critical points, and apply life cycle thinking when designing energy projects.

Economics

## Energy economics

Understand the functioning of energy markets and carbon markets at the European level.

## Credit Risk

Become familiar with most classical credit instruments (bonds, Credit Default Swap, Asset-Backed Securities, Collateralized Synthetic Obligation, etc.): understanding their use, measuring their associated risks and being able to price them.

Finance

## ESG Analysis

Practice and implement ESG analysis, use concepts linked to ESG investing; Understand how ESG analysis is implemented within Financial institution and supervised by regulators (e.g Task Force on Climate-related Financial Disclosure);

## Financial regulation for Green Finance

Understand the debate and the difficulties related to the integration of climate risk with financial regulation and supervision processes, including stakes and limits of using climate scenarios and stress-tests.

## Project Finance

Master project funding concept, principles and techniques such as used in banks, international financial institutions, the local sector and in certain firms.

Construct a simplified financial model using spreadsheets, assess the different financial ratios specific to project funding.

## Green Financing

Find methodologies and estimate credit ratings of bond and green bond programs; Contribute to a green bond issuance process.

Capstone  
Project

Taking advantage of the strong links between École des Ponts ParisTech and industries, students are mandated by a firm to solve a specific issue related to Sustainable and Green Finance

Conference  
Cycle

All along the semester, conferences are organized with experts in the field talking about either their experience or cutting-edge topics.