

# Master's Degree, One Year Graduate Program Biorefinery and Biomaterials

Bio2

Are you interested in the fields of biomass valorisation, biorefinery processes and in the production of biofuels as a replacement for fossil-based products? Do you also have an interest in the environment and sustainable development?

Have you completed at least 4 years of science-based higher education (chemistry, materials science or chemical engineering) and are you keen to study in France? Apply for the Biorefinery and Biomaterials Master's degree!

The Biorefinery and Biomaterials Master's program aims to train professionals specializing in the field of **biomass valorisation**, with a particular focus on the development of processes allowing its **transformation into biomaterials, chemical products or energy sources**.

This program will help you to develop specific skills in the fields of chemistry, **process engineering** and polymerisation, but also in the areas of **production costs, environmental factors and energy consumption**. International companies in the **textile, packaging, energy, food and pharmaceutical sectors** have a particular need for these skills today.

## TOPICS COVERED

- BIOREFINERY (CHEMICAL COMPONENTS OF PLANTS, POLYMER CHEMISTRY)
- BIOREFINERY FOR ENERGY (BIOETHANOL AND BIOMETHANE PRODUCTION, DIESTER PRODUCTION)
- BIOREFINERY FOR BIOPRODUCTS
- BIOMATERIALS (BIOPOLYMERS, COMPOSITES, NEW BIOMATERIALS)
- SUSTAINABILITY ASSESSMENT (ENVIRONMENTAL FACTORS, ENERGY CONSUMPTION)

## TRAINING PROVIDED IN ENGLISH

### DURATION

1-year, from Sept. to August

### LOCATION

Grenoble, France

### 6-MONTH INTERNSHIP IN A COMPANY OR LABORATORY

with a minimum monthly stipend of €600 if it takes place in France

### SCHOLARSHIPS AVAILABLE

### TUITION FEES

€243/year EU citizens  
€3 770/year non EU-nationals  
(Partial payment of €500 in July)

# PROGRAM DESCRIPTION

The Biorefinery and Biomaterials master's program leads to an official qualification.

## SEMESTER 9

- UNIT 1 Biorefinery for chemicals
- UNIT 2 Biorefinery for energy
- UNIT 3 Biobased materials
- UNIT 4 Biomass purification and analytical techniques
- UNIT 5 Technico-Economical Project

## SEMESTER 10

### FINAL-YEAR 6-MONTH INTERNSHIP IN A COMPANY OR IN A LABORATORY

With a strong network of industrial and research partners, Grenoble INP - Pagora will ensure that each student finds a final-year internship (grant of around €600/month if it takes place in France).



## INTERNATIONAL DIMENSION

With courses taught in English, this master's degree is a great opportunity to develop the capacity to manage projects in an international context.

## STUDENTS TESTIMONIES

### Andjela, from Serbia | 2023

” I found this course in the area of biomaterials, which I'm really interested in. That is one reason. And the second reason was finding out how many partnerships the school has with companies that I would really like to do internships with or work for.

### Bedan, from Democratic Republic of the Congo | 2023

” The Biorefinery and Biomaterials Master's program at Pagora is one of the programs I was looking for that I could not find in most of schools in Europe. I also really fell in love with the city.

## IN COLLABORATION WITH



## PREREQUISITES

At least 4 years of science-based higher education or 1 year of graduate studies in materials science, chemistry, biochemistry, chemical engineering or polymeric materials

English language skills: level B1 minimum, level B2 strongly recommended, European standards

## APPLY ONLINE

DEADLINE FOR SUBMITTING  
THE APPLICATION

[pagora.grenoble-inp.fr/en/education/master](https://pagora.grenoble-inp.fr/en/education/master)



## CONTACT

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