RÉPUBLIQUE FRANÇAISE
Liberté Égalité Fraternité

GRENOBLE INP UGA Pagora

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

GRENOBLE INP UGA · lgp2 · tec21 the engineering of complexity · INSTITUT CARNOT PolyNat

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

KTH, UQTR Université du Québec à Trois-Rivières, IMT Mines Albi-Carmaux École Mines-Télécom, UPC, Cermav, INRAE, IFP Énergies nouvelles, CEBB, Cellulose Valley

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

CONTACT

pagora.contact-masterbio2@grenoble-inp.fr
+33 (0)4 76 82 69 00
Grenoble INP - Pagora, UGA
461 rue de la papeterie
38402 Saint-Martin-d'Hères, France