

2023 SUMMER SCHOOL

SUSTAINABLE CITIES OF THE FUTURE THE TECHNOLOGIES OF NATURE BIO- CITY | BIO-ARCHITECTURE | BIO-ENERGY | CIRCULAR BIO-SOCIETY

OVERVIEW

Innovation, engineering, architecture, and ecology are brought together in an exciting two-week summer program. Come and explore how sustainable thinking can be inspired by the laws of nature and to explore how technology can contribute to creating sustainable cities for the future.

Built around the topics of Bioenergy, Bio-Architecture, Bio-Technology and Circular economy and Bio-Society, the 2023 summer school is a journey from theory to practice experienced on campus, in companies and research laboratories, in nature, and in cities.

WHAT ARE THE BENEFITS?

- Earn 3.5 ECTS
- Be part of an integrative and multidisciplinary approach to the topic and latest materials and technologies applied to the field of bio-architecture and bio-urbanism presented by French and international experts from universities, research institutions and companies
- Have fun while enjoying a multicultural and multidisciplinary experience and start creating your future
- Visit research laboratories and companies and be inspired by firsthand professionals
- Build an international professional network
- Enrich your profile with cultural visits and field trips

WHEN?

Monday, July 3rd, 2023 - Thursday, July 13th, 2023

WHERE?

The summer school is offered by ESTP in partnership with EPF. The activities will be organized on both campuses, in the cities of **Troyes** and **Cachan**.

Students will enjoy the beauty of the **Champagne region**, the capital city of **Paris and its surroundings**.

Transfer will be arranged between Troyes and Paris-Cachan.

WHO CAN PARTICIPATE?

We invite students from engineering, architectural, urbanistic, environmental and societal studies, or related fields to join us for an innovative, multidisciplinary, and exciting two-week summer program.

Required academic level:

- Master's degree students
- Ph.D. students
- Young researchers and professionals who want to improve and find new opportunities in their work and research
- Advanced Bachelor's degree students

Language of instruction: English

Recommended English level: B2

APPLICATION & REGISTRATION

Online application & registration on ESTP student portal (will open soon!)

Required documents:

- Latest degree certificate/diploma or proof of enrollment in an academic program
- Letter of motivation
- Passport or National Identity Card for EU citizens

Application deadline: **Wednesday, May, 31st, 2023**

PROGRAM DESCRIPTION

Building healthier, environmentally respectful cities that foster a flourishing economy and society is still one of the biggest challenges of our century.

Creating sustainable cities requires holistic, system-based approaches to the multiple environmental, societal, and economic hazards. It is necessary to consider the co-benefits and unintended consequences and have an in-depth understanding of the complex societal, technological and environmental barriers and the enablers for effective change.

While modern technologies give many answers, nature shows us how to integrate human activity into the natural cycle and to harmonize the creations of people and nature.

Bio-inspired solutions/technologies are increasingly explored and applied in practice due to their higher contribution to sustainability.

The academic program includes **25 hours/week** of lectures, projects, workshops, research laboratories and company visits.

It covers, but is not limited to, the following themes and topics:

- System thinking and introduction to the laws of nature and their applicability in architecture and urban planning
- Sustainable Energy in the cities of the future: Bioenergy: biomass, biofuel;
- Solar Energy, Energy Supply & Management, smart grids
- Bio-architecture, regenerative architecture, and bio-urbanism: artificial intelligence in urban planning, sustainable materials and AI-based applications in sustainable material development, 3D printing for sustainable architecture, NetZero carbon construction
- Bio-society, Bio-metric technology and circular economy in the cities of the Future

Cultural and social program will be announced soon.

PROGRAM TUITION FEES

The program fee is **1500€** and includes :

- Tuition and documentation
- Welcome and farewell events
- Access to ESTP Paris and EPF facilities
- Free internet access
- Official program certificate
- Cultural and social events
- Transfer between Troyes and Paris-Cachan

Accommodation is not provided, but you can receive information upon request.

Living expenses, individual insurance, and visa fees are not included.

Note:

- program content may be subject to change or cancellation based upon low enrollment
- the academic credits are subject to acceptance by each educational institution.

CONTACT

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WHO WE ARE

ESTP Paris

Ecole Spéciale des Travaux Publics, du Bâtiment et de l'Industrie was founded in **1891** as a private higher education institution and officially recognized by the French government in 1921. ESTP diplomas are accredited by the Ministry of Higher Education & Research and the "Commission des Titres d'Ingénieurs" (CTI). Several training programs have been awarded quality labels, such as EUR-ACE & RICS. In France, ESTP Paris counts over 2 800 students, a network of 45000 Alumni and trains the biggest number of students for the construction industry. ESTP Paris has made its reputation as THE "Grande Ecole" for professionals in the following areas: construction, planning & development, project and facilities management, sustainable buildings & infrastructures, design, rehabilitation, maintenance, real estate, topography-surveying, materials, energy efficiency, building information modelling, digital twins, net-zero carbon construction, etc. ESTP Paris works in collaboration with industrial partners, in addition to its strong international relations (88 academic partners in 40 countries). ESTP focuses on an equal opportunities policy and the emphasis on sustainable development.

EPF - ECOLE D'INGÉNIEUR·E·S

Founded in 1925 and located in Cachan, Troyes and Montpellier, EPF is one of the best post-secondary School for general engineering sciences. In 1991, EPF - Graduate School of Engineering - acquired the status of Public Foundation and became co-educational in 1994. EPF offers to its 2 400 students a year (including 15% of international students) a five-year post-secondary engineering sciences curriculum. First three years consist in a general curriculum. In 4th year, students chose among 8 different majors: Aeronautics & Space, Structures & Materials, Engineering & Health, Engineering & Management, Engineering & Digital technologies, Energy & Environment, Architectural Engineering and Data Engineering. EPF's diplomas are accredited by

the French Ministry of Higher Education and Research and the “Commission des Titres d’Ingénieurs”. EPF is a member of both the “Conférence des Grandes Ecoles” (CGE) and the “Union des Grandes Ecoles Indépendantes” (UGEI). EPF’s curricula favors a faster integration into the job market with one of the highest starting salaries amongst post-secondary schools. More than 12 000 graduated engineers from EPF are spread out within the industry and service sectors.