

// JULY 2020

ANGERS
PARIS - VÉLIZY
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eSEO
GRANDE ÉCOLE D'INGÉNIEURS



INNOVATION MAKES SENSE

**ESEO International
Summer Programmes**

ESEO International Summer Programmes:

July 2020 (6 July – 17 July 2020)

Angers - FRANCE

ESEO's summer programmes provide international students with opportunities to receive high quality courses on topics among the fields of expertise of the school. All courses are taught in English. They aim at developing a full understanding of the domain by illustrating the theoretical aspects through the development of practical functional projects that will remain as a souvenir for the participants.

In addition, ESEO's International Summer Programmes are an occasion to make new friends from all parts of the world and discover France, French culture and life in Angers, a city in the heart of the Loire Valley.

Summer Programme #1:

IoT: From Sensors to Decision and Action

Scope: This programme presents the Internet of Things (IoT) by focusing on the full chain starting with the sensor and the data it collects and ending with the relevant action to be taken. It covers aspects such as: the electronics of sensors and their supply in energy, the network protocols used for communication or the security concerns. The programme will be supported by a practical project and the participants will develop a fully functional communicating smart device.

Required skills and degree: The programme is designed for Bachelor's or Master's students in computer or electrical engineering. Other international university students with basic knowledge in electronics, networks and programming can apply.

Teaching language: All courses are taught in English. A course on the discovery of French language and culture will be scheduled each morning. Participants are not required to have any knowledge of the French language.

ECTS: Participants attending all courses will receive 3 ECTS and a certificate.

Maximum number of participants: The programme will accept a maximum of 25 participants.

Tuition fees: The tuition fee for the "IoT : From Sensors to Decision and Action" summer programme depends on the date of registration. It includes tuition, social and cultural events and a local public transport pass valid for the duration of the programme.

Accommodation, transport to and from Angers are **not included**.

At an extra cost, accommodation in students' hostels can be arranged.

Course leader: Dr Richard PERDRIAU

	Early bird until 31/05/20	Regular from 01/06/20
Tuition fee	900 €	1100€
Accommodation (optional)	400€	500€

► PRELIMINARY SCHEDULE

The following tentative schedule is subject to change. Each day will start with a short one hour course on French language and culture.

Monday 6 July 2020

Welcome and presentation of the programme
Social and Cultural Event: Visit of the city

Tuesday 7 July 2020

Lab: Laser Cutting and 3D printing
Lecture: Protocols for the IoT

Wednesday 8 July 2020

Lecture: Energy for the IoT
Social and Cultural Event : Industrial Visit

Thursday 9 July 2020

Lab: Implementing a smart device

Friday 10 July 2020

Lecture: Security for the IoT
Social and Cultural Event: Canoeing the rivers of Anjou

Saturday 11 July 2020 Free time

Sunday 12 July 2020 Free time

Monday 13 July 2020

Lecture: Time domain analysis
Lab: Implementation of a smart device

Tuesday 14 July 2020

French National Day - Free time

Wednesday 15 July 2020

Lab: Implementation of a smart device

Thursday 16 July 2020

Lab: Implementation of a smart device

Friday 17 July 2020

Assessments
Social and Cultural Event: Cultural visit and farewell dinner

Summer Programme #2: Electronics for Audio

Scope: This programme aims at presenting audio power amplification and signal processing for audio. It is supported by illustrative practical projects and the participants will develop a fully functional BlueTooth speaker.

Required skills and degree: The programme is designed for Bachelor's or Master's students in computer or electrical engineering. Other international university students with basic knowledge in electronics, networks and programming can apply.

Teaching language: All courses are taught in English. A course on the discovery of French language and culture will be scheduled each morning. Participants are not required to have any knowledge of the French language.

ECTS: Participants attending all courses will receive 3 ECTS and a certificate.

Maximum number of participants: The programme will accept a maximum of 25 participants.

Tuition fees: The tuition fee for the "Electronics for Audio" summer programme depends on the time of registration. It includes tuition, social and cultural events and a local public transport pass valid for the duration of the programme.

Accommodation, transport to and from Angers are **not included**.

At an extra cost, accommodation in students' hostels can be arranged.

Course leader: Dr Éric CHAUVEAU

	Early bird until 31/05/20	Regular from 01/06/20
Tuition fee	900 €	1100€
Accommodation (optional)	400€	500€

► PRELIMINARY SCHEDULE

This tentative schedule is subject to change. Each day will start with a short one hour course on French language and culture.

Monday 6 July 2020

Welcome and presentation of the programme
Social and Cultural Event: Visit of the city

Tuesday 7 July 2020

Lecture: Class A linear amplifier
Lab: Designing a Class A linear amplifier

Wednesday 8 July 2020

Lab: Laser Cutting and 3D printing
Social and Cultural Event : Industrial Visit

Thursday 9 July 2020

Lecture: Class D amplifiers

Friday 10 July 2020

Lab: Simulation of a Class D amplifier
Social and Cultural Event: Canoeing the rivers of Anjou

Saturday 11 July 2020 Free time

Sunday 12 July 2020 Free time

Monday 13 July 2020

Lab: Simulation of a Class A amplifier
Lab: Design of a Class A amplifier

Tuesday 14 July 2020

French National Day - Free time

Wednesday 15 July 2020

Lecture: Digital Signal Processing for audio
Lab: Digital Signal Processing for audio

Thursday 16 July 2020

Lab: Real Time Signal Processing for audio
Lab: Finalisation of the project

Friday 17 July 2020

Assessments
Social and Cultural Event: Cultural visit and farewell dinner



Contact, enquiries and registration

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Presentation of ESEO

ESEO is a comprehensive **electronics and computer engineering school** founded in 1956 in Angers, France. Since 1962, it has continuously been accredited by the "Commission des Titres d'Ingénieurs" - CTI (French national commission on engineering degrees) and as such was awarded the **EUR-ACE** (EUROpean Accredited Engineer) label. ESEO is a member of the "Conférence des Grandes Écoles - CGE"; a French national institution that counts all the engineering institutions accredited by the CTI as its members.

ESEO is an **international higher education** group. It has 3 campuses in France (Angers, Paris and Dijon), 2 sites abroad (Shanghai and Bamako) and a large network of international academic partners.

Each year, some **200 ESEO students graduate** with the French "**Diplôme d'Ingénieur**" after having gained scientific, technical, technological, economic, organisational and strategic skills in the fields of electronics and computer engineering. The school is **recognised by companies** as one of the best in its fields and our students have a wide range of **professional opportunities** once they graduate.



Presentation of Angers

ESEO is located in Angers in the Pays de la Loire Region of Western France. UNESCO has recognised the region as a World Heritage Site for both its natural and historical heritage.

With a population of approximately 300 000 inhabitants and over 40 000 students, 15% of whom are international students, Angers is the 17th most populous city in France and has, several times, been elected the city with the highest quality of life in France.

The city of Angers is also a center for innovation and advanced technology and was awarded the "French Tech" label to support initiatives in the fields of smart devices, IoT and the Smart City. This gives the school a very dynamic and technological surrounding to build local partnerships.

Paris is only 300 kilometres from Angers and can be reached after a 1.5 hour journey by high-speed train. Nantes, the largest city in the region, is 90 kilometres from Angers. This makes Angers within a 2 hour distance of two international airports.

Angers is only 1.5 hours by car from the closest beaches on the Atlantic Ocean.

