



Biomedical Engineering Trip to France 2024: Global Engineering Experience

Dates: February 17 – 25, 2024

Program Details:

Day 1: Arrival in Paris

Day 2: Paris

Visit to Cite des Sciences Museum, where students will be exposed to a variety of hands-on engineering educational activities, workshops, and experimentation, including the exploration of the engineering of the human brain. Students will learn of the importance of their interdisciplinary engineering degree and how the importance of collaboration between biomedical engineering, sciences, and medicine created valuable advancements in daily life and how they can contribute their biomedical expertise to a variety of industries.

Day 3: Lyon

Visit to Carthera: this is a clinical-stage MedTech company focused on developing innovative ultrasound-based medical devices to treat a wide range of severe brain disorders; students will be visiting their research & development site and have an introduction to how clinical trials for glioblastoma treatment were initiated for their SonoCloud device.

Day 4: Lyon


Visit to LabTAU: this large research laboratory is part of the French National Institute of Health and Medical Research (INSERM). This lab is at the interface between engineering sciences and medicine and develops approaches and devices for Cancer Targeted Therapies and Biomedical Acoustics. This laboratory has successfully translated lithotripsy, high-intensity focused ultrasound and drug delivery technology into current commercial devices used worldwide. Students will visit the lab, where active research projects and experiments will be showcased.

Day 5: Lyon

Visit to EDAP-TMS: this company is the pioneer and a market leader in Extracorporeal ShockWave Lithotripsy (ESWL) with the Sonolith® range of devices. With Ablatherm® HIFU and its recently introduced Focal One®, EDAP TMS is the leader in High-Intensity Focused Ultrasound (HIFU) for treating Prostate Cancer. Both technologies are based on ultrasound waves applied to tissues to elicit biological effects. Students will visit the company's research and development area and fully GMP-compliant manufacturing facility.

Day 6: Besançon

Visit to Imasonic: this is a world-leading designer and manufacturer of ultrasonic transducers for health applications. They specialize in designing and manufacturing custom ultrasound transducers for many applications,



including imaging and therapy. Students will visit their manufacturing facilities, where they will be able to observe the manufacturing of their devices.

Day 7: Travel from Besançon to Paris

When in Paris, students will take public transportation to an educational visit to Musee des Arts et Metiers where they will be able to view revolutionary engineering and scientific inventions of devices that changed the engineering, medical, and scientific world over time and the impact these made and keep making for biomedical engineers of the future. Students will gain knowledge of how some of the first biomedical devices were created and later enhanced.

More information:

Participants: Open to a maximum of **16 undergraduates** in **Biomedical Engineering major**. Students are required to complete the Global Engineering Experience application form. They must participate in all pre-departure education, meetings, and preparation activities.

Eligibility: Students who have a minimum GPA of 2.0, **have not previously participated in the Global Experience** program and in all years of their Electrical Engineering major are welcome to apply. Students must be currently eligible and have valid visas for travel to France as well as all supporting travel documentation required for their destination. Please note, **passport must be valid at the time of application**.


Cost: Students eligible for this program will be required to pay out of pocket **\$2,000**. This includes round-trip airfare, field trips, local transportation, emergency medical insurance, and accommodations. Some meals will be provided (program dependent), but students should budget for food and snack purchases.

Funding: Due to the significant existing financial contribution from SSE, students will not be eligible to receive Schulich Student Activities Funding (SSAF) or UCalgary International Funding for these experiences.

Pre-departure: The Engineering Student Centre and Chaperone(s) will host a mandatory pre-departure session for students. Topics covered will include student rules of conduct, customs/norms of the destination countries, attendance expectations, and a full overview of the agenda. Students will also be expected to complete online study abroad module in D2L.

Student conduct: Students will be bound by university non-academic misconduct policies and will be required to sign the SSE Rules of Engagement for Group travel document. If misconduct occurs, the faculty chaperones, in consultation with the Dean's Office, reserve the right to send the student(s) home. Students will be required to sign risk and student conduct waivers at the pre-departure session.

Additional student expenses: Managed directly by program participants:

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- Meals (breakfast may be provided)
 - Additional baggage fees (if required)
 - Passport & Photos (If required)
 - EU Visa (if required) or ETIAS (https://travel-europe.europa.eu/etias_en)
 - Immunizations: based on recommendations from travel clinic, cost varies depending on individual circumstances and destination countries
 - Travel insurance (emergency response will be included)