



## Chemical Engineering Trip to Germany 2024: Global Engineering Experience

**Dates:** February 17 – 24, 2024

### Program Details:

#### Day 1: Arrival in Berlin

Arrive at the hotel in Berlin in the afternoon. Following check-in, students will go on a short walk around central Berlin. The destination of the walk will be the Sony Centre at Potsdamer Platz. The roof at the Sony Centre is of interest to Chemical Engineering students. Using computational fluid dynamics and dynamic thermal modelling, the Architect (ARUP) was able to design a roof that leads to a near-constant temperature, without the use of air conditioning. Along the way, students will also see the Brandenburg Gate, the Reichstag and the Berliner Dom.

#### Day 2: Berlin

Visit the Fritz Haber institute of the Max Planck Society to learn about their latest research underlying the chemical conversion of matter and energy at surfaces and interfaces. Visit the Die Königliche Porzellan-Manufaktur Berlin to see how porcelain is produced. In this visit, we will see examples of particulates handling and heat transfer.

#### Day 3: Berlin

Visit the Deutsches Technik Museum to learn about the history of industry and technology in Germany. Of particular interest to Chemical Engineering Students are exhibits on Chemicals & Pharmacy, Sugar, Printing, Paper Making, Textiles and Wind Power. In the afternoon, visit die Historische Brauerei (the historical brewery) to see examples of chemical engineering unit operations being used in the production of beer.

#### Day 4: Berlin

Students will have the morning to themselves, during which time they might want to enjoy some of the museums of Museum Island. In the afternoon, we will take a guided [river boat cruise](#) along the Spree River where you can observe the Combined Heat & Power Plant (Heizkraftwerk Mitte), as well as the use of an inland waterway for transporting chemicals and materials. Students may also see canal locks being filled or emptied.

#### Day 5: Berlin

Visit a steel mill in Berlin and then the campus of Technische Universität Berlin in the afternoon.

#### Day 6: Berlin and Amsterdam

In the morning, visit the Hanf Muuseum (Hemp Museum) to see examples of chemical engineering processes being used to transform raw plant materials into finished products such as paper and textiles. In the evening, we will fly to Amsterdam.



## Day 7: Departure from Amsterdam

After overnighiting in Amsterdam, we will catch an early afternoon flight back to Calgary.

### More information:

**Participants:** Open to a maximum of **20 undergraduates** in **Chemical 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 Germany 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 **\$1,500**. 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:

- 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](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)