

## Plus3X Syllabus *(Draft)*

### ***Engineering at the Crossroads of Europe***

ENGR 00XX | 3.0 credits | May 2023

Swanson School of Engineering

University of Pittsburgh

Canvas: [INCLUDE LINK HERE](#)

#### **Faculty & Program Assistant**

<b>Mary Besterfield-Sacre</b>	<b>Chris Kirchhof</b>
Associate Dean for Academic Affairs Professor, Industrial Engineering, Swanson School of Engineering Director, Engineering Education Research Center	Director of First-Year Recruitment and Transfer Student Services Swanson School of Engineering
151 Benedum Hall	152 Benedum Hall
Email: <a href="mailto:mbsacre@pitt.edu">mbsacre@pitt.edu</a>	Email: <a href="mailto:chk63@pitt.edu">chk63@pitt.edu</a>

This new Plus 3 program focuses on the Czech Republic, specifically Prague, with a few day trips. We will be visiting both universities and companies and are arranging several visits. Below is a short list of the potential tours we hope to take advantage of.

- SKODA and other automotive facilities
- CEZ Group
- EUROVIA
- Mott MacDonald
- Nano Energies
- EP Infrastructure
- Glass factory near Prague
- US Embassy visit
- The Škoda plant (~ an hour away from Prague)
- UNESCO World Heritage Site (~an hour away from Prague) <https://whc.unesco.org/en/list/621/>
- The Bat'a shoe company, in Zlin, has a really interesting history (<https://www.csmonitor.com/World/2010/0305/Workers-paradise-The-town-built-by-Czech-version-of-Henry-Ford>)

Plus3-X Czech Republic is a three-credit research-focused study abroad opportunity for transfer students who did not have the advantage of taking a first-year Plus3 course. With that in mind, the course is open to all upper-class engineering students.

Pre-departure sessions (held at Pitt) will explore The Czech Republic's history and culture and its success in various industries such as manufacturing, R&D, energy, IT and electronics, and

construction. We will stay in Prague, known as the Crossroads of Europe, and travel to the surrounding areas. We will visit various companies and learn about the business and engineering practices that highlight their nation's reputation in these industries. From design practices to business strategy to operations, the company visits provide a firsthand perspective of this intersection.

### Course Objectives (DRAFT)

- To provide engineering students an early study-abroad experience like the Plus3 experience that first-year students are opportune to take.
- To equip students with skills for analyzing economic, political, social, and environmental sources of engineering concerns or opportunities and to identify both business and social decision-making solutions to address issues (see Figure 1),
- To provide a first-hand opportunity for Pitt students to observe, analyze, and understand business in the Czech Republic,
- To provide the opportunity for engineers to work together on common engineering-society research projects,
- To provide an opportunity to reflect on the international travel, study, and research experience, and
- To develop research, writing, and presentation skills

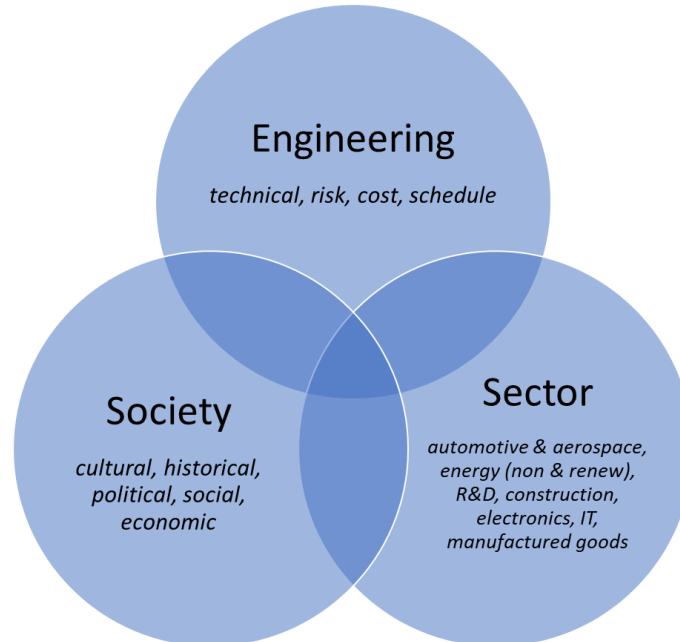


Figure 1. The intersection of Engineering, Society, and Sector

### Course Structure

The course consists of three components:

1. A pre-departure component that includes an introduction to the historical, cultural, social, and economic environments of the Czech Republic, as well as an introduction to engineering aspects that one might encounter, as well as an overview of what students will need to observe when they are abroad. Engineering aspects might include technology, risk/safety, cost, or schedule. Each of these aspects integrates with the historical, cultural, political, social, and economic considerations of the country. From this, students will be divided into groups, as there will be individual and group assignments for each of our pre-departure meetings.
2. A field study component that includes company visits, cultural excursions, and lectures at various sites in and around cities visited in and around Prague. Students must attend and participate in all lectures, company visits, cultural excursions, and university activities. Students will take notes during the experiences and write a daily blog based on guided prompts. These writings will be posted on the Plus3 website.
3. Report – After returning to Pittsburgh, each student is required to research some selected aspects of the businesses studied in the Czech Republic and report on this research as well as their overall experience in the class.

### Reading/Textbooks

Students will be provided with some reading resources to improve their understanding of the culture of the Czech Republic. As assigned, there may be other supplemental readings that can improve your performance on the various assignments.

#### Czech Republic (TBD)

- <https://booksandbao.com/books-to-read-prague-czech-republic/>
- [https://www.amazon.com/History-Czech-Republic-Fascinating-Wonderful-ebook/dp/B08X45SPXP/ref=sr\\_1\\_1?crid=198226DFJZA9&keywords=history+of+czec+h+republic&qid=1668023412&s=digital-text&sprefix=history+of+czec%2Cdigital-text%2C64&sr=1-1](https://www.amazon.com/History-Czech-Republic-Fascinating-Wonderful-ebook/dp/B08X45SPXP/ref=sr_1_1?crid=198226DFJZA9&keywords=history+of+czec+h+republic&qid=1668023412&s=digital-text&sprefix=history+of+czec%2Cdigital-text%2C64&sr=1-1)
- Goal – have students definitely read the short history of Czech Republic (link above) and hopefully/may select another book of interest.

#### Engineering and Society (TBD)

- <https://interestingengineering.com/culture/30-must-read-engineering-books>
- Goal – have students select one from a short list (5-6) of books that they are interested in that will help them link their area/interest in engineering and society

### Evaluation Summary

Course performance evaluation is based on assignments done individually (I) and in your group (G). Groups of 4 or 5 students will be formed before the first pre-departure meeting. Students will be asked to complete a CATME survey, which will be used to create the groups.

Assignments	%
1. Pre-departure activities (I)	20
2. Pre-departure activities (G)	20
3. Personal reflections blog (I)	40
4. Post-travel report (I)	20

1. **Pre-departure activities (I):** Individual pre-departure activities are intended to facilitate cohesive interactions between class members, facilitate individual interactions, and provide reflective opportunities to demonstrate an understanding of students' engineering interests and Czech culture.
2. **Pre-departure activities (G):** In addition to developing a personal understanding of Czech culture and engineering considerations, group activities will be designed to identify others who are complementary interests. Groups will form to research specific areas of interest. Groups will share their results through interactive presentations to the class.
3. **Personal reflections blog (I):** Students are expected to create and post blog entries (two to four paragraphs) daily during the in-country component of the course. Reflections can include material covered in the pre-departure meetings, discussions with company representatives or others met that day, material learned relative to supply chain that day, as well as a personal reflection on the cultural and business norms abroad. Additional details will be provided in the blog assignment description.
4. **Post-travel report (I):** Students will reflect on the in-country company visits and compare textbook material to the first-hand experience gained during the field study component. Evaluated based on your
  - a. Ability to relate course concepts to information gained during the field study
  - b. Ability to acquire relevant information from in-country company visits and lectures, and
  - c. Reflection and analysis of information gained from the field study abroad as it relates to cultural and engineering issues raised in class.

## Expectations

Students are adults and will act as such during the trip. The role of the faculty is to help and guide – not to watch every step every student takes 24 hours a day. Thus, students will exhibit maturity, maintain decorum, and exercise care and concern for themselves and their colleagues. Every student is required to attend every programmed activity, lecture, and visit and is responsible for being on time at the right place. Deviations will not be tolerated and may result in the student being dismissed from the trip and sent home at their expense and/or a

failure in the course or other grade penalty. If necessary, any such actions will be taken by the faculty after consultation with the University of Pittsburgh Study Abroad Office.

Academic Integrity – All students and faculty are expected to adhere to the standards of professional conduct and academic honesty. Any student engaged in cheating, plagiarism, or other acts of academic dishonesty would be subject to disciplinary action. Any student suspected of violating this obligation for any reason during the semester will be required to participate in the procedural process, initiated at the instructor level, as outlined in the SSoE Academic Integrity Policy found at:

<https://www.engineering.pitt.edu/contentassets/Of1fe3fd97424866b12ef28c2886fc50/ssoe-academic-integrity-6-2020.pdf>

Disability Services – If you have a disability for which you are or may be requesting accommodation, you are encouraged to contact both your instructor and Disability Resources and Services (DRS), 140 William Pitt Union, (412) 648-7890, [drsrecep@pitt.edu](mailto:drsrecep@pitt.edu), (412) 228-5347 for P3 ASL users, as early as possible in the term. DRS will verify your disability and determine reasonable accommodations for this course. <https://www.diversity.pitt.edu/disability-access/disability-resources-and-services>

### Spring 2023 Course Schedule and Assignments

The course will follow the schedule listed below (subject to change). The scheduled class meeting dates are TBD. All times listed will be local times. All assignments will be due no later than 11:59 PM local time unless indicated otherwise.

Date	Topics	Assignments
<b>February 2023 – April 2023</b>	Four scheduled class meetings, Dates TBD	TBD
<b>Friday, May 5</b> Students arrive back on campus on or before this date	Pre-departure dinner Details to follow	TBD
<b>Saturday, May 6</b>	Fly to <b>Prague, Czech Republic</b> from Pittsburgh, PA, USA	
<b>Saturday, May 7 – Friday, May 19</b>	Arrive Prague Begin in-country program Itinerary forthcoming	TBD
<b>Friday, May 19</b>	Depart from <b>Prague, Czech Republic</b> to U.S. destinations	