



Engineering Camp

IMMERSE AND DEEPEN

Through Engineering Camp, students (ages 14 to 15) are immersed in the engineering design process and exposed to university life through a free, week-long camp experience. They deepen their awareness of and interest in engineering and develop important engineering habits of mind as they complete design challenges inspired by real-world scenarios and interact with experienced engineering faculty, staff, and business leaders, initiating emergence of an identity as aspirant engineers.

Overview

The purpose of Next Engineers is to increase the diversity of young people pursuing engineering career paths by implementing three discrete but complementary programs – Engineering Discovery, Engineering Camp, and Engineering Academy. This document describes the **Next Engineers: Engineering Camp**. It should be read in concert with *The Five Building Blocks of Next Engineers* which summarizes the essential theory of change.

Camp objectives

The purpose of Engineering Camp is to deepen campers' **awareness** of what engineering is by offering greater exposure to engineers and the work they do, more specifics about the different kinds of engineering fields available to them, and further details regarding the potential pathways to access these careers. It also aims to further campers' **interest** in engineering by providing fun experiences that promote a positive outlook and attitude towards and develop a greater curiosity in engineering.

Through engaging and extended engineering design challenges, Engineering Camp will encourage the development of a set of **engineering habits of mind** (typical dispositions and ways of thinking practiced by engineers) and the emergence of an **identity** as an aspirant engineer. Experiences of university campus and student life will help foster in campers a vision of themselves as future post-secondary engineering students.

Engineering Camp can also act as an outreach and recruitment tool for Engineering Academy.

Camp design

Each Engineering Camp will be held over a week during school holidays or vacations and will include 30 to 35 hours of programming. Ideally, Engineering Camps will be held on the campuses of post-secondary education institution that offer engineering courses (e.g., universities or technical colleges). Depending on local context, cultural norms, and incentives for participation, Engineering Camps may be residential or non-residential.

THE 5 BUILDING BLOCKS OF NEXT ENGINEERS

- Awareness
- Interest
- Engineering Habits of Mind
- Engineering Identity
- Agency

AWARENESS

Awareness is a perception of knowledge of something.

<https://dictionary.apa.org/awareness>

30 - 35

Ideal number of hours for a non-residential Engineering Camp



Engineering Camps will be co-facilitated by camp provider- or community partner-affiliated facilitators and current engineering students, engineering faculty, and/or GE volunteers.

Campers will participate in several authentic and extended engineering design challenges, culminating in a capstone challenge. Campers will have the opportunity to showcase their capstone challenge ideas and products to a public audience of parents/guardians, facilitators, GE volunteers, and others. These showcase events present an opportunity to reach parents/guardians, teachers, and other significant and influential adults regarding the value of engineering, the various careers available, and the value of students pursuing such careers.

Exposure to faculty facilities and GE workplaces will allow campers to see engineering in action, engage with engineering students, faculty, and GE engineers about their work, and develop a deeper understanding of what engineering is, the different kinds of engineering that are done, and what it is like to study and work as an engineer.

Camper selection

Each Engineering Camp will cater to 50 students aged 14–15 years (i.e., students who are not yet eligible for the Engineering Academy) and who reside in the general geographical catchment area defined for Next Engineers in each city.

Engineering Camp is free to students, but they are required to apply via an online form. Over-subscription will be managed by way of a lottery. In total, four Engineering Camps will be hosted per year for a total of 200 campers.

Engineering Camp is open to all eligible students. However, community partners should target marketing through Engineering Discovery channels.

For more information about Next Engineers visit www.NextEngineers.org.

50

Number of campers each Engineering Camp should accommodate.

