In this two trimester class, Intro to Engineering, introduces Technology, Engineering and Manufacture, and then applies them to everyday life. It has many hands on projects and activities. A unified approach will show us the commonality of many physical principles that describe different systems and electronics. The four major system areas are mechanical systems, fluid systems, electrical systems, and thermal systems. We use force, volume, area, work, rate, resistance, energy, power, force transformers, momentum, waves and vibrations, energy converters, transducers, radiation, light and optical systems, and time response of systems that are used in everyday life

This course earns physical science credit for graduating high school. People who take this course can possibly be accepted by UC for lab science entrance requirements also expected by MIT in place of regular science courses. This can teach you to be part of the solution not the cause. This class helps many people in math and reading computers.

The purpose of engineering education is to graduate engineers, who can design, and that design thinking is complex. Several dimensions of design thinking are then detailed, explaining why design is hard to learn and harder still to teach, and outlining the research available on how well design thinking skills are learned.

Engineering is building things based on an idea of concepts and theory and Intro to Engineering gets you ready to build by hands on applications of earth & physical science, mechanics, electronics, computers, and the engineering design process. We cover topics in science & engineering from the property of matter to astronomy with many hands on opportunities. In practical lab work, we learn the basics of circuits and how mechanical devices work (like solar panels). A computer lab allows for animated physical science instruction, student report and presentation development, as well as, introductory computer programming lessons. Students participate in design teams to brainstorm, design and build projects like hot air balloons. Other projects can range from telescopes, to solar houses and hydrogen fuel cells. We watch many videos and have many discussions about current things happing in the world as well as things in the past.

A good collage makes for a good life. MIT expects its graduates to have an understanding and appreciation of the basic concepts and methods of the physical and biological sciences. These concepts and methods are needed in most degree programs at the Institute. More important, they are an essential part of the background that MIT graduates bring to their roles as professionals and as broadly educated citizens in a world strongly influenced by science and technology. Students begin with six science core subjects in mathematics, physics, biology, and chemistry, and then add the Science, Laboratory, and Restricted Electives in Science and Technology known as REST Requirements, both described later in this section. These programs introduce basic elements of the scientific method: experimental foundations and techniques, mathematical analysis, and conceptual models for experimental facts. Important experimental as well as conceptual aspects are introduced by the chemistry and biology requirements and by the Laboratory Requirement. Mathematical methods common to much of science and technology are explored in the mathematics requirement. Basic concepts that underlie many physical phenomena are defined and elucidated in the physics and REST requirements.

For the Balloon Project, my balloon was called “Le Gut Flying Pez.” It was a purple sphere. Its max altitude was 39meters and it was up for 96 seconds. It won two awards; one for Best use of color and the second for time aloft. The day was cold, and

calm. I thought it was a good day to launch Le Gut Flying Pez. Everybody was excided to launch their balloon and some parents even came for the launch' my dad was one of them☺. We had to make a balloon that could carry an egg. Our gondola was a plastic sandwich bag. This year, we launched the balloons on Thursday, December 7th at 8:00A.M. Beginning and intermediate student teams were required to design a balloon capable of bearing an egg-filled gondola. The advanced Endeavour teams were challenged to loft special telemetry systems including remote live aerial video

In the year we also had a bridge project. Three important factors in the construction of the bridge were the weight, strength of the joints, and size. The weight is important because the more the bridge is heavier then it isn't as efficient. The strength of the joints is important because the joints are the weak links in each segment. These links are stronger if they are under compression, but they can still buckle. If they are under tension then the joints pull apart. The size of the bridge is important because the bigger it is the heavier it is, but also bigger can hold up more weight, so you have to find the happy medium.

The benefits I have gotten from this course have been the fun of doing hands on projects, not just sitting in a classroom or in front of a computer doing essays. This class has given me a chance to do something and not sit behind a desk all day. That's why this class is my favorite class.