

2952E - Career Readiness

Structural Engineer

Naperville, Illinois

By: Sahasra, Shreyas, and Agaran

Organization: mySTEMbuddy

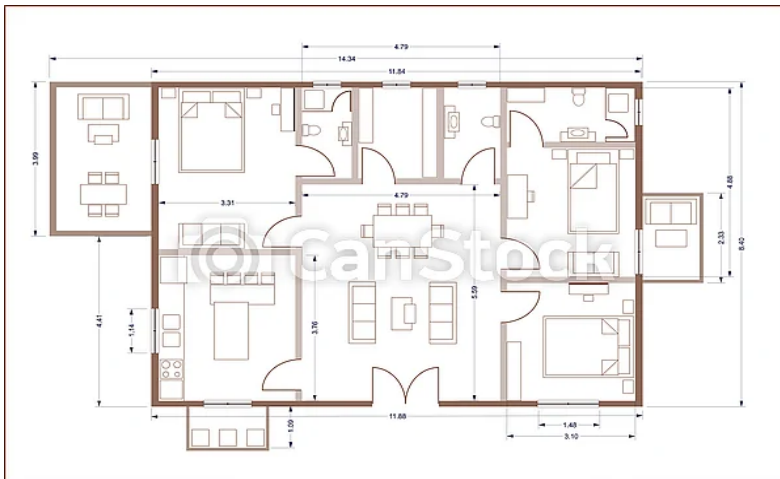
Resource: [Google](#)

Structural Engineer

Hello, we are team Robo Squad and our team number is 2952E and today I am going to talk about Structural Engineering for my career readiness project. I would love to be a Structural Engineer when I grow up because you can actually build things unlike some other engineering jobs. The job is important because if the world does not have Structural Engineers then how will we have buildings for people to do stuff like working, playing, learning, and living in. The resource that I used for my project is my mom who is also a structural engineer.

This is how Structural Engineers work on their design process. First they identify what to build, why do they need to build it, and what they will use for it. Then, they make a blueprint showing all the details of how to build it and what they need for it. Next, they understand what parts they will need for the project. At the end they perform tests to make sure that everything works as it is supposed to and looks good.

Here is an example of a blueprint of a house that a structural engineer made:



Now I am going to tell you about how my team works on our design process. We started by deciding what the robot will do like if it can get balls in all of the goals and about the length and width limitations. Then, we built the base and we just went up from there. First, we decided which two pieces of robot mechanisms that we want to use. Then, we decided where to use them and then started building from there. At the end, we took test drives every now and then and when it was almost done with building we

started programming the robot. But one thing that is a challenge is finding the pieces because there are a lot of pieces but barely none of them are the things that we will always need like stoppers, gears, connector pieces, beams, chains, rubber bands, and way more stuff. This is how we built our Vex IQ Robot.

The one very common similarity that a Structural Engineering and Robo Squad team in Vex IQ has is they both build things. There could be some differences like they have different design processes and different products they build, but they still have few similarities in their process like that they both have to plan out their work before they actually start building it, they both go through their work in detail and follow all the required steps. The last difference that I am going to say is that when you are a professional Structural Engineer, you use different materials than if you are in Vex IQ.

I have considered Structural engineers as my career readiness project because they are alike in many ways and it lets me apply what I learnt during Vex IQ. That is why I chose Structural Engineers as the job for my Career Readiness project.