Sample interview questions for engineering students

The employer wants to know who you are:
1. Tell me about yourself.
2. How would you describe yourself?
3. What motivates you to put forth your best effort?
4. What are your special abilities and strong points?
5. What are your weaknesses?
6. Name a major problem you have encountered and describe how you solved it.

The employer wants to know what skills you have:
1. How do you organize your time in school/work/play?
2. Give me an example of a problem you solved and the process you used to solve it.
3. What have you done which shows initiative and willingness to work? Give two examples.
4. What two accomplishments have given you the most satisfaction? Why?
5. What is the most valuable thing you learned in your last job that you could bring to this position?
6. You are approaching a deadline to finish a project and you realize you will be unable to meet it. What do you do?
7. Give me an example of a time when you worked effectively as part of a team.
8. Give me an example of how you were able to solve a difficult problem quickly.

The employer wants to know about your education and career goals:
1. Why did you decide to study engineering?
2. Why did you choose the career for which you are preparing?
3. What courses did you like best? Least? Why?
4. What are your long and short-term career goals?
5. Where does this position fit with your career goals?

The employer wants to know what kind of employee you are:
1. Do you prefer working with others or by yourself?
2. Do you like routine work? Regular hours?
3. What jobs have you held? Enjoyed the most? Least? Why?
4. What have you learned from the jobs you have held?
5. In what kind of work environment are you most comfortable?
6. In what ways do you think you can make a contribution to our firm?
7. How would you describe your ideal job?

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The employer wants to know what you know about his/her company and the job you have applied for:
1. What is your understanding about the nature of this job?
2. What do you think are the most important aspects of this job?
3. What parts of the job do you think you would find most satisfying? Least satisfying? Why?
4. Why do you want to work for our company?
5. What do you know about our company?
6. How did you research this position?

The employer wants to know how you react in certain situations:
1. Can you give me an example of a time when you had to resolve a conflict at work/in class/in extracurricular activities? What was the outcome? What did you learn from this situation?
2. Tell me about your biggest achievement?
3. Tell me about a team project that you participated in. What worked? What didn't work and how was this handled?
4. Give me a situation in which you failed and how you handled it.

The employer wants to know why he/she should hire you over another candidate:
1. Why should we hire you?
2. What skills and/or special qualities do you possess for this job that would make you stand out from other candidates?
3. In addition to your educational and professional experiences, what else would you like us to know about you in order to make an appropriate decision?

Questions for the Employer:
1. What makes Company X a great company to work for?
2. What do you see as the biggest challenges facing the person in this position?
3. When will you be making your decision?
4. I'm interested in learning more about _____ (some facet of the organization's operation). Could you tell me a little about it?

Technical interview questions

As you progress in your degree and work terms, employers may question you more specifically about certain skills. Work with your co-op coordinator to develop statements about the new skills that you acquire through your academic classes, labs, and work terms and update your resume with this information.

MECHANICAL ENGINEERING:
- Materials
- Structures and Machines; Statics and Dynamics
- Advanced Thermodynamics and Fluids
- Power and Energy Systems
- Control Theory and Systems

ELECTRICAL ENGINEERING:
- Power and Energy Systems
- Control Theory and Systems
- Circuits and Electronics
- Networks; Hardware and Communications

COMPUTER ENGINEERING
- Control Theory and Systems
- Circuits and Electronics
- Networks; Hardware and Communications
- Software Development; Theory and Practice
- Computer Hardware and Systems

SOFTWARE ENGINEERING
- Networks; Hardware and Communications
- Software Development; Theory and Practice
- Computer Hardware and Systems
- Computer Information Processing and Algorithms

CIVIL ENGINEERING
- Transportation Systems
- Sustainability Resource Development and Responsible Infrastructure
- Water and Environmental Systems
- Design
- Reliability, Safety and Failure Analysis

BIOMEDICAL ENGINEERING
- Advanced Thermodynamics and Fluids
- Biological Systems
- Control Theory and Systems
- Power and Energy Systems

Use STARR to Answer Behavioural Interview Questions

Situation	Set the scene by giving background information. You are creating context for your answer.
Task	Ensure the task you describe relates to the question asked.
Action	What did you do to solve the problem? Why did you choose to do that?
Result	What happened? Was the problem solved? Be specific and concrete.
Reflection	Looking back on this experience, what did you learn from it? If you had to do it again, would you start by doing anything differently, based on what you've learned?

Comments from a former employer:

"As for the interview, some employers use the behavioural interview format. Normally they would start the interview with three or four technical type questions regarding specific engineering and computer experience/knowledge. The remainder of the questions would be based on skills that the supervisors have identified as critical for the position. These would most likely be some of the skills identified in the job description, the most common being teamwork, time management, conflict resolution, and working under difficult circumstances."

"The questions would all ask for examples from the student's past that demonstrate that they excel in that particular skill. Basically they believe that if they behaved that way in the past, they will most likely behave that in the future."

"The biggest mistake students make in answering these questions is not giving specific examples. When asked to tell about a time when they had to deal with a difficult person they answer that they always get along with everyone, but if they didn't they would … This is not what they are looking for; they want a specific example which demonstrates the student's ability to deal with a difficult person and get some sort of resolution. The examples can come from any aspect of their life, school, work, sports or personal life. Of course, I believe the school, work and sometimes sports examples are usually the strongest ones."

"The best way to prepare for these interviews is to review the job description and try to identify which skills they will be looking for. Then write down specific examples from your past that highlight your skills in that area."

"Knowing something about the position and the company helps. For example, answer the "Tell me about your computer skills" question by saying, "Well, I understand from the job description that your company uses SolidWorks. My experience with this is _____. As well, I am familiar with AutoCAD, Pro-E ….""

Here's an Example of How to use STARR:

Question: Tell us about a time when a team member was being difficult and how you responded.
Answer: Use STARR:

Situation	We were assigned group projects in my thermodynamics course. There were four members of my team, we had 4 weeks to do the project, and it was going to count for 50% of our grade, so it was really important that we did well on it. We divided up the work and decided to meet in 2 weeks to compare notes and tackle the last stage of the project.
Task	When we met, one of our team members hadn't done any work and wanted the rest of us to do it for him. The other group members were angry, and I was pretty worried because I wanted to get a good grade in that class, and worried that my classmate's bad attitude would make us fail.
Action	I asked my classmate to meet me for coffee, and we talked about the project. It turns out that he didn't do his part because he didn't know how to do it, was feeling overwhelmed and guilty. Once he explained this, I stopped feeling mad at him, and asked if I could help him. His attitude became more positive right away. I showed him how to make an outline of the work he had to do, and then prioritize it with daily due dates so he would make steady progress on his part of the project. I also coached him on a couple of technical aspects, and showed him some websites where he could find more information. Once he made the outline and knew where to go to find more information, he seemed to feel much better, and was able to start doing his work. We arranged to talk daily so he could ask me questions and I could coach him. This helped me know whether he was getting it, or whether he was getting stuck again and would need more help. I also talked to the other team members to let them know that our teammate was back on track. Once they knew what was happening, they were much more positive towards him, and also offered to help coach him.
Result	When we had our next team meeting at the start of Week 3, everyone was back on track. My classmate had done his work and the other team members were relieved, and had stopped being angry. We completed the project on time and got an A- on it, which made us all feel really happy.
Reflection	Looking back on this, I learned several things: • It's important to check in early with team members to make sure everyone knows how to do their part. • It's really important to communicate well when you work in a team. • If a team member is stuck, ask them if they want to be coached through it. I can't do their work for them, but I can help them in other ways, like being a resource to help them find their own answers to questions. • I also learned that sometimes when a person is acting in a difficult way, there's a reason for it, and it's important not to judge the person. Everyone has bad days and hard times, so it's better to try to help them if it's possible and if it's appropriate to the situation.

STARR helps you frame your answer. Also, very few people take the time to add the "Reflection" part. If you include it by talking about what you learned from the experience, and what you would do differently the next time in order to have an even better outcome, the employer will be interested to hear what you have to say. The reflection is a mature, thoughtful way to conclude your answer.

How would you use STARR to answer these questions?

Question: Tell us about an analysis you did and how it turned out.

Situation	
Task	
Action	
Result	
Reflection	

Question: Tell us about a goal you set for yourself and successfully achieved.

Situation	
Task	
Action	
Result	
Reflection	

Question: Tell us about the most technically challenging work you have been involved in to date.

Situation	
Task	
Action	
Result	
Reflection	

Question: Tell us about a situation when you failed and how you handled it.

Situation	
Task	
Action	
Result	
Reflection	

Question: Tell us about a time you had to handle a heavy workload with tight deadlines.

Situation	
Task	
Action	
Result	
Reflection	