Hopin' to Professionalism 101 Guide

Technical and Non-Technical Interview Questions

Technical Questions

Lab Intern Positions

1. Many interns assist with our sample preparation. What procedure would you follow to prepare a sample for microstructure analysis? (Mount, polish, etch, optical analysis)
2. What equipment are you familiar or trained on relating to this position?
3. Report and technical writing is very important for this position. What are some common shortfalls you often see people make in their report-writing? (Inconsistent format, incorrect citations, not enough white space, passive language, stretched images, no figure/table captions)
   a. Do you have any weaknesses in your technical writing?
4. We often use XRD for sample analysis. Can you explain to us how the process works?
   a. Repeat for relevant analysis technologies such as: spectroscopy, SEM, light microscopes, etc
5. What experience do you have working with Excel and usage of VBA for formulas and solving complex problems?

Coding Intern Positions

1. What languages / frameworks are you familiar with and how will it relate to the field you are applying for?
2. Give an example of a project you have worked on that heavily involved coding.
3. How could machine learning and process optimization help with the problems companies in our field may have?
4. What are your experiences with coding management softwares in projects or the workplace?

General Academic questions

1. What is a quick way to calculate frictional pressure drops in carbon steel pipes? (Reynolds number)
2. For a heat exchanger, will the overall heat transfer coefficient increase along with an increase in LMTD (log mean temperature difference) around the unit? (Weakly dependent on temperature)

3. What is a good device to use for obtaining viscosity data for a Non-Newtonian fluid? (Consider a rotational viscometer)

Soft Skills Questions

General knowledge about the company:

1. Introduce yourself and how your interests relate to our company.
2. What do you know about the position and how would you be an asset?

Leadership

1. Leadership skills are an asset to this company, whether in taking lead of your own responsibilities autonomously or in assisting in training others. Where have you shown leadership skills and how would they transfer to this position?
2. What are leadership qualities?

Teamwork

1. Give me an example of a time you faced a conflict while working on a team. How did you handle that?
2. Describe a time when you struggled to build a relationship with someone important. How did you eventually overcome that?
3. We all make mistakes we wish we could take back. Tell me about a time you wish you'd handled a situation differently with a colleague.
4. Talk about a time when you had to work closely with someone whose personality was very different from yours.
5. Tell me about a time you needed to get information from someone who wasn't very responsive. What did you do?

Time Management

1. Tell me about a time you had to be very strategic in order to meet all your top priorities.
2. Describe a long-term project that you managed. How did you keep everything moving along in a timely manner?
3. Sometimes it's just not possible to get everything on your to-do list done. Tell me about a time your responsibilities got a little overwhelming. What did you do?

4. Tell me about a time you set a goal for yourself. How did you go about ensuring that you would meet your objective?

Communication

1. Tell me about a successful presentation you gave and why you think it was a hit.
2. Tell me about a time when you had to rely on written communication to get your ideas across to your team.
3. Give me an example of a time when you were able to successfully persuade someone to see things your way at work.
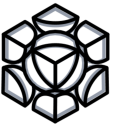
Club Exec Questions

General Questions

1. Considering COVID-19 may result in next year being online, how would you suggest the council adapt to ensure we provide as many of our plans as possible?
2. Do you have any recommendations for online events, socials, or games we could do to bond / network students?
3. What is your biggest struggle when working in group projects and how do you try to alleviate it?
4. What is your vision for how you will evolve this role in the coming year?
5. One theme students often struggle with is promoting events on their social media, whether in group chats, or in person. How do you handle this, and what can you do to best promote what council does?
6. If you had 2 deadlines due on the same day, but you couldn't complete one of them, what would you do?
7. Greatest failure and if you could go back in time, what would you redo?
8. How would you help to bridge the divide between non-involved students, as well as between cliques in materials?
9. Do you see any of the roles being scrapped or being completely re-worked?
10. Are you involved with any other extracurriculars and if so how do you plan to balance these with school and your role on council?

Fundraising:

1. If we cannot sell merchandise in-person due to COVID-19, do you feel this role can still be justified in council, and if so, how would you help raise funds for MSE?

2. If fundraisers are limited due to COVID-19, are you willing to help out in other teams, if so, what areas would you be interested in? We may emphasize social and academic VPs.
3. What fundraisers have you heard of that have been successful?
4. Reaching out to large companies for sponsorship is a great way to increase funds for events. Due to COVID-19 many companies are facing economic hardship, while others have received increased demand. Do you feel this will affect sponsorship funds? How and which will you target companies in this light?

Design Questions

1. What are some 3d printable merchandise / swag that you feel could be successful in fundraisers for MSE?
2. You are given the task of creating VP profiles to post on social media. What program / resources would you use to make these, and what would they look like. Please provide a template for profiles for execs and submit this within 48 hours of the interview.

Academic

1. Considering classes may be online next year, how would you try to help students in 2nd year / above courses?
2. How would you run industry night if we transition to online in the fall semester, without knowing how the winter semester will go?
3. For this position, we expect to have a lead and assistant lead. If this is the scenario, are you comfortable working in this structure?

Admin:

1. Someone has a deadline coming up, you've contacted them once, and you've reached out again and they don't respond. The presidents don't have time to deal with this issue, so how do you ensure that this task gets completed on time to prevent the event/policy/etc from falling through?
2. What is your experience with running team management servers such as Slack, Microsoft Teams, Asana, and how would you use or not use these programs to help keep yourself and team members on track?
3. What can make you especially powerful as VP admin outside of taking notes?

Finance:

1. If someone comes up to you and lost their receipt for an approved expenditure, how do you handle the situation? What do you tell the person who has spent this money?
2. How would you keep track of cheques dispensed to individuals for reimbursements?
3. If the bank account has a debit card, how do you ensure that these finances aren't abused?

Social:

1. Do you feel that the events (not the timings) were appropriately aimed at the whole materials student body? How could we create better and more desirable events?
2. Considering you are in a different year than many targeted students (2nd year, 4th year, etc) how will you create better timing for events to avoid placing socials during unwanted hectic times?
3. If we remain online next year, are there comparable online "venues" like that of laser tag you hope to work with to run events?
4. If we are in person next year, what NEW events would you try to run?
5. We hope to increase the collaborations we have next year. How would you hope to do this, and with what groups?
6. With groups like the Materials Student Technical Society run by Daniella and Farheen, do you see opportunities to engage with graduate students for social, not just academic events, in helping to include them as not just mentors but friends for undergraduates?

Outreach:

1. 1P13 will have a large impact on the exposure of Materials to first year students. What are some ways you plan on increasing engagement with these students?
2. From your experience, what are some effective and ineffective strategies for increasing interest in materials for first years?
3. How can the faculty improve the perception of materials in their teaching during 1P13 to help remove the negative connotation of students being in materials because they didn't get into their program?

2nd Year Rep Questions:

General Questions:

1. Greatest failure and if you could go back in time, what would you redo?
2. How would you help to bridge the divide between non-involved students, as well as between cliques in materials?
   a. Part 2: How would you suggest to moderate conversations online to avoid devolving into inappropriate conversation?
3. How would you suggest the MSE Society and department improve the perception of materials among first-year students?
4. How have you proven to be reliable before, and how will you do so throughout the year in this role?
5. What is your involvement with other extracurriculars and how will that impact your time allotted to this role?
6. Considering we lost 1M03 and have reduced lectures in 1P13 about materials, how would we get students excited more about materials?

Co-op Assistant:

1. The VP co-op position exists to fulfill a number of certain goals:
   a. Outreach to 1st and 2nd year students about co-op experience in MATLS
   b. Help current MSE students gain the skills/experience to land a good co-op experience
   c. Do you have any new ideas to further the mentioned goals?
2. Current VP Co-op is working on the following:
   1. Co-op Talks
   2. Co-op Showcase
   3. Industry Night
   4. How do you see yourself actively contributing or building on these specific projects?

Industry Night / Professionalism Assistant:

1. What have you seen students miss opportunities in their own professional settings that hurt their ability to land co-ops? How would you suggest they improve this?

Design Assistant:

1. Considering teams will have events occurring regularly, and some with little notice, how would you help ensure that their events get promoted on all platforms timely?
2. How can we use our social media to further outreach to the general engineering student body about materials?