Academic Interview Questions
Including Postdoc Observations and Comments

Mechanical Engineering

On-site interview questions from a large US Southwestern University system asked to a MIT ME Postdoc

- What attracted you to the position in our ME Department?
- What specific areas of research would you like to pursue at our University?
- Have you identified any of the department’s current areas of research in which you might collaborate?
- What has your research involved that is related to experimental and/or computational mechanics of materials, including biomechanics and biomaterials?
- Please tell us in which of the undergraduate and graduate courses that we currently offer that you would be most interested in teaching.
- Tell us a little about your experience teaching graduate and undergraduate students.
- What do you think are your biggest strengths as a faculty member?
- What is one area in which you would like to improve?
- If you were offered the position, is there anything you can think of that might prevent you from accepting it?
- Are there any other points you would like to add?

Content provided by MIT ME Postdoc for a US East Coast Technical University - Skype Interview (20 minutes)

- At the very onset, they just quickly introduced me to the members. They then quickly asked: Why did you consider our University and why should we hire you?
- Then they passed to the second person who asked me what equipment/resources would you require, and if I have identified any areas where I could work with others.
- Then the third person asked me how can I follow the proposed topics, and how will I get the funding.
- Then the 4th person asked me if there is anything beyond what I had already shared in my application that I would like to tell now.

MIT Postdoc in Mechanical Engineering Dept. On-Site interview at a US West Coast State University

The posting was for an assistant professor in design:

- Can you teach machine design?
- Who will fund the type of research in your area?
- Have you worked on a project that has received government funding?
- Has your supervisor received NSF funding for her research?
- What kind of equipment do you need?
- What kind of administrative support do you need?

From their phone interview last month:
• Why do you want to join us?
• What can you bring in teaching and research?
• What kind of collaboration research do you want to propose?
• What kind of grant money can you bring?

**Former MIT Postdoc ME - Assistant Professor at a university in Israel**

First-round questions:
• Describe your current research objectives and your most significant research achievements to date.
• Describe your priorities and methods for developing a successful research program.
• Describe your perspective on faculty responsibilities regarding undergraduate and graduate students.
• Describe your experience teaching and your methods for developing successful teaching.
• Describe how you would contribute to a climate that attracts and supports students of all races, nationalities and genders.

**Electrical Engineering Computer Science**

**MIT Postdoc EECS – Now a tenure track Assistant Professor in the Netherlands.**

I want to outline the process for you very briefly so that you could keep it on your record and share it with the generations to come.

1) **Skype interview (about 30 min long)**
I was speaking with only one person. They are a chair of a research group consisting of 5 full-time professors and 2 assistant professors. They described the opportunity to me. It was clear they had a specific research direction in mind for this opening. I was asked to talk about my background with the emphasis on two things: 1) how my previous research fits with this position? 2) What kind of leadership experience do I have and how would I behave as a leader?

2) **On-site interview (single day)**
It consisted of a trial lecture and an hour-long interview. The trial lecture was 30 min long and it was on any topic from their undergrad curriculum that is not in my field of expertise. I was allowed to choose the topic myself and to prepare anyway I wanted. I used chalk and talk style lecture, but I believe they were open for a PowerPoint slide deck as well. The interview itself was hour long and on the same day as the lecture. I prepared a 30min presentation on my previous research, and my vision for future research if I join their department. 30 min of Q&A followed. The interviewers were several faculty and staff members. Some of them were from my area of expertise, and some were in charge of professional development of young professors at the University. I received many questions:
• What is my preferred style of teaching?
• Would I use new technology for teaching?
• How would I prepare myself to teach a new course?
• What would be my biggest challenge in teaching a new course?
• Would I be interested in developing my teaching skills further and which skills would I put emphasis on?
• What kind of leadership experience do I have?
• Which leadership skills would I need to develop in the future?
• Where do I see myself at the end of the contract for assistant professor?
• What was the main contribution of my thesis?
• Who are my professional connections?
• Why do I want to leave my postdoc position?
• Several technical questions regarding my research, proposals I worked on, and papers I wrote.

Five Questions from Boston area (EECS Postdoc)...was asked many from above plus these five.
• From the chair: "What courses can you teach and what courses would you like to teach? I hope you get the difference"
• From a Faculty: "Will you compete with your past advisers?"
• How quickly could you set up your lab? How much space would you need?
• Would you be willing to share equipment and space?
• How would you attract postdocs into your lab?

Chemistry

Interview Questions from a University in the Netherlands – MIT Chemistry Postdoc
• You are the coordinator of a European grant application, with whom will you collaborate? Name five people.
• How many people are working on your topic?
• What will you do if nothing of your proposed experiments work, and do you have a back-up plan?
• You and your two 1st year PhD students are going to a conference to present. Who will present, and who will write the abstract?
• An MSc student has not finished his thesis, how will you help?
• The pressure to publish is quite high, how are you planning to accomplish that?
• How did you get the idea for your proposal?
• What is the potential impact of your research in 5 years?
• What do you think you can improve in your teaching or would like to learn about?
• What will you do if you don’t get any external funding?

MIT Chemistry Postdoc who had a Skype interview with a University in the Netherlands.
It was much more conversational than question/answer. But here are some of the questions:
• MIT is a great place for NMR, why would you leave? Answer: Postdocs aren't a permanent position and I would like to go back to something I enjoy more, teaching science.
The structure of the American academic institution is geared towards churning out professors. This position is more instructional. How do you feel about not being a professor?

How do you handle when people damage equipment? Can you repair things yourself?

A lot of the questions weren't even about what I had done or challenges or conflicts, etc., they were geared towards collaboration and interacting with people but again, everything was very conversational so exact questions are hard to think of.

**MIT Chemistry Postdoc – Telephone Interview - Chemistry Department at a US West Coast State University**

They started by introducing themselves, then told me a bit about the school and their department. They are part of a larger system and have 42,000 full-time students, and offer BA, BS and MS degrees in chemistry. They asked me the following:

- How do you think you fit with us?
- How does accepting a position with us fit into your long-term goals as an academic?
- You will have students in your classes with a range of abilities. How do you keep them all interested and learning, supporting the weaker students and challenging the stronger?
- How big would your group be?
- How would you manage undergraduate and master's-level researchers?
- What kind of lab space and what equipment would you need?
- Are you open to teaching introductory and general chemistry courses?
- Tell us about your experiences teaching undergrads.
- Why are you interested in joining non-PhD institutions?
- Describe one of your proposed projects and what external funding sources you would pursue for it.

**Chemical Engineering**

**MIT Postdoc in Chemical Engineering – Telephone Interview with a US Southern East Coast Technical University.**

- How does your postdoc work contribute or compare to state-of-the-art literature in this field?
- List the biggest/most significant contributions in your PhD work.
- List some competitors/collaborators that you'd like to work with inside and outside the US.
- How is your work different from your postdoc and PhD advisor?
- What would you like your lab to be known for 5 years down the road?
- If we were to nominate you for a big award 10 years down the road, what would this award be for?
- What do you think will be the biggest roadblocks and challenges that your research lab would face?
- No teaching related questions were asked.
MIT Postdoc Chemical Engineering - Interview Questions for Faculty Candidates at a US Northern West Coast State University

I received this partial list of questions in advance of my telephone interview.

- What about this position motivated you to apply?
- In what direction(s) do you see your research going in the next five years?
- Beyond seeking funds from the National Science Foundation, how would you fund your research program?
- What are some of your specific equipment needs to get your research program started?
- The teaching duties for this position will include courses supporting the undergraduate program; the undergraduate program in Chemical Engineering; and the graduate program in Chemical Engineering:
  - What new courses would you like to develop?
- Our University is committed to diversity and seeks to build an organizational culture that will allow each individual to enter, participate and thrive, unimpaired by her/his identity-group status. In this culture, each of us will be valued for our uniqueness.
  - How have your experiences prepared you to be effective in an organization that holds this value?
- Any questions for us?

MIT Chemical Eng PhD student who had an academic interview at a US East Coast University:

- Why would you fit with our university?
- Tell us about your interest in undergraduate teaching.
- What graduate courses would you like to develop?
- Can you please provide an example of your teaching ratings or evaluations?
- How would you balance teaching and research?
- What type of research lab would you develop?
- What type of research collaborations would you pursue?
- What funding opportunities will you pursue?
- What strategies will you use for recruiting graduate students to work in your lab?
- What resources would you need to have a successful research lab?
- Do you have any questions for us?

Biological Engineering

Interview questions asked to a MIT Postdoc – PhD in Biological Engineering

At the end of my job interview at a US West Coast State University, the search committee went through a list of questions for over an hour.

- Who do you think can collaborate with you in our department?
- What are your long-term academic goals in the next 20 years?
- What limitations do you see in this university for your research?
- Do you have a start date in mind?
- Describe outreach activities you have done in the past years?
- What was the most difficult challenge in your career and how did you approach it?
- What funding agencies can you apply to support your work and how confident you are in your ability to get grants?

**Brain & Cognitive (Neuroscience)**

**Interview questions asked to a MIT Postdoc in Singapore – Computational Neurosciences PhD**

In the committee there were the president, the provost, the associate provost and some of the department heads. I have collected some of the questions that I remember they asked me:

- Imagine you would have an infinite amount of time, computational resources and data. Would your proposed method make sense?
- Has your advisor at MIT influenced your research and how?
- Tell me an example or idea or spin-off that could originate from your research.
- How is your lab going to be different from the work of the other hundreds of labs that do computer vision?
- Explain to me more about your collaboration with (funding agency in Singapore).
- Explain to me more about your collaboration with (another university in Singapore).
- How is your work different from your professor that is also doing computer vision?

**Environmental Sciences**

**Content provided by MIT Postdoc in Environmental Sciences**

**Questions I was asked during the phone interview at a California State University**

- Why did you apply to our departments/University?
- The job title included: looking for someone in physical meteorology, the question was how do I fit in this title based on my research?
- How many courses have you taught in the past, who were the students, and how many were in each class?
- How will I integrate students in my research, what type of background should they have, and how will I teach them?
- Am I okay with teaching a class with 50 students?
- The institute is very diverse, how will I take that into account in my classes?
- How will I deal with the fact that there are students with different backgrounds and knowledge?
- Am I coming with money (grants)?
- From the list of courses they have, what type of courses will I feel comfortable teaching
- What will I need to do my research (lab facilities, computers, etc.)?
MIT Postdoc (Environmental Atmospheric Planetary Sciences) Skype interview for a position at a university in Maryland:
1. Can you discuss three topics?
2. Describe your first grant proposal
3. What would your group look like?
4. How would you fit in?
5. Do you have any questions for us?
6. You have been working on these topics with people, when will they be completed?
7. Your work is analytical. Would you consider applying also numerical methods?

Material Science & Engineering

MIT Postdoc who had an interview for tenure track faculty position at an Ivy League College:
1. Tell me about yourself and why you applied to our College.
2. Tell us why your research is meaningful, and why you think it is most important for research in the future?
3. What courses do your grad students need to take to work together with you on your research?
4. What is your education strategy (plan) for our College?
5. With whom can you collaborate within our College or elsewhere?
6. How can you find, or what type of funding opportunities do you think you have?
7. What is your most important publication and what is its meaning in the field?
8. How would you attract undergrads to work with you in research?

Media, Arts & Sciences

Interview from a Postdoc for tenure-track teaching position in the US
• They asked me what interested me about the department, and why I’d be interested in teaching there.
• They asked me about what I would do about my current post-doc program, and what I would do about it if I got the job (if I would leave my postdoc one year early).
• The professors and dean asked me what my tenure portfolio would look like - what kinds of work would I be evaluated on, and what the balance would be between research and creative work.
• They asked me to describe my teaching experience, including any classes I have taught.
• I also had lunch with the students and taught an one-hour class.

Everyone that I interacted with (about 12 people) had looked at my CV and portfolio and knew a little about me-- I didn't have to give a full summary of my work in conversation.
Aeronautics & Astronautics

Interview questions from a Technical University in Germany for a position in computational mathematics:

Below, you may find the questions that the committee asked during the interview:

(F): asked by faculty member
(P): asked by scientific staff members: PhD/postdoc
(S): asked by a student representative

(F): Tell us three topics for PhD projects that you could supervise.
(F): Where do you see your work/group going in the next 5 years?
(F): What are, in your opinion, the areas of your research, where you made the greatest theoretical contributions?
(F): How would you cope with an exceptionally high failure rate in a written exam in one of your courses?
(F): Have you identified possible future collaborators in our department? Give us as many names as possible.
(F): Which start date do you have in mind?
(F): What kind of flow solver do you employ?
(F): What is the balance between theoretical developments and practical implementation in your work?
(F): Say you have a PhD student funded by via third-party project. Does this student have to help in correcting exams?
(F): What do you think how big your group would grow in the next 5 years?
(P): What graduate courses would you like to develop?
(S): What is your basic educational approach?
(S): How much experience do you have with undergraduate teaching?

Physics

M. MIT Postdoc (Organic and Nanostructured Electronics Lab) who had an interview in the UK.

The evening before we (me plus the other short-listed candidates) had a tour of the department and then a dinner with several faculty members. The more formal parts were the next day. This started with a seminar in the morning to the panel and other staff/students in the department. It consisted of 15 minutes on future research and 5 minutes on my future teaching, then 5 minutes of Q&A from the audience. Then there was a panel interview in the afternoon. There were 6 on the panel - the dean of sciences, the head of the department, two senior academics, then another academic from another department, and finally someone from human resources (who simply sat in to observe).
The format was 25 minutes of questions, then 5 minutes of questions from me to the panel. The questions varied from open-ended to more specific ones. Some questions I remember are listed below:

1. Why is this the right place to make your career?
2. Why do you want to be an academic?
3. Briefly summarize your teaching experience. What would you like to teach?
4. What lab space do you need? What equipment do you need?
5. How are you going to get funding?
6. After 5 years, how are you going to continue your funding?
7. Where do you see yourself in 5 years’ time? What will your research and group look like?
8. How much money do you think you’ll need to get your equipment and group up and running?

Other Questions That Could Catch You Off Guard

- The illegal questions: spouses, children, etc.
  - For example: will anything need to be done for your spouse/partner (like find them a job)?
- Would you take this job if it were offered to you?
- How would you handle an interpersonal conflict in your lab?
  - A break-up between two members of the lab who were involved?
- What makes you better than the other candidates?
- What would you do if you lost your funding?
- What kinds of tools would be available in your lab for grad student use?
- In what areas do you think your work would uniquely contribute to this department?
- With whom in the department do you envision interacting the most? Outside the department?
- What meetings do you attend? What societies do you belong to?
- What do you envision as your ideal lab: # grads, undergrads, postdocs, techs, participation of grads who are not your own students?
- To what degree do you see integrating grad students into your research program?
- Is your PI’s work closely related to your research focus, or are you fairly independent?
- How do you help grad students get started on a project?
- What’s your perspective on grad student funding?
- When and how would you respond to a student who is floundering (early vs. late)?
- What types of mentoring have you experienced -- and what would you do similarly or differently?
- What courses have you taught before?
- What do you see as the major challenges of teaching at a large (small) university?
- What do you want to teach? (grad, undergrad, seminars) Statistics?