

Dr Michael Sulu Biochemical Engineer



Hi there! I am Dr Michael Sulu – A biochemical engineer



Where do I work?

I teach Engineering at University College London, I spend a lot of my time teaching people how to grow bacteria and fungi so they can do interesting things for us!

What did I like doing when I was at school?

I have always loved maths and science, but I also loved sport. I loved singing, baking and drawing but I am not good at everything!

What do I like doing in my spare time?

I stay as active as possible by sprinting and playing basketball. I also try to spend time helping to get people into science, and with the time leftover I still try to sing sometimes, and I do a little yoga too!

What do I do as a biochemical engineer?

I design the huge industrial plants and factories that make things. It always starts with growing a lot of microorganisms and using different methods to get them to make a huge variety of things, like medicine, food, and some chemicals.



How does what I do make the world a better place?

My job involves looking at ways to help people improve their health or fight disease, as well as methods to feed and fuel the population sustainably, by making food and energy sources that are rapidly renewable.

What I like about my job

I love teaching and being able to 'play' in the lab, trying to discover new things, or solve new problems.



Challenges I have faced

I was really supported to do what I found interesting, but because I found so many things interesting, I found it hard to decide what to do. In the end, I cheated by picking a subject that has maths and all the sciences in it. Sometimes people have assumed I know less than I do, or have mistaken me for a student, but I have tried to focus on not letting anyone else define my worth. Hard work, kindness and helping others has helped me create a network that can remove some of the challenges before I face them.

If you want to be a biochemical engineer, you need:

- * to love solving problems, as engineering is a lot of problem solving and coming up with answers without knowing all the information
- * to be interested in solving the BIG problems that society faces
- * to understand that things happen at different scales, and they are all important, from the tiny microorganism to a huge industrial production plant and from an individual to a community or the whole world!



Discussion time

* Would you like to be a biochemical engineer like Dr Michael Sulu?

Why? Why not?



- * What skills and interests do you already have that would help you become a biochemical engineer?
- * What new skills and knowledge would you need to develop?



Michael Sulu is a STEM ambassador. Click <u>here</u> to access free STEM Ambassador support and resources.

Free supporting resources for biochemical engineering

Science at Work – see 'Isambard Kingdom Brunel' and 'Meet two engineers'

Engineering Our World — a series of STEM Club activities for children aged 7-11 which use famous scientists and engineers as a spring-board for group-based engineering activities

<u>I bet you didn't know...</u> articles use cutting-edge science research as a context for learning. Teacher Guides describing the research and activities and investigations for children can be used a classroom presentations. See:

- Soil fungi could reduce global warming
- How do plants know good microbes from bad ones
- Slug slime might be the answer for medical adhesives

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