What is Materials Science & Engineering?

As the name suggests, materials science and engineering is a dynamic, interdisciplinary study that combines the fundamental sciences, chemistry, physics and life sciences; with applied engineering, electronic, mechanical, chemical and bioengineering. Materials scientists and engineers work at the forefront of technology; designing, processing, modifying and fabricating functional materials to improve the quality of life, contributing to major breakthroughs in clean energy, nanotechnology, infocomm and biomedical technology.

NUS Materials Science & Engineering offers a 4-year programme fully accredited under the Washington Accord through the Engineering Accreditation Board of the Institute of Engineers Singapore. That makes our degree recognised in the United States, United Kingdom, Canada, Japan, Korea, Malaysia and many other countries.
Specialisations

There are currently two areas of specialisations in Materials Science & Engineering. The course curriculum is designed to be flexible in terms of specialisation so that it can be adapted to the future needs of companies in Singapore. In addition, the syllabus is structured, taking into account the 3 main core platforms of the Department: biomedical, infocomm and sustainable energy technologies.

NANOSTRUCTURED MATERIALS & NANOTECHNOLOGY

POLYMERIC & BIOMEDICAL MATERIALS
Career Prospects

Materials scientists and engineers have flexibility in career choices due to their interdisciplinary background, giving them very good employment opportunities. Some examples of career placement for our graduates are:

- **Aerospace & Defense Technologies**: GE Aviation, Global Engineering (under Pratt & Whitney), Ministry of Defence, Rolls Royce, Singapore Technologies Ltd
- **Banks**: Citibank, OCBC, UOB
- **Electronics & Semi-Conductors**: Bombardier, GlobalFoundries, HP Singapore, Seagate Technologies, TECH Semiconductor
- **Energy & Utilities**: Keppel Energy, Singapore Power, SP Power Grid
- **Petrol-Chemical**: ExxonMobil
- **Research Institute**: A*STAR Research Institute, DSO National Laboratories
- **Other Industries**: IRAS, Keppel Shipyards, Ministry of Education, Singapore Customs, SPRING Singapore

“Hewlett Packard Singapore seeks alternative materials to enhance our product offering and efficiency, for instance, reengineering of the material set used in our product is critical for successful transition. In addition, identifying new materials typically leads to better experience for our customers, as well as driving innovation of new products that will help enhance our customer offerings.

Our company recently hired some NUS Materials Science & Engineering graduates. With their underlying knowledge of materials and training in fundamental engineering application, the graduates provide a refreshed approach on how we qualify changes, and manage change risk, vis-a-vis time to market and product quality. Contributions of the NUS Materials Science & Engineering graduates in our organisation are critical, as we continue to expand and grow our business.”

*Tony Wong*

Product Engineering Manager,
Hewlett Packard Singapore
Enrolling in NUS Materials Science & Engineering was an enriching experience for me. The highly qualified and passionate professors were instrumental in grooming us individually to work as engineers and scientists on cutting-edge technologies. The rigorous Materials Science & Engineering curriculum, which allowed me to pursue my interest in nanotechnology, also helped develop my technical knowledge and analytical thinking skills, effectively preparing me for my role as a Product Engineer in Hewlett Packard.

Cheong Fa Siang, Class of 2016
Product Engineer, Hewlett Packard

I am really grateful for the well-rounded education I received at NUS Materials Science & Engineering. The interesting and comprehensive modules helped me build a solid foundation in the knowledge of various fields of materials science.

The hands-on experiment sessions and final year project also honed my skills in research and development, and inspired me to become a R&D engineer to contribute to the innovation in the semiconductor industry. Without the well-designed curriculum and helpful professors from NUS Materials Science & Engineering, I would never have made it in my job today.

Zhang Hanwen, Class of 2014
Research & Development Engineer, Applied Materials

After graduating from NUS with a bachelor’s degree, I was offered a 2-year management trainee scheme at Keppel Shipyard, a member of the Keppel group, as a quality assurance engineer. The knowledge and skills acquired from NUS Materials Science & Engineering such as welding metallurgy, metallic materials and corrosion have equipped me with the relevant knowledge and expertise to thrive in the area of quality assurance, in the marine and offshore sector.

Finian Lim, Class of 2012
Quality Assurance Engineer, Keppel Shipyard, a member of Keppel Group

NUS Materials Science & Engineering has equipped me with strong analytical skills and a firm foundation in problem solving. The modules taught by the professors were well structured and interesting, which allowed me to extend my creativity and further develop my interests. This course has also nurtured my passion to further my studies to have a deeper understanding of how materials can interact with each other and improve the lives of people. The rigorous projects and all-rounded curriculum definitely prepared me to take on challenges in the working world. I am always thankful for the guidance I received from my professors and coursemates during my time in NUS Materials Science & Engineering. I believe that Materials Science & Engineering is a degree that prepares undergraduates for the working world, whether in an engineering or a related non-engineering field.

Cedric Wee Chien Yi, Class of 2016
CVD Process and Equipment Engineer, Micron