Words from our Graduates

Most people have the intuitive, but incorrect, engineering ideals with greedy expectations at the workplace in mind. While the "technology" these days is extremely important, understanding how each individual process piece fits in to form the big picture.

Jamil Tari, Class of 2013

Being part of the Systems Engineering Specialisation in NUS Engineering was fantastic. I was able to engage with industry mentors and peers from across the Specialisation and was able to get a glimpse into the different fields that I'm passionate about. The opportunity to intern with many companies of varying sizes and industries was also a fantastic way to get practical engineering learning.

Nugraha Hendika, Class of 2013

Word: Networking Event - Black Cat Café, 1933

Mentor: Steven Ong, CAK Inc.

Nurturing Holistic Engineers, Impacting Lives

MECHANICAL ENGINEERING

PROGRAMME ENQUIRIES

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NUS Engineering
What is Mechanical Engineering?

Mechanical engineering is a broad discipline that combines scientific and mathematical principles with engineering judgment to create solutions for problems related to the mechanical systems of everyday life. A mechanical engineer designs equipment used in transportation, manufacturing, power generation, and medical treatment. Mechanical engineers design systems to meet the needs of human society, and they use a variety of tools and techniques to achieve their goals. These tools and techniques may include computer simulations, mathematical models, and experimental testing. Mechanical engineers work in a variety of industries, including automotive, aerospace, energy, and manufacturing.

Specialisations

- **Aerospace Engineering**: Focuses on the design and development of aircraft and spacecraft. Designers must consider the aerodynamics of flight, propulsion systems, and the structural integrity of the vehicle. Aerospace engineers work on everything from small drones to commercial airliners to spacecraft for space exploration.

- **Energy Engineering**: Involves the design and development of systems that convert, transport, and utilize energy. Energy engineers work on projects related to renewable energy sources, such as solar and wind power, as well as traditional fossil fuels.

- **Environmental Engineering**: Focuses on the design and development of systems that improve the quality of the environment. Environmental engineers work on projects related to water and air pollution, waste management, and the development of sustainable technologies.

- **Sustainable Design**: Emphasizes the integration of environmental, social, and economic considerations into the design process. Sustainable design aims to create products and systems that are environmentally friendly, socially responsible, and economically viable.

Career Prospects

The versatility of training in mechanical engineering opens up a wide range of career opportunities. Graduates may design products, plan projects or systems and solve problems. Bosco, the traditional systems of research and teaching are fading away. Today, the world is witness to a great change in the emergence of emerging sectors such as robotics, biomedical technology, and sustainable energy, etc. Our graduates are well equipped for the critical, creative thinking and teamwork, attuned to the rapidly changing manufacturing fields such as robotics, management, supply chain, and biology.

I would like to congratulate the student team for a Job well done in developing a reusable food solution in facilitating our machinery to set up production parts in a higher speed as compared to previous times.

Kai Yang Peng
PhD Student
GE15 and GE16 (Dean's Deck)

I supervised the student team working on our MultiMechanical Engineering Applied Materials Singapore Technology collaborative design project. It was immediately evident that the team is highly motivated and driven to make the project a success. Bosco being critical questions and engaging in discussions, the student team was able to come up with a project that is more student-centered. Through the students’ goal-directed perseverance, they honed their communications, interpersonal, and leadership skills, and these traits will be of great assistance for future success.

Kai Yang Peng
PhD Student
GE15 and GE16 (Dean’s Deck)