

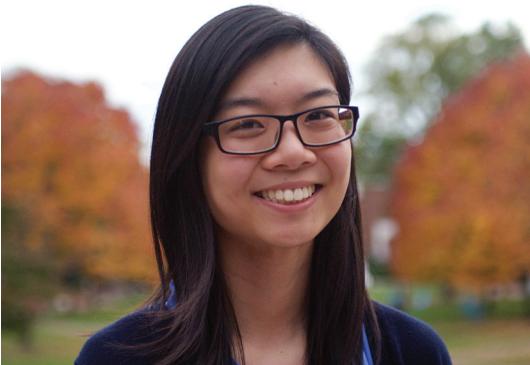
Masters Co-Op Unlocks True Engineering Careers

Training engineering students for a successful career is challenging. Students need a well-balanced curriculum that includes fundamental science and engineering theory, as well as opportunities to apply their knowledge to everyday issues. While learning in classrooms or laboratories teaches technical skills, it is the tangible experience gained through practical work that teaches them what a real engineering career feels like.

For this reason, INBT created the Masters Co-Operative Education Program. In addition

to their classroom education, students spend six months at a leading company to obtain industry experience and gain a broad practical, hands-on background in disciplines such as operations, pilot plants, safety and environmental management, or regulatory affairs. Students are supported through this experience by their department advisor, INBT's Director of Corporate Partnerships, and supervisor at their mentoring company.

The program began in the fall of 2016 with one student and one company: Andrew Beamsder-



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fer working at Becton Dickinson (BD), a medical technology company that manufactures medical devices and instruments. “The people and project management was an eye-opening experience. I designed experiments, as well as created and tested solutions to problems. My team treated me as a full contributing member to the project and not just a student,” said Beamsderfer. He now works full-time for BD.

Since then, eight students have finished the program and recruitment is ongoing. Company participation has also increased to include MedImmune, WR Grace, and Lonza: all leading companies in pharmaceuticals, specialty materials and chemicals, and biotech and pharmaceutical products and services, respectively.

The program offers students more than the development of technical skills. It also gives them a chance to build critical skills such as communication and team collaboration. “I worked on a multidisciplinary team with people who understood different aspects of what it takes to develop a product for clinical needs and bring it to market. They were very involved and invested in my professional development and making the most of my experience at the company,” said Shirley Ng, former Masters Co-Op participant at BD.

The program is still in the pilot phase and open to Chemical and Biomolecular Engineering and Materials Science and Engineering students. The next phase is to broaden the interest of other engineering departments and bring new corporate partners into the program. Companies that have expressed interest in participating include Paragon Bioservices, Air Liquide, and Hopkins Applied Physics Lab (APL). C-Care will begin hosting students in 2018.

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The program benefits all participants. Students not only get to experience the thrill of applying their education in a real-world laboratory, but also build their resumes. The participating companies not only receive support with a project they may not be able to staff, but also gain a recruiting advantage for new graduates. Finally, INBT and Hopkins not only establishes a unique engineering program, but also benefits from a closer collaborative relationship with local industry. 🍷