DEVELOPING YOUR WORKFORCE

Kent and Medway Engineering, Design, Growth and Enterprise (EDGE) Hub at Canterbury Christ Church University has a team of highly-skilled and experienced staff with a wealth of industry-relevant knowledge across engineering and technology sectors.

The collective expertise of engineering, technology and design staff is being harnessed to promote skills and capacity in industry, particularly in the context of Industry 4.0 and the wider digital transformation agenda.

CONTINUING PROFESSIONAL DEVELOPMENT (CPD) OPPORTUNITIES

We have a range of CPD taster sessions and higher and degree apprenticeships in addition to our undergraduate, postgraduate and research degrees, which are designed to answer the needs of the modern workforce.

<table>
<thead>
<tr>
<th>CYBERSECURITY AND IT SOLUTIONS</th>
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<tbody>
<tr>
<td><strong>Hybrid smart home security technology for detecting intruders</strong></td>
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<td><strong>Growing mobile technology and its implications for enterprises</strong></td>
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<td><strong>How secure are smart home technologies? A forensic case study of the security and privacy in smart home internet of things technology</strong></td>
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<td><strong>Visual technology abstraction solutions for people identification</strong></td>
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<td><strong>Cybervetting</strong></td>
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<td><strong>Incident response malicious code analysis</strong></td>
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## DEVELOPING THE WORKFORCE

### Business breakfast: Demystifying apprenticeships with an engineering focus
- **Date:** 4 December 2019
- **Time:** 7.30am – 9am
- **Participants:** Engineering Managers; Project Managers; HR

### Business breakfast: Inclusive engineering recruitment - practical solutions
- **Date:** 8 January 2020
- **Time:** 7.30am – 9am
- **Participants:** Engineering Managers; Project Managers; HR

## MANUFACTURING AND INDUSTRY 4.0

### Introduction to exoskeleton robotics - for post-stroke rehabilitation
- **Date:** 23 October 2019
- **Time:** 5.30pm – 7pm
- **Participants:** Senior Managers; Engineering Company Owners; Production Engineers; Operation Engineers; Engineering Managers; Technical Staff

### 3D laser forming of advanced high strength steels, an Industry 4.0 manufacturing method
- **Date:** 22 January 2020
- **Time:** 5.30pm – 7pm
- **Participants:** Senior Managers; Engineering Company Owners; Operation Engineers; Engineering Managers; Technical Staff

### Industry 4.0 instrumentation: 2D image analysis – case studies of applications
- **Date:** 12 February 2020
- **Time:** 5.30pm – 7pm
- **Participants:** Senior Managers; Engineering Company Owners; Production Engineer; Operation Engineers; Engineering Managers; Technical Staff

## BIOCHEMICAL ENGINEERING

### Energy generation opportunities through bio waste processes
- **Date:** 5 March 2020
- **Time:** 5.30pm – 7pm
- **Participants:** Senior Managers; Engineering Company Owners; Production Engineer; Operation Engineers; Engineering Managers; Technical Staff
  - Urban bio refineries
  - Bio opportunities: algae, solid state fermentation, advanced anaerobic digestion

### Biochemical engineering solutions
- **Date:** 25 March 2020
- **Time:** 5.30pm – 7pm
- **Participants:** Senior Managers; Engineering Company Owners; Production Engineer; Operation Engineers; Engineering Managers; Technical Staff
  - Biomass transformation and downstream processing
  - Smoke-to-wealth: CO2 conversions to carbonised products of value
  - Sustainable waste-to-wealth

Apprenticeships offer valuable and transferable skills which are beneficial to both the apprentice and their employer. We have a proven track record of working in partnership with employers to design and deliver employer-led programmes. We are currently working with local and regional employers to deliver recognised qualifications to help apprentices succeed and enhance their career within their chosen sector. Apprenticeships provide the opportunity to gain qualifications while in full-time paid employment and to apply learning immediately to the working environment.

Sessions are free, but spaces are limited. To book your place, please visit [www.canterbury.ac.uk/edgehub](http://www.canterbury.ac.uk/edgehub)
Our degree apprenticeships are designed to address regional engineering skills shortages and sector diversity. Apprenticeships have been identified and developed with industry to support local businesses to ‘grow their own’ graduate engineering workforce as well as meeting the needs of the individual.

Our degree apprenticeships are underpinned by CDIO (Conceive, Design, Implement and Operate) - the internationally-recognised and innovative education framework developed by the Massachusetts Institute of Technology. CDIO has been shown to develop and produce industry-ready engineers and we have worked closely with regional businesses to ensure that our apprenticeship programmes will produce the right engineers for the local economy.

Apprentices will be supported not only to gain the relevant manual dexterity and technical knowledge, but also to develop occupational behaviours, including a problem-solving orientation, a safety mindset, good communication skills and adaptability.

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<tr>
<th>1. Manufacturing Engineer Degree Apprenticeship - BEng (Hons) Manufacturing Engineering</th>
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<td>Our Manufacturing Engineer Degree Apprenticeship is a unique and inclusive learning opportunity, co-designed with local industry, to equip apprentices with the knowledge, understanding and skills to take on the role of Manufacturing Engineer. This apprenticeship has been designed to support manufacturing within the regional context, with an additional pathway developed through close collaboration with, and in response to, the expanding build off-site industry. Employers can select the pathway that is most relevant to their business, with the first pathway developed to support manufacturing within Kent and Medway, and the second to support the specific needs of the build off-site industry.</td>
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<th>2. Science Industry Process/Plant Engineer Degree Apprenticeship - BEng (Hons) Process Engineering</th>
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<td>Our Science Industry Process/Plant Engineer Degree Apprenticeship has been co-designed with pharmaceutical, cosmetic, food, drink, chemical, and water utilities companies. The programme will support apprentice learning through designing, implementing, commissioning, operating and maintaining process systems to ensure process quality and efficient reliability. Apprentices will be supported to develop as Process Engineers through working with a range of company scientific and engineering teams.</td>
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**HOW APPRENTICESHIPS WORK**

As part of the apprenticeship standard requirements, an apprentice must have 20% off-the-job learning time for the duration of their contracted apprenticeship hours. This typically translates to one day a week attending the University, but can also include face-to-face or ‘blended learning’ - a combination of face-to-face and online teaching. The apprentice must be in paid employment for at least 30 hours and the employer must agree to cover the costs of the apprenticeship.

Employers usually set their own selection criteria and entry requirements. Typically candidates will have relevant level 3 (equivalent to A level) qualifications. Employers might consider prior work experience as an alternative.

The duration of these apprenticeships is 3 years, with an additional six months to complete the end point assessment. This may be reduced for a candidate with previous relevant experience and/or someone already part-qualified. Upon completion, successful apprentices will achieve an engineering degree (BEng (Hons)) level 6, relevant to their role.

**OTHER CURRENT APPRENTICESHIPS**

- Chartered Manager Degree Apprenticeship
- Senior Leader Master’s Degree Apprenticeship
- Healthcare Assistant Practitioner
- Nursing Associate (NMC 2018) Apprenticeship
- Social Worker (Degree) Apprenticeship
- Occupational Therapist (Integrated Degree) Apprenticeship
- Operating Department Practitioner (Integrated Degree) Apprenticeship
- Registered Nurse - Degree (NMC 2018) Apprenticeship

For further information, please visit: [www.canterbury.ac.uk/apprenticeships](http://www.canterbury.ac.uk/apprenticeships)