ME Materials Science and Engineering

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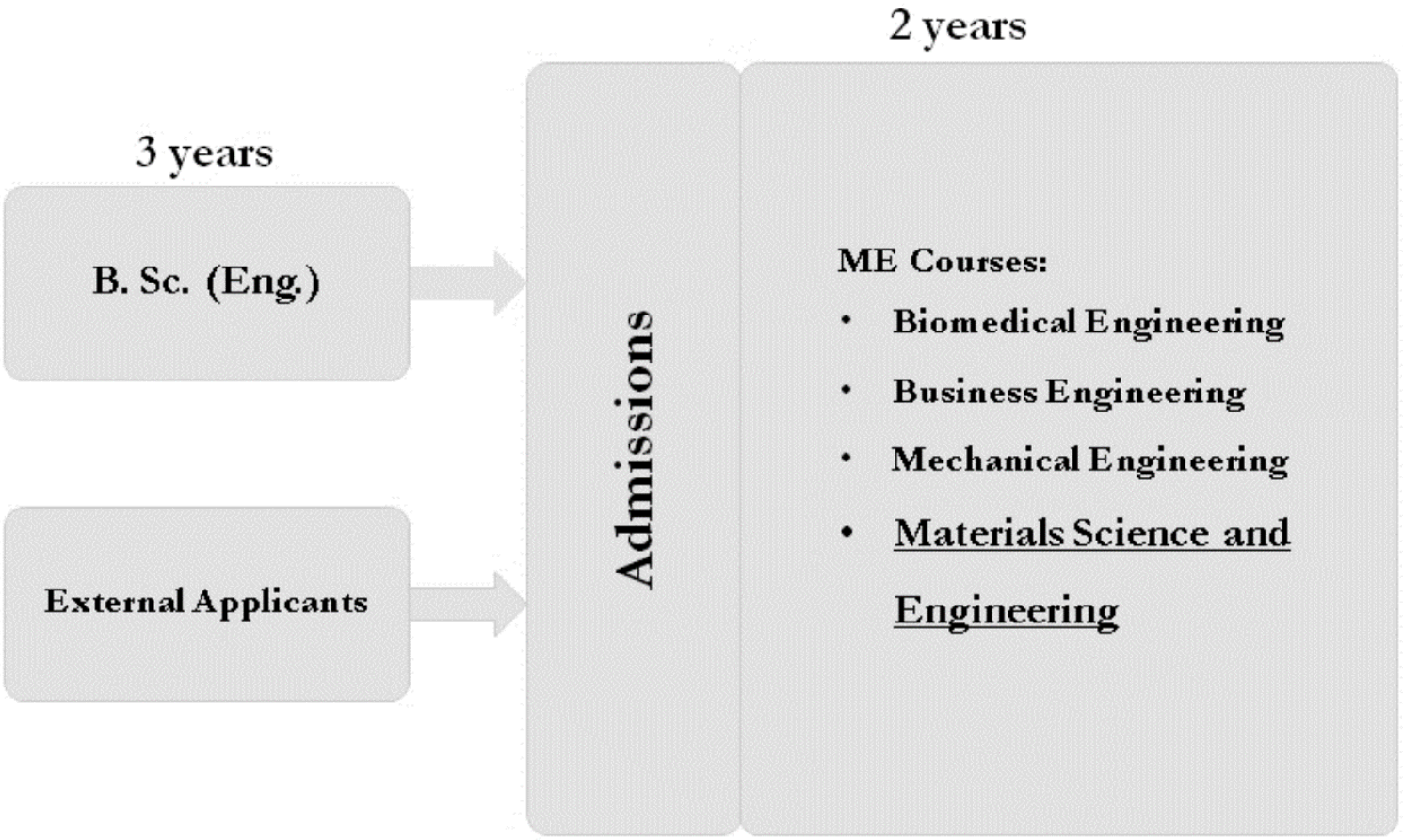
Most Critical Engineering Skills ?

- ✓ Problem-solving
- ✓ Team-work
- ✓ Creativity
- ✓ Communication
- ✓ Attention to detail

Will your selection of ME Courses affect your skillset?

ME Materials Science and Engineering

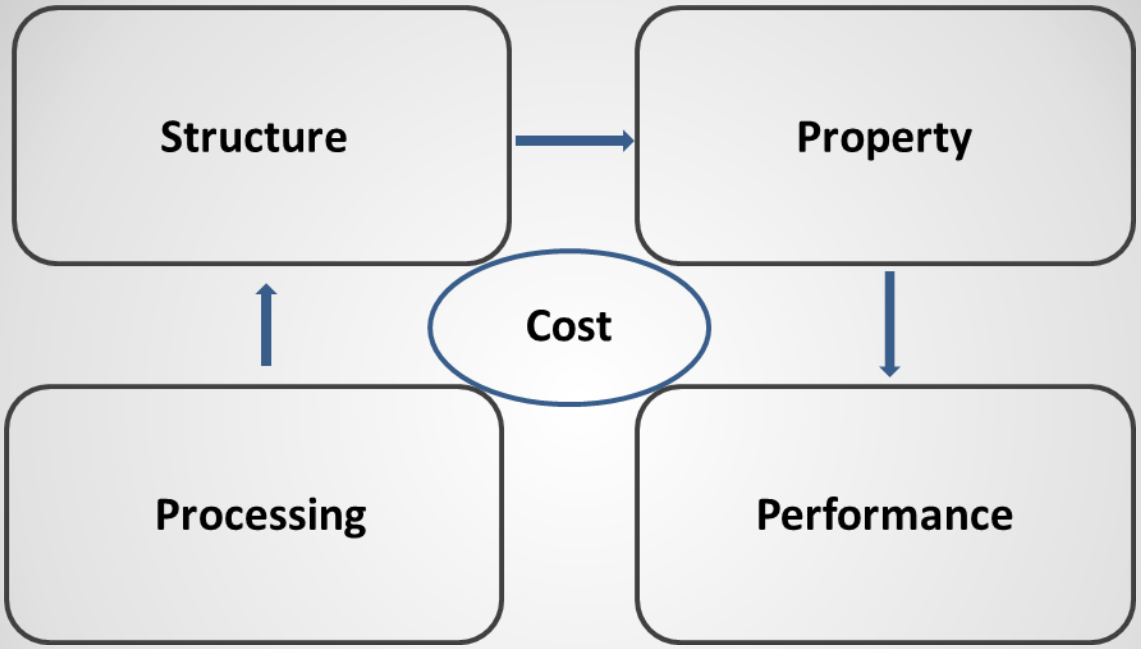


Materials Science and Engineering ?

The term **'materials'** broadly describes everything we use to make everyday objects from bicycles to buildings, toys to space shuttles

"Study of **solid** materials in engineering"

Materials Science & Engineering

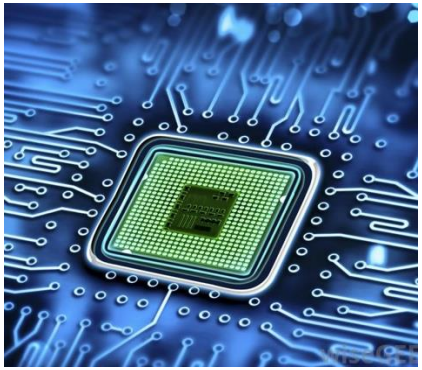


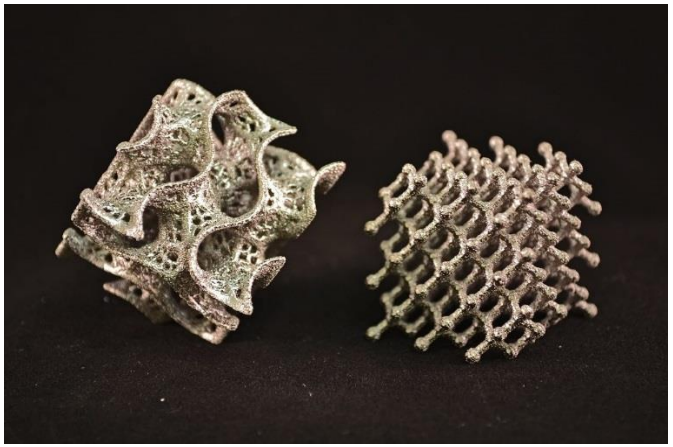
- Manufacturing Engineer, Data Scientist, Development Engineer, Research Engineer, Associate Engineer, Operations Engineer, etc.
- Around 85% of our graduates are either in Employment / pursuing further studies

ME: Materials Science and Engineering

- Master of Engineering in Materials Science and Engineering
  - A materials science degree course with a focus on **engineering applications of advanced materials**
  - **The only such course in the country**
- **2-year full-time 120 credit (ECTS) programme**
- **Professionally dual accredited**
  - **Institute of Materials, Minerals and Mining (IOM3)**
  - **Engineers Ireland**
    - **A member of the Washington Accord signatory institutions**

- Fundamentals and applications of **metals, ceramics, polymers, composites, semi-conductors and materials processing**
- **Nanotechnology, Energy, Biomedical, Manufacturing**
- **6-months Industrial Work Placement**





ME MSE: Indicative Modules

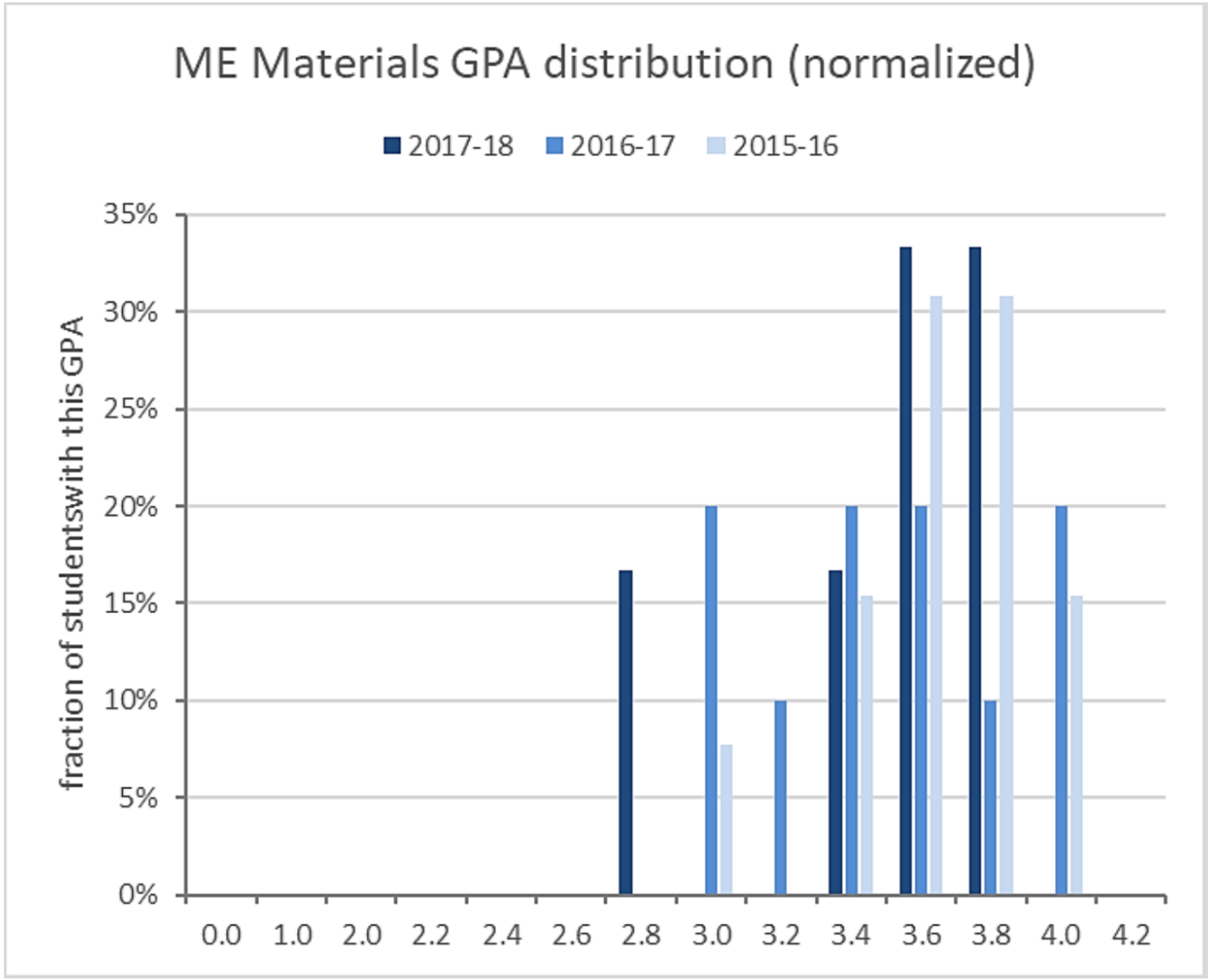
8 Core Modules:

- Advanced Metals Processing
- Material Science and Engineering II
- Technical Ceramics
- Professional Engineering (Finance)
- Solid-State Electronics
- Fracture Mechanics
- Advanced Polymer Engineering
- Professional Engineering (Management)
- Research Project
- Research Skills and Techniques;
- Professional Work Placement

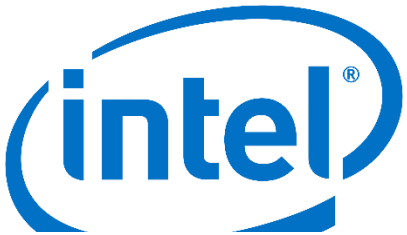
10 Option Modules:

- Computational Continuum Mechanics I
- Energy Systems and Climate Change
- Manufacturing Engineering II
- Biomaterials
- Medical Device Design
- Bio-material Interactions
- Applied Chemistry: Selected Frontiers Areas
- Nanomaterials
- Materials Thermodynamics & Kinetics
- Advanced Characterisation Techniques

2019-2024 Work Placements?


ME Materials GPA distribution (normalized)
2017-18
2016-17
2015-16
fraction of studentswith this GPA
35%
30%
25%
20%
15%
10%
5%
0%
0.0
1.0
2.0
2.2
2.4
2.6
2.8
3.0
3.2
3.4
3.6
3.8
4.0
4.2

Where can I work after completing ME Materials?



What do the graduates think about ME Materials Programme?

QA Engineer, Lockheed Martin Aeronautics Company, California, US

"Post UCD, I currently find myself working at **Lockheed Martin Aeronautics Company** in California. The (current) work is technically challenging, incredibly fun, and an honor to work on. It NEVER would have happened if it weren't for UCD. My experience for **destructive/non-destructive testing of composites at UCD** during my Masters is serving me nicely here.."

LOCKHEED MARTIN

Senior R&D Engineer, Stryker, Cork

The ME in Materials Science and Engineering provided me with the knowledge and experience necessary for the next step in my professional career. What convinced me to choose this programme was **its interdisciplinary nature** and the exposure to a wide range of engineering subjects that comes with it. The **programme manages to combine theoretical learning and practical experiences masterfully** …. Thanks to this experience and the excellent education that this programme provided me with, I was able to obtain a job at one of the world's leading biomedical engineering companies where I currently work as R&D engineer.

stryker®

What do the graduates think about ME Materials Programme?

Materials Application Engineer, GE Aerospace

"…**The broad exposure to different areas**, ranging from the mechanics-oriented to the health-related applications of materials, from the energy sector to finance, helped me gain an all-round education, essential for a contemporary engineer, and helped me move towards my career ambitions. The **industrial placement** at Johnson&Johnson MedTech helped me gain invaluable soft and hard skills I could immediately put into practice in the job market and complemented the academic offer of the Programme…"

PhD Student, Cambridge University, UK

"What I liked most about the ME in Materials Science and Engineering was the open, academic, and **interdisciplinary nature of the programme.** This experience, in turn, led me to win a prestigious fellowship that will allow me to study for a PhD at a top international university"

- ✓ Problem-solving
- ✓ Team-work
- ✓ Creativity
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- ✓ Attention to detail

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