

Welcome

School of Engineering

University of Bolton UK

26/03/2020

School of
Engineering



*Professor Danny Morton BSc PhD CEng FIET
Head of School*



*Dr Mo Sanami CEng IMechE FHEA
Programme Leader Biomedical & Medical Engineering*



School of
Engineering



Bolton – Greater Manchester



Travelling from Bolton

- | | | | |
|----------------------|--------|------------------|---------------------|
| • Manchester | 22km | 30 mins by train | cost c£4.00 return |
| • Manchester Airport | 35km | 40 mins by train | cost c£5.00 return |
| • Liverpool | 60km | 1hr by train | cost c£12.00 return |
| • London | 350km, | 2.5 hr by train | cost c£50.00 return |

With a Student railcard

- Lake District & Dales – 60km

The University of Bolton



University Halls



Bolton ONE – Health Centre & Sports



School of Engineering



Bolton Countryside



The University www.Bolton.ac.uk

Circa – 8000 students. Located on 3 campuses in Bolton

Schools/Faculties

- School of Engineering, including National Centre for Motorsport Engineering
- Arts
- Creative Technologies
- Law
- Sport & Biological Sciences
- Institute of Management
- Faculty of Health & Wellbeing = Nursing Dental Technology
- Education
- Psychology
- Off Campus locations throughout the world – e.g. Malawi, Zambia, Sri-Lanka, Ras Al-Khaïmah, Shanghai, Kuala Lumpur, Athens, Prague, South Westphalia etc.

Strong Performance For University Of Bolton In National Student Survey (NSS)



<https://www.bolton.ac.uk/strong-performance-for-university-of-bolton-in-national-student-survey-nss/>

University Of Bolton Storms Up Whatuni* National League Table, And Takes First Place In Greater Manchester



<https://www.bolton.ac.uk/university-of-bolton-storms-up-whatuni-national-league-table-and-takes-first-place-in-greater-manchester/>

University Of Bolton University No1 for Student Satisfaction Greater Manchester



Out of 130 UK Universities



School of Engineering Programme Areas

- *Automotive / Motorsport*
- Biomedical & Medical Engineering
- *Civil Engineering*
- *Construction Project Management*
- *Electrical & Electronic Engineering*
- *Mathematics*
- *Mechanical Engineering*
- *Mechatronics*
- *Systems Engineering*



Programmes from Foundation Programme through to PhD

Investment in Facilities

- Recent circa £1 Million invested in facilities for engineering
- Centre for Advanced Performance Engineering
- Electrical and Electronic Engineering laboratories
- Projects workshop
- CNC machinery
- New Geospatial Engineering Laboratory.
- Planned expansion in Intelligent Construction – Technology Assisted Living Project.



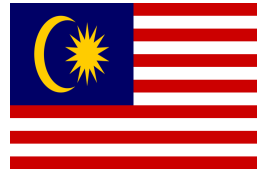
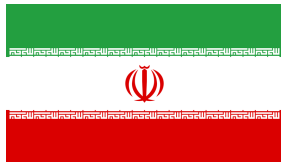
New Mechanical Science Laboratory

- *Launch September 2019*
- *£0.25m development*



Multidisciplinary International Staff Team

- Our staff come from over 10 different countries bringing an international dimension to all our programmes
- We have collaborative partners delivering our programmes throughout the world



Professional Body Accreditation

*The Institution
of Structural
Engineers*

 INSTITUTE OF
HIGHWAY
ENGINEERS

ice

 **CIHT**

CIWEM Chartered Institution of
Water and Environmental
Management

 **cabe**
chartered association
of building engineers

 Engineering
Council

IET The Institution of
Engineering and Technology

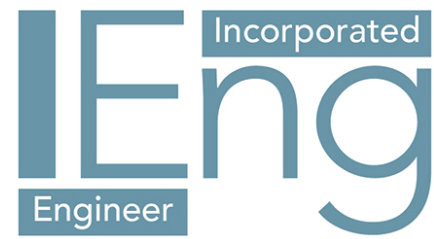
 **CIOB**
THE CHARTERED INSTITUTE OF BUILDING

 **IPEM**
Institute of Physics and
Engineering in Medicine

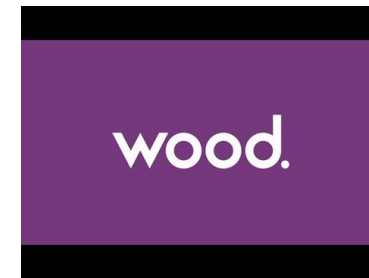
 Institute of
mathematics
& its applications

**Institution of
MECHANICAL
ENGINEERS**

Professional Registration



Strong Links with Industry



Our Ethos

- We deliver a wide range of taught undergraduate & Postgraduate programmes.
- Strong research background, delivering a number of PhD's both on campus, and off-campus with collaborative partners.
- Strong ethos of working with industry
- All undergraduate programmes developed as UK Apprentice Degrees for delivery to industrial based students.
- Track record of delivering KTP's (UK Government sponsored - Knowledge Transfer Partnerships)
- Up to date modern facilities with dedicated Engineering building.
- Majority of staff practice based with significant industrial and research experience.
- Over 90% staff qualified at Doctorate Level or Chartered Engineers.

Our Approach to Teaching

- Small Class sizes –Less than 30 students in most cases
- Lots of individual support
- Industrially relevant curriculum
- Dedicated team of mathematicians
- Enhanced Personal Tutor System
- Specialist study support modules on a range of topics
- Formative assessment policy with lots of feedback
- A focus on innovation and problem solving in all programmes
- Teaching Intensive Research Informed (TIRI)

Teaching Intensive Research Informed

- Our principal focus is on teaching and supporting students
- We like all our staff to engage in research
- We have a strong research profile with over 70% of our research deemed to be of international standing and excellent in the last Research Excellence Framework
- The research activity helps our staff to be up to date in their teaching
- We challenge students with industrially relevant problems

Masters Degrees

- MSc Systems Engineering (Electronic) And Engineering Management
- MSc Systems Engineering (Mechanical) And Engineering Management
- MSc Systems Engineering (Mechatronic) And Engineering Management
- MSc Engineering Management
- MSc Civil Engineering
- MRes Engineering Management

New Masters Degrees for 20/21

- MSc Electrical & Electronic Engineering
- MSc Systems Mechanical Engineering
- MSc Biomedical Engineering
- MSc Electric Vehicle Technology
- MSc Civil Engineering
- MSc Robotics, Autonomous Systems and Telecommunications

The Offering for 2020/2021

- £7700 per student, with students paying for their own accommodation. The University will assist students to find private accommodation in Bolton.
- Summer School £400/student. **27th July to 21st August 2020**
- Typically private accommodation in Bolton is £50 to £90 per week per student.

MRes – Master of Research

- A UK based Level 7 qualification focussing on research training.
- A Foundation for a research career in industry and study at PhD level.
- Can give advanced standing for entry into a Doctorate programme.
- Study modes – Full-Time and Part-Time.
- Industry based.

Summer School CPD Diploma - Engineering Orientation Programme

This CPD programme is designed for candidates who hold an HND or equivalent in Engineering and aspire to enter directly into the final year of one of our BEng Degrees.

Normally study of the orientation programme will not be a condition of entry to the top-up Degree but some candidates may be strongly advised to undertake study on this programme. All applicants will, however, be given the option of joining this programme.

It is proposed that the following study modules will be offered:

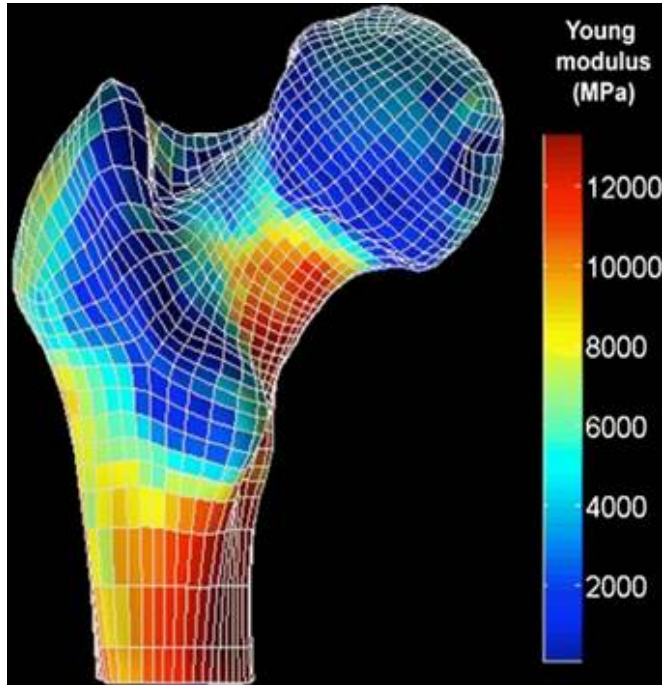
- EFP 3001 - English Summer Course (0 credits)
- EEE 5001 - Instrumentation & Control (20 credits)
- AME 5002 - Mechanics of Materials and Machines (20 credits)

For the award of the CPD Diploma candidates will normally take EFP 3001 and one of the two technical modules for entry into the final year of one of our Engineering programmes.

Programmes

- BEng Civil Engineering
- BEng Mechanical Engineering
- BEng Electrical & Electronic Engineering
- BEng Biomedical Engineering
- BEng Automotive Performance Engineering (Motorsport)

What is an Engineer?



ENGINEER



What my friends think I do



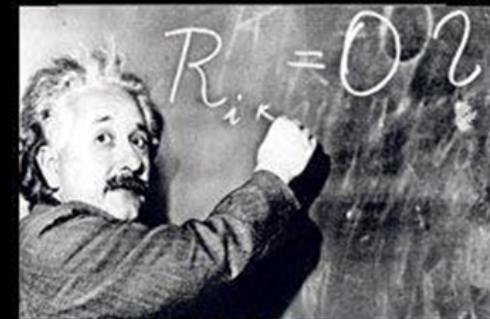
What my Mom thinks I do



What society thinks I do



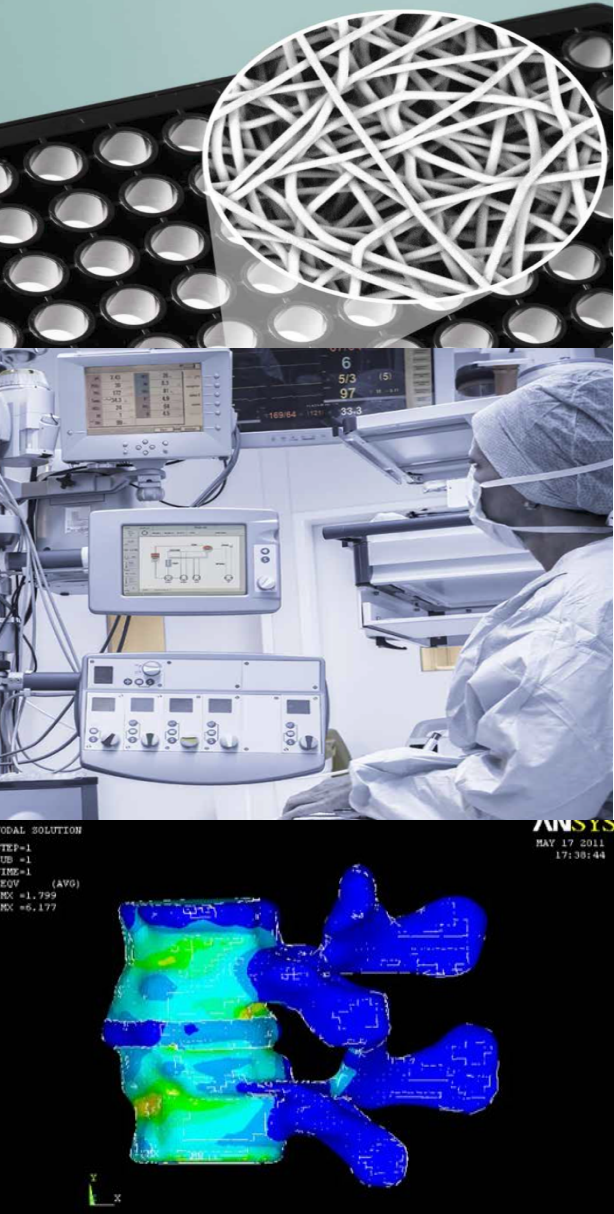
What the government thinks I do



What I think I do



What I really do



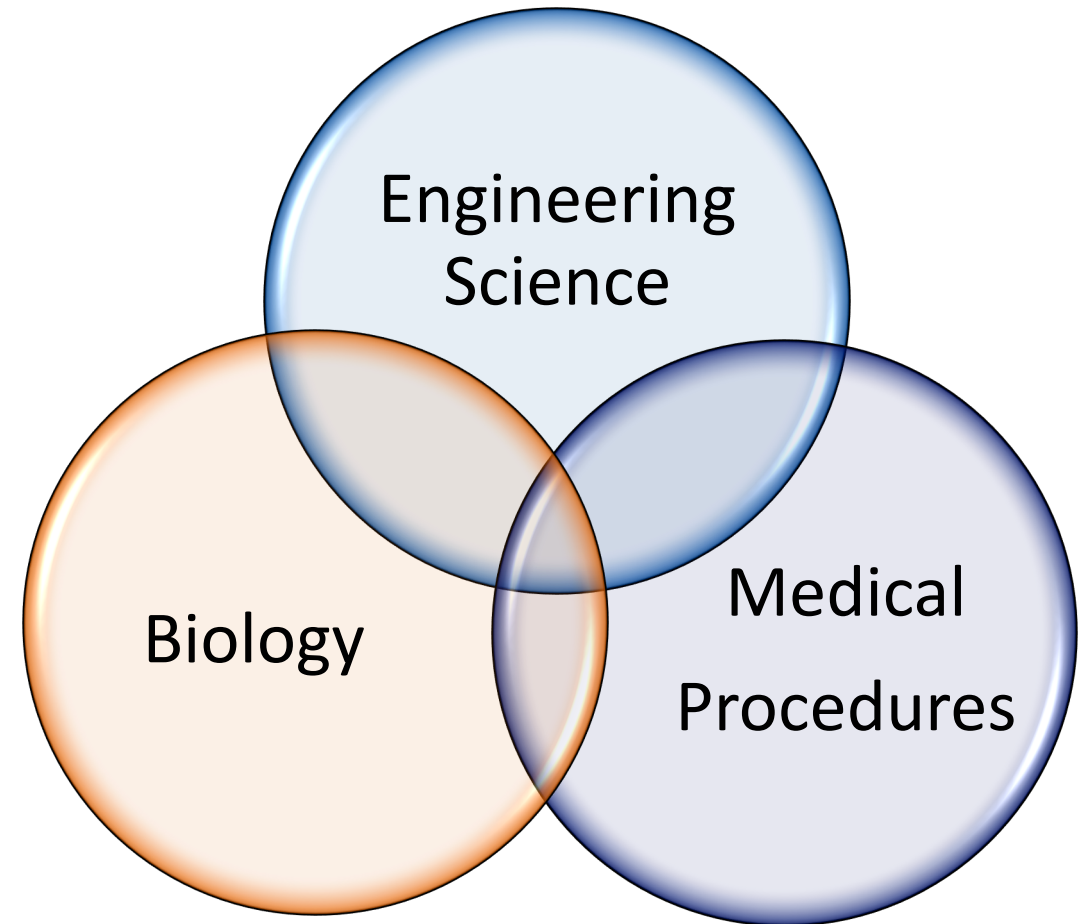
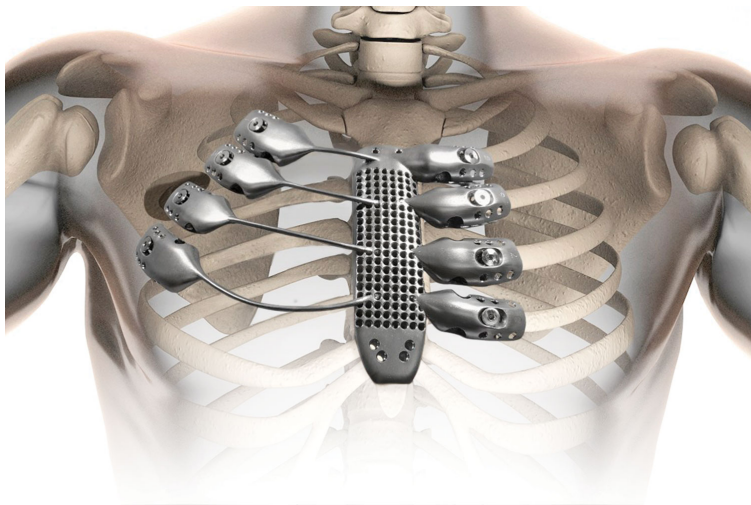
IPEM

Institute of Physics and
Engineering in Medicine

Biomedical Engineer

- ❖ Designs and develops equipment and its function
- ❖ Evaluates the data collection such as: temperature, pressure, flow rate and electrical current.
- ❖ Decides the methodology for Manufacturing and assembly of devices and equipment.
- ❖ Develops the next generation of devices and equipment.

Interaction of many disciplines



Meet the rest of the team

- Diverse Team
- Industrial Experience and Research mix
- All Fellows of the HEA (minimum)
- All Members of Professional Engineering Bodies (minimum)



Our Programmes

- BEng (Hons) Biomedical Engineering
 - BEng (Hons) Biomedical Engineering with Foundation
 - BEng (Hons) Medical Engineering
-
- MSc Systems Engineering & Engineering Management
 - MRes
 - MPhil
 - PhD



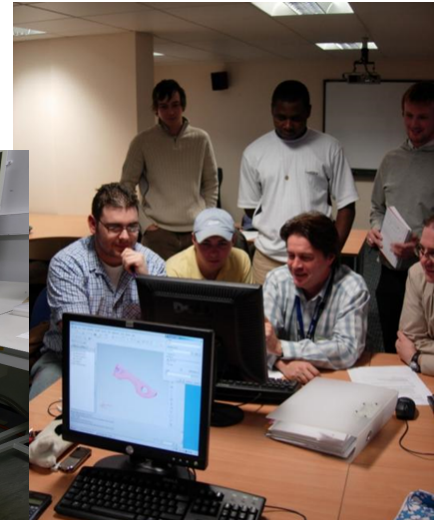
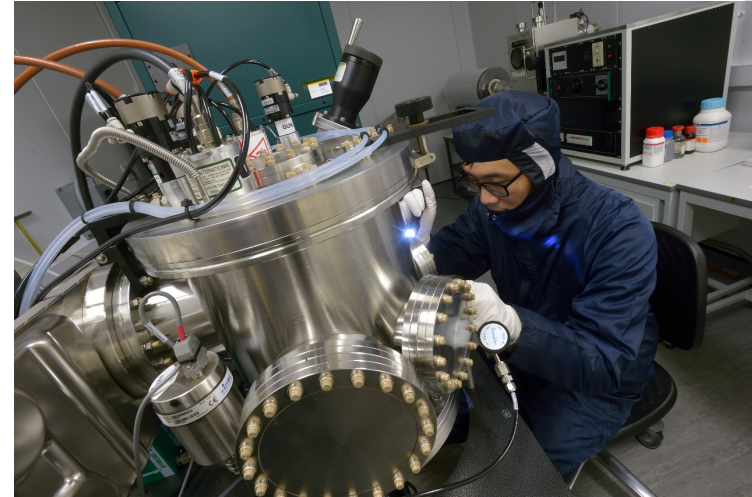
Specialisms in Biomedical Engineering

- Software & Electronics
- Management & Executive
- Manufacturing
- Regulatory and quality
- Design
- Scientific & laboratory
- Research & development

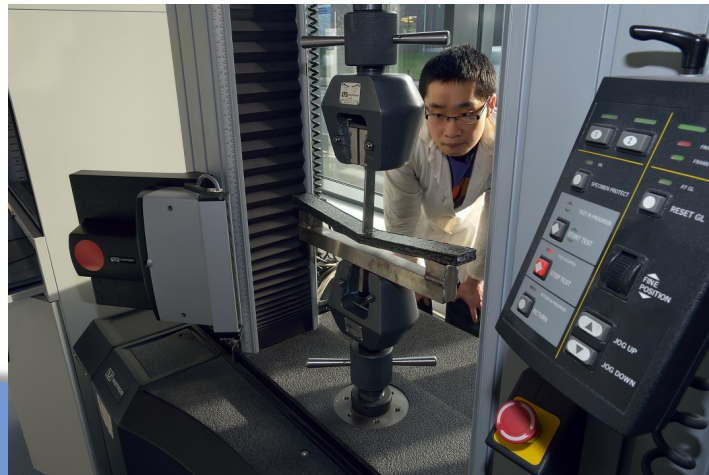
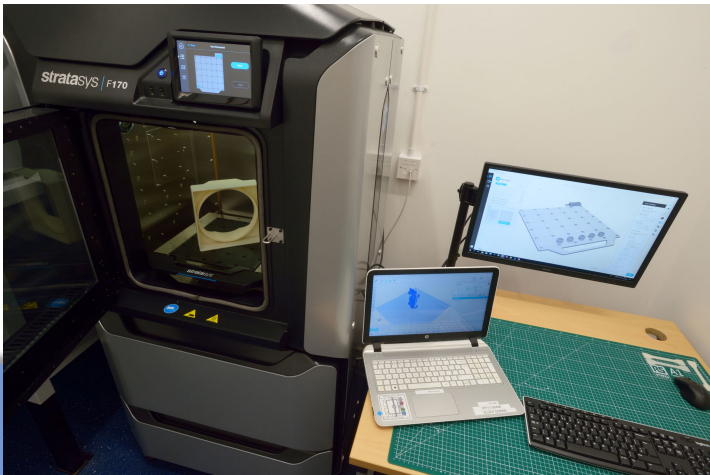
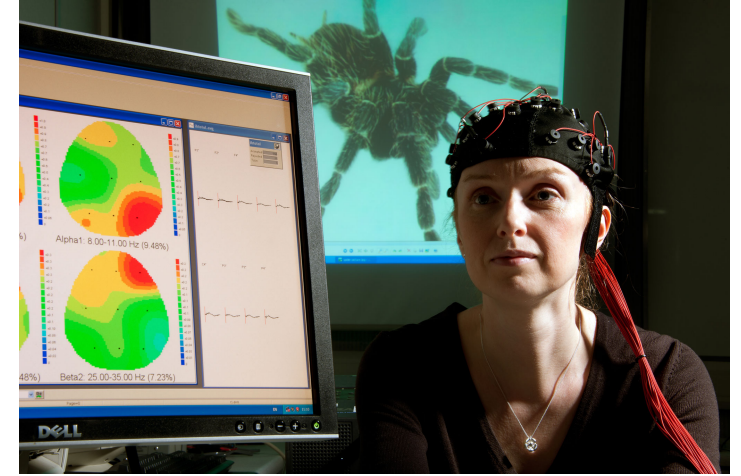
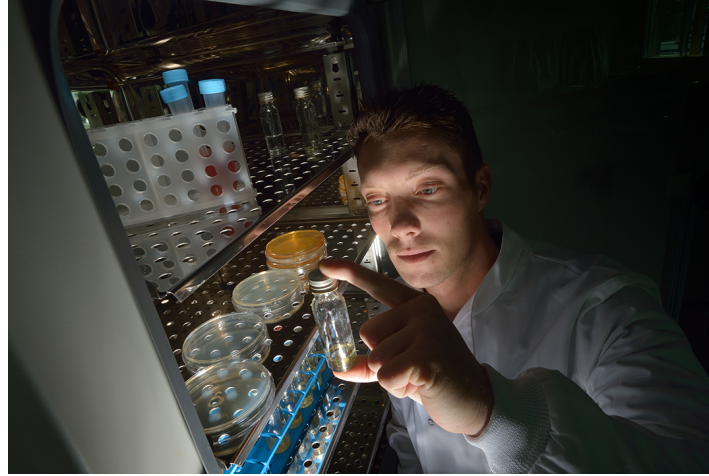


Examples of what and how you will Learn

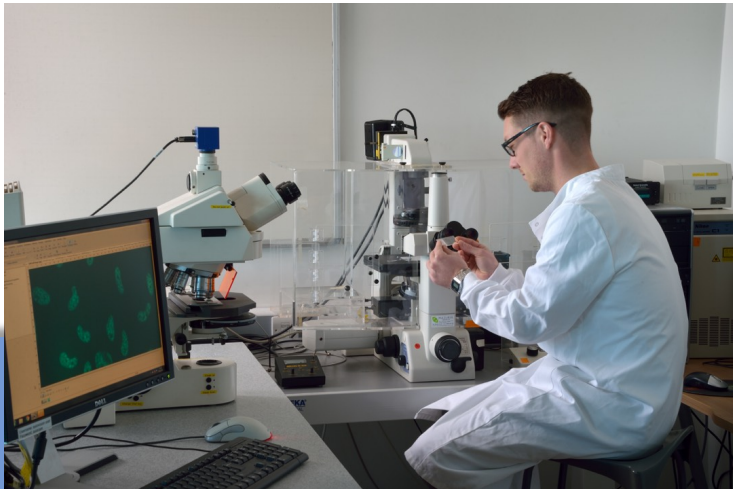
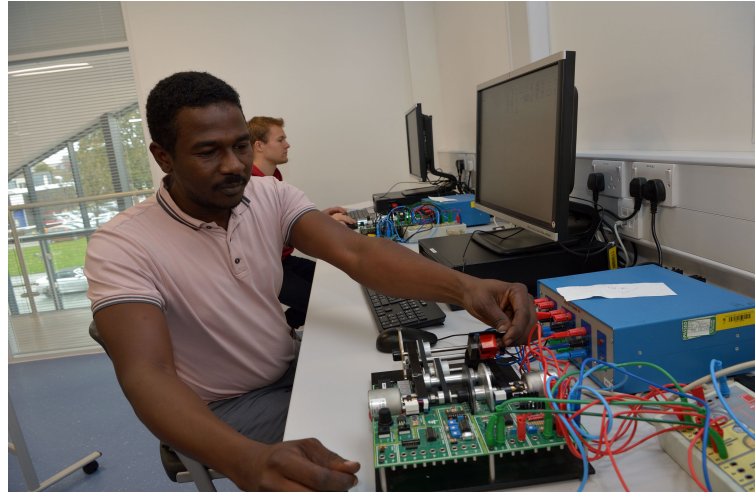
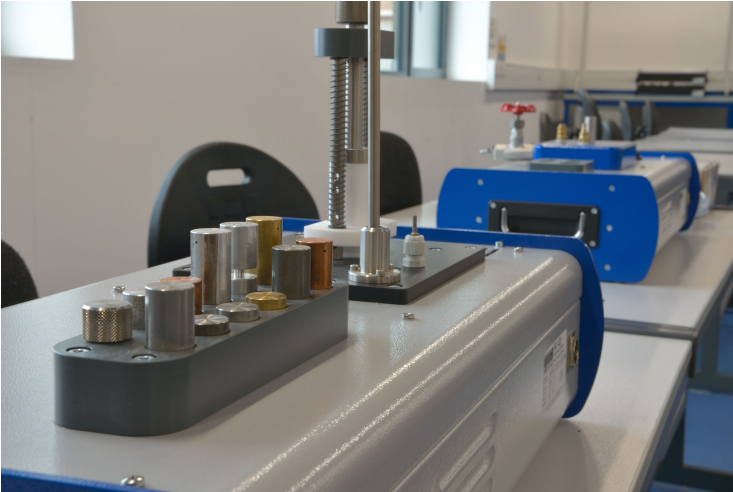
- Mixture of classroom, studio, workshop
- Modest class sizes
- Accessible staff
- A personal approach
- Industry standard software
 - SolidWorks
 - Simulink
 - Matlab
 - Ansys
- Student Voice
- Personal tutor



Examples of what and how you will Learn



Examples of what and how you will Learn



Programme structure

- All modules UK-SPEC compliant
- Modular structure
- Combination of Assessment methods
- Regular Feedback
- CPD embedded

Today < > 30 Sep – 4 Oct 2019 month week day list

	Mon 30/9	Tue 1/10	Wed 2/10	Thu 3/10	Fri 4/10
all-day					
08					
09	09:00 - 10:30 Teaching - Lecture ATT3033-19-A3 [Foundation Principles 1] ATT3033-19-A6 [Foundation Principles 1]	09:00 - 10:30 Teaching - Lecture ATT3033-19-A3 [Foundation Principles 1] ATT3033-19-A6 [Foundation Principles 1]			09:00 - 10:30 Teaching - Lecture ATT3035-19-A3 [Engineering Study Skills] ATT3035-19-A6 [Engineering Study Skills]
10					
11	11:00 - 12:30 Teaching - Lecture ATT3033-19-A3 [Foundation Principles 1] ATT3033-19-A6 [Foundation Principles 1]	11:00 - 12:30 Teaching - Lecture ATT3033-19-A3 [Foundation Principles 1] ATT3033-19-A6 [Foundation Principles 1]			11:00 - 12:30 Teaching - Lecture ATT3035-19-A3 [Engineering Study Skills] ATT3035-19-A6 [Engineering Study Skills]
12					
13	12:45 - NCA Sports - Toning	12:45 - NCA Sports - Yoga	12:45 - NCA Sports - Pilates	12:45 - NCA Sports - Yoga	
14	13:30 - 15:00 Teaching - Practical/Workshop ATT3037-19-A1 [Foundation Principles 0] ATT3037-19-A2 [Foundation Principles 0]	13:30 - 15:00 Teaching - Practical/Workshop ATT3037-19-A1 [Foundation Principles 0] ATT3037-19-A2 [Foundation Principles 0]			13:30 - 15:00 Teaching - Lecture ATT3035-19-A3 [Engineering Study Skills] ATT3035-19-A6 [Engineering Study Skills]
15					
16	15:30 - 17:00 Teaching - Practical/Workshop ATT3037-19-A1 [Foundation Principles 0] ATT3037-19-A2 [Foundation Principles 0]	15:30 - 17:00 Teaching - Practical/Workshop ATT3037-19-A1 [Foundation Principles 0] ATT3037-19-A2 [Foundation Principles 0]			15:30 - 17:00 Teaching - Lecture ATT3035-19-A3 [Engineering Study Skills] ATT3035-19-A6 [Engineering Study Skills]
17					

Today < > 30 Sep – 4 Oct 2019 month week day list

	Mon 30/9	Tue 1/10	Wed 2/10	Thu 3/10	Fri 4/10
all-day					
08					
09					
10					
11	11:00 - 12:30 Teaching - Lecture BME4003-19-A [Introduction to Biomechanics] M1-022 - Teaching Room [30]	11:00 - 12:30 Teaching - Tutorial/Seminar BME4007-19-A [Biomedical Engineering Projects and Systems]		11:00 - 12:30 Teaching - Lecture BME4002-19-A [Molecular Principles of Biomedical Engineering]	
12					
13	12:45 - NCA Sports - Toning	12:45 - NCA Sports - Yoga	12:45 - NCA Sports - Pilates	12:45 - NCA Sports - Yoga	
14	13:30 - 15:00 Teaching - Lecture/Practical BME4003-19-A [Introduction to Biomechanics] Bolton One - Sport Science Lab 2 [03-00-045]	13:30 - 15:00 Teaching - Group/Team Projects BME4007-19-A [Biomedical Engineering Projects and Systems]		13:30 - 15:00 Teaching - Practical/Workshop BME4002-19-A [Molecular Principles of Biomedical Engineering]	
15					
16	15:30 - 17:00 Teaching - Lecture/Practical BME4003-19-A [Introduction to Biomechanics] Bolton One - Sport Science Lab 2 [03-00-045]	15:30 - 17:00 Teaching - Group/Team Projects BME4007-19-A [Biomedical Engineering Projects and Systems]		15:30 - 17:00 Teaching - Practical/Workshop BME4002-19-A [Molecular Principles of Biomedical Engineering]	
17					

Academic Calendar 2019/20

18/07/19

Academic Year	Date (Week Beginning)	Academic Week	Semester	Teaching Week	Core Activity	Assessment	Appeals	Mit. Circs.
	16/09/19				Enrolment New Full time students & Induction activities			
	23/09/19	1	Semester 1	1	Teaching		Appeal submission deadline: 28-Sept-19	
	30/09/19	2		2				
	07/10/19	3		3				
	14/10/19	4		4				
	21/10/19	5		5			Appeals Panels for refer/defer at August submissions	
	28/10/19	6		6		September Resit Exam Week		
	04/11/19	7		7				
	11/11/19	8		8	Careers Fair (14/11/2019)			
	18/11/19	9		9				
	25/11/19	10		10				
	02/12/19	11		11				
	09/12/19	12		12				
	16/12/19	13		13		Deadline for refer/defer work (Sept.19): 20-Dec-19		
	23/12/19				Bank Holidays Wed 25 Dec. & Thurs 26 Dec.			
	30/12/19				Bank Holidays Wed 1 Jan.			
	06/01/20	14		14	Teaching or Assessment Preparation Week			
	13/01/20	15		15	Semester 1 Exam Week	Semester 1 Exam Week		
	20/01/20	16		16	Teaching or Assessment Week			Mit. Circs. Deadline: 24-Jan-20

NAVIGATION
Dashboard

- Site home
- Site pages
- ▼ My courses
 - LEAP-AHEAD-2019
 - BME4004-18-UOB-J
 - BME5002-18-UOB-J
 - BME6009-18-UOB-J
 - AKB2-TUT-MBIO-MBE-18
 - BME6010-18-UOB-A
 - BME4002-18-UOB-A
 - BME6008-17-UOB-A
 - BME5001-17-UOB-A
 - AKB2-TUT-MBIO-MBE-17
 - AN2-PDR-FDY-ENG-18
 - BS9-GTO-18
 - CHS1-EEE-PRO-17
 - EDM7100-18-UOB-J
 - EDM7041-17-UOB-J
 - EDM7040-17-UOB-A
 - EEM7010-18-UOB-A
 - HM5-DATA-PROTECTION-16
 - JPE1-GDPR-17
 - BME6008-18-UOB-A
 - AME5011-18-UOB-A
 - KRG1-QP-BIO-ENG-18
 - AME6011-18-UOB-A
 - KRG1-EGP-17

MOODLE COURSE MANAGEMENT - STAFF ACCESS ONLY

Select the button below to add new Moodle courses linked to SITS modules, create Non-SITS courses, clone existing Moodle courses and to manage existing Moodle courses .

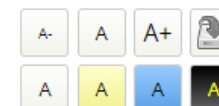
[Manage My Moodle Courses](#)
COURSE OVERVIEW
[Timeline](#)
[Courses](#)
[In progress](#)
[Future](#)
[Past](#)

LEAP-AHEAD-2019 LEAP AHEAD 2019

At the University of Bolton, we are committed to helping every student to achieve their potential. One of the ways we do this is to ask ...


BME4004-18-UOB-J Medical Sensory Devices and Measurements

summary goes here

ACCESSIBILITY


[Launch ATbar](#) ☐ (always?)

PRIVATE FILES

No files available

[Manage private files...](#)

LATEST BADGES

You have no badges to display

CALENDAR

September 2019						
Sun	Mon	Tue	Wed	Thu	Fri	Sat
1	2	3	4	5	6	7
8	9	10	11	12	13	14
15	16	17	18	19	20	21
22	23	24	25	26	27	28
29	30					

Attendance!!

- Attendance is very important
- If you are not able to attend any lectures please contact module tutor/programme leader
- Deadlines are a common everyday occurrence in our busy lives. As soon as you are given a **deadline** for a task/assignment, put it in your diary and **work backwards** from that date to ensure you achieve it on time.

● Marks		Register Details (ID: 23246640)														
□ Student		32	33	34	35	36	37	40	Min	Comment	Absent	Late	Att %	Absent	Late	Att %
4		A	A	A	A	A	A	A			7		0%	7		0%
		O	/	/	A	/	A	L	40		2	1 / 5	71%	2		71%
		/	A	A	L	/	/	/			2	1 / 5	71%	2		71%
		/	/	/	/	/	/	/					100%			100%
		/	/	/	/	/	/	/					100%			100%
		/	/	O	/	/	/	/					100%			100%
		/	/	/	O	/	A	/			1		86%	1		86%
		A	A	O	A	/	O	/			3		57%	2	1 / 5	71%
		/	/	O	/	/	A	/			1		86%	1		86%
		A	A	A	A	/	A	A			6		14%	4		43%
		/	/	/	/	/	/	/					100%			100%
		/	/	/	A	/	A	/			2		71%	2		71%
		/	/	/	/	/	/	/					100%			100%
		/	O	/	/	/	/	L	30			1 / 7	100%			100%
		A	/	O	/	/	A	/			2		71%	2		71%
		A	/	A	L	/	/	L	40		2	2 / 5	71%	2		71%
		5 / 16	4 / 16	4 / 16	5 / 16	1 / 16	7 / 16	2 / 16			28	5	75%	25	1	78%

Professional Body Relationships and Value Added

- IMechE Accreditation
- IPEM
- IMechE Challenge



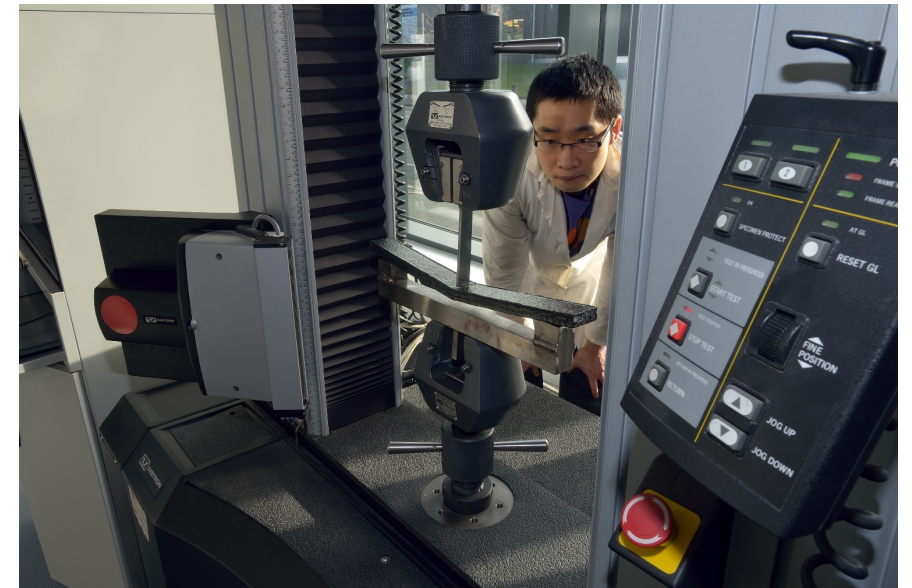
IPEM

Institute of Physics and
Engineering in Medicine

- Alliance Learning partnership
- CSWA Certification



- Ras Al Kamiah (study abroad)
- Hosting IMechE events



Industry Advisory Board

- Sellafield
- RLC - Calendar
- Ajax Ltd
- Philips Uk
- Melba Swintex Ltd
- Viridor – Energy Recovery Facility
- Automarine Cables & Components Ltd
- Movetech UK
- SENKO Group
- Trade Golf Supplies Ltd



Transforming waste™



Undergraduate Entry Requirements

- Foundation Year - 4 Year Degree: 48 UCAS points
- BEng(Hons): 96 UCAS points from Mathematical and/or physical science subjects.

We will also consider:

- Access qualifications
- Work/Life Experience – by interview
- Part Time entry



Teaching Intensive, Research Informed

 @BoltonEng