Engineering Doctorates in Composite Material, Mechanics, Design and Manufacture

Type of award  Engineering Doctorate
Department  Aerospace, research group BCI
Scholarship Details  An enhanced stipend of £22,124 for 2022/23, a fee waiver and generous expenses for the successful candidates.
Duration  4 years
Eligibility  Home/EU (UK settled status) with permanent UK residency
Start Date  Flexible from October 2022

Opportunities for doctoral studies at Bristol Composites Institute and National Composites Centre.

The NCC has supported the Industrial Doctorate Centre (IDC) in Composites Manufacture for many years. We are now seeking high calibre candidates to join our IDC and take up one of four new studentships. You will be based at NCC and will work on pre-commercial, yet industrially focused, cutting-edge research, whilst following a taught programme at University of Bristol.

The projects will be concentrated on NCC strategic areas including Low-Carbon Concrete, Sustainability and Digital Engineering. We are seeking highly motivated engineers with an eye on the future, who are interested in conducting stimulating and essential industrial research in areas such as:

- **Low-carbon concrete**, which is essential to reduce the carbon emissions created by the construction industry. The project will develop and test new materials and methods to accelerate the decarbonization of concrete, contributing to the net-zero ambitions of the UK’s Construction Industry.

- **End-of-life recycling supply chain and market demand** for recyclate, principally focusing on the market demand involving a technical, economical and environmental (LCA) approach to adapting and developing design guidelines, evaluating processing issues and demonstrating application concepts.

- **Sustainable polymers and composites** focusing on materials chemistry bridging the academic research and the increased demand from industry for materials data spanning performance, processing and environmental credibility.

- **Computer modelling of composites manufacturing processes** to avoid defects in production and understand the mechanisms that generate defects in automated manufacturing processes.

Further Particulars

Candidate Requirements
Applicants must hold/achieve a minimum a 2:1 MEng or merit at Masters level or equivalent in engineering, physics or chemistry. Applicants without a master’s qualification may be considered on an exceptional basis, provided they hold a first-class undergraduate degree. Please note, acceptance will also depend on evidence of readiness to pursue a research degree.
If English is not your first language, you need to meet this profile level:

**Profile E**

Further information about [English language requirements and profile levels](#).

**Basic skills and knowledge required:**

Essential: Excellent analytical skills and experimental acumen, commensurate with a good degree in engineering or equivalent. Ability to communicate complex ideas to a non-technical audience

Desirable: A background understanding in one or more of the following:
- Some industrial experience or internship
- Interest in engineering design
- Awareness of environmental impact of engineering
- Interest in outreach and developing community

**Scholarship Details**

We are offering an enhanced stipend of £22,124 for 2022/23, a fee waiver and generous expenses for the successful candidates.

For eligibility and residence requirements please check the [UKRI UK Research and Innovation](#) website.

Funding is open to EU applicants who have no restrictions on how long they can stay in the UK and have been ordinarily resident in the UK for at least 3 years prior to the 1st day of the month in which the student starts the programme (with some further constraint regarding residence for education).

**Informal enquiries**

Please email Professor Janice Barton ([janice.barton@bristol.ac.uk](mailto:janice.barton@bristol.ac.uk))

**Application Process**

If you are interested in making an application, please complete and submit the [online form](#) and send your CV and transcript of results to [Helen.Howard@bristol.ac.uk](mailto:Helen.Howard@bristol.ac.uk).

Selected candidates will be invited to attend an informal interview with NCC prior to candidates being invited to formally apply to the University following approval.

The initial closing date for applications is **30 November 2022**. The positions will however remain available until all scholarships are awarded.

For questions about eligibility and the application process please contact the Industrial Doctorate Centre [idc-composites@bristol.ac.uk](mailto:idc-composites@bristol.ac.uk)