BSc IN NUCLEAR SCIENCE AND MATERIALS (H821)
MEng IN NUCLEAR ENGINEERING (H822)

Course outline
Over the next ten years the UK will embark on an ambitious programme of commissioning nuclear energy, creating opportunities for graduates from plant design and construction to finding sustainable ways of recycling nuclear materials. These degree courses have been designed in response to demand from the nuclear industry to equip students with the fundamentals to provide non-fossil fuel alternatives for our future energy requirements.

This challenging and growing field offers a range of well-paid careers for graduates with strong technical and scientific skills.

The degrees bring together a range of modules taught from top ranked Schools across the University, including the School of Physics and Astronomy and the School of Metallurgy and Materials, ranked 1st and 3rd amongst the Russell Group in the 2016 Guardian League Tables for their respective disciplines. This means you will receive a first-class grounding in the issues facing the nuclear industry today, taught by some of the leaders in their field.

What will I study?
Core modules in your first year will include Fundamentals of Materials Science, Classical Mechanics and Relativity and Fluid Flow and Thermodynamics. You will also study computing and mathematics to ensure that you have the essential skills for higher study in further years. An essential component of your first year will be laboratory experience, as you will spend over five hours per week in labs.

The programmes continue providing students with a detailed understanding of the Physics of Nuclear Fusion and Fission, radiation shielding, dosimetry and the failure and environmental degradation of materials. Practical skills are developed continuously through radiation detection laboratories and group research projects sponsored by Rolls-Royce. Students who choose to follow the MEng in Nuclear Engineering will have the opportunity to study further specialised topics in their fourth year, such as reactor control systems and nuclear fuel cycles. The fourth year also includes an individual research project.

This course has been designed to ensure that you have the theoretical foundations necessary to conduct further research in this growing area, or to obtain a graduate role in a range of disciplines from reactor management to radiation safety. We have strong links with a range of companies including Magnox, NNL, AMEC, Rolls-Royce M, Serco, HSE ONR (NII), Atkins, Babcock, AWE, Frazer-Nash, BAE Systems, Westinghouse, Areva Canberra, EDF, E.ON, RWE NP and Horizon Nuclear Power giving you access to placement opportunities and careers advice.

Entry requirements
Typical offers range between AAA-AAB. Subject requirements apply. Please contact the Admissions Tutor or visit www.birmingham.ac.uk/nuclear. Scholarships are available based on A-level performance.