The University of Birmingham has been leading research into railway power systems for the last four decades, and is now regularly involved with the design, condition monitoring, and optimisation of power supply systems for railway infrastructure managers and metro operators around the world. A recognised Centre of Excellence in the industry, the University is the lead academic institution in the UK Rail Research and Innovation Network (UKRRIN), a £92 million national network of 4 research centres focussing on different aspects of the railway system; digital systems, infrastructure, rolling stock, and testing.

Building on the strong links to the industry built up by its research portfolio, the University of Birmingham has joined the IET Power Academy as an associate member with a specific remit in the area of railway power systems. Applicants to the scheme from Birmingham will be studying in the Electronic Engineering department of the School of Engineering, which offers a variety of power-system related courses, all fully accredited by the IET, and many with a specific rail focus. All undergraduate courses are available as BEng, MEng, and MSc variants, and include the option of a Year in Industry.

These include
- Undergraduate (BEng / MEng) courses in:
  - Electrical and Railway Engineering
  - Electronic & Electrical Engineering
  - Mechatronic and Robotic Engineering
- Masters level taught courses in:
  - Railway Systems Engineering and Integration
  - Railway Safety and Control Systems
  - Electrical Power Systems
  - Electrical Power Systems with Advanced Research
  - Electronic and Computer Engineering

The University of Birmingham holds a TEF gold rating, was the Times / Sunday Times University of the year in 2013/14, and the Times / Sunday Times University of the year for graduate recruitment in 2015/16.