



The  
University  
Of  
Sheffield.

Electronic &  
Electrical  
Engineering.

## **EEE6226 FUTURE ELECTRONIC AND ELECTRICAL ENGINEERING TRENDS**

**Credits: 5**

### **Course Description including Aims**

This module aims to provide students with an opportunity to carry out research into the future of any topic in the electronic or electrical fields. The teaching style will be seminar based and will cover developing basic research/technology ideas, literature reviewing techniques, social, economical and environmental impact of future technology. Expert lectures on specific topics will be provided. Students will be expected to present their opinions of the future trends of their chosen topic via an oral presentation.

Specifically the aims are

1. To allow students to choose their own research/technology topic which is of interest to them
2. Students will carry out a literature review of the topic and summarise this to their peers in group sessions.
3. Students will carry out research and discuss in groups the social, economical and environmental impact of the technology.
4. To give expert opinions of research and technology trends via academic or industrial lectures and Q&A sessions.
5. Students will present their findings and opinions to their peers and staff

### **Outline Syllabus**

Literature review skills and techniques. Expert lectures on technology areas. Seminar based group discussions/ feedback sessions. Social, economical and environmental impact of research/technology. Presentation of student findings via oral presentations.

### **Time Allocation**

3-4 two hour seminars/workshops, 3-4 expert lectures, and presentation seminars. To be held from weeks 1-18.

### **Recommended Previous Courses**

Previous undergraduate modules.

### **Assessment**

A coursework assessment covering objectives 1-3 (50%) plus a presentation of the chosen research topic and the future trend in this area (50%)

### **Recommended Books**

## **Objectives**

By the end of the unit a successful student will be able to

1. Demonstrate ability to collate and critically review literature on an electronic and electrical engineering (EEE) topic of the students choice.
2. Analyse constraints on the technology including economic, environmental, sustainability, health and safety, design risks and aesthetics.
3. Propose how the engineering life cycle {production, operation, maintenance and disposal} can drive or limit technological development.
4. Present ideas on future trends, in both written and oral formats, using evidence from previous literature research.