

## EDEXCEL BTEC LEVEL 5 HIGHER NATIONAL DIPLOMA (HND) IN ELECTRICAL & ELECTRONIC ENGINEERING

### Programme Description

This programme delivers foundation knowledge and core skills in electrical and electronics engineering. The qualification prepares learners for employment in the electrical and electronic engineering sector and will be suitable for learners who have already decided that they wish to enter this area of work. Both theoretical and practical elements of the courses are taught within college premises in the fully equipped classrooms and laboratory of LCEM. The new BTEC Higher Nationals in Electrical and Electronic Engineering have been accredited onto the Qualifications and Credit Framework (QCF). The Edexcel BTEC Level 5 HNDs in Electrical Engineering and Electronic Engineering are qualifications with a minimum of 240 credits of which 65 are mandatory core and 175 are specialist unit. This programme is the Higher National Diploma (HND) of Edexcel. This level is the academic equivalent to Year 2 of a UK University honours Degree and National Vocational Qualification (NVQ) level 5. A Higher National Diploma (HND) course is best described as a two-year full-time course, which once completed can lead to entry on the final year of a degree course.

**Programme Objectives:** This qualification meets the needs of learners by:

- Developing a range of skills and techniques, personal qualities and attributes essential for successful performance in working life and thereby enable learners to make an immediate contribution to employment at the appropriate professional level.
- Preparing for a range of technical and management careers in electrical, and electronic engineering.
- Equipping individuals with knowledge, understanding and skills for success in employment in the electrical/electronic engineering-based industry.
- Providing specialist studies relevant to individual vocations and professions in which learners are working or intend to seek employment in electrical/electronic engineering and its related industries.
- Enabling progression to or count towards an undergraduate degree or further professional qualification in electrical/electronic engineering or related area.
- Providing a significant educational base for progression to Incorporated Engineer level.

**Programme Structure:** This programme consists of 16 modules, which are spread out over four semesters (terms), typically containing four units in each semester.

### Mandatory Core Modules

- Analytical Methods for Engineers
- Engineering Science
- Project Design, Implementation and Evaluation
- Electrical and Electronic Principles

### Specialist units group A – choose units with a minimum credit value of 75 credits

- Electronic Principles
- Further Electrical Power
- Engineering Design
- Business Improvement Techniques
- Employability Skills
- Research Project
- Electrical, Electronic and Digital Principles
- Manufacturing Electronic Products
- Design for Manufacture
- Quality and Business Improvement
- Personal and Professional Development
- Work-based Experience

### Specialist units group B

- Quality Assurance and Management
- Further Analytical Methods for Engineers
- Managing People in Engineering
- Advanced Mathematics for Engineering
- Workplace Study and Ergonomics
- Statistical Process Control
- Knowledge-Based Systems and Techniques
- Managing the Work of Individuals and Teams

**Career Opportunities:** This programme offers career opportunities in any public or private organisations as an Electrical Engineer, or Electronics Engineer or a Manager.

**Awarding Body:** Edexcel, a Pearson company, is the UK's largest awarding body offering academic and vocational qualifications and testing to schools, colleges, employers and other places of learning in the UK and internationally.

**Duration/Delivery Method:** 3 years BSc (Hons) (2 years full-time in LCEM for HND and 1 year at a university) and face-to-face

**Entry requirement:** Applicants must have obtained one or more of the following:

- A BTEC National certificate or Diploma in an appropriate area
- Two "A" Level passes plus four GCSE passes at Grade A, B or C,
- Equivalent overseas qualifications
- Candidate whose first language is not English will need an IELTS overall score of 4.0

**Edexcel Registration:** Students should also register with Edexcel and be accepted for a particular level of examination. Membership registration can take place at any time of the year

**Examination:** Edexcel BTEC Level 5 HND Electrical & Electronic Engineering programme is assessed by a mixture of assignments and examinations by the college.

**Grading:** The grading of Edexcel BTEC Higher National qualifications is at the unit and the qualification level. Each successfully completed unit will be graded as a pass, merit or distinction. A pass is awarded for the achievement of all outcomes against the specified assessment criteria. Merit and distinction grades are awarded for higher-level achievement.

**University Progression:** After completion of this course, apply to third year of BSc (hons) or BE (Hons) at UK university.

**Fees:** For information regarding fees for LCEM programmes, please refer to the following website: [www.lcoem.com](http://www.lcoem.com)