Assessment

All unit topic areas will be assessed by a number of centre set assignments in which students can achieve Pass, Merit or Distinction grades.

Unit 4 will be assessed by a Pearson-set assignment. The project brief will be set by the centre, based on a theme provided by Pearson (this will change annually).

The theme and chosen project within the theme will enable students to explore and examine a relevant and current topical aspect of professional engineering.

Mode of Delivery

This course is structured to be delivered on a part time basis over two years. This will comprise of four units delivered each year.

Delivery will be at our Newtown Campus one day per week, the academic year will be 30 weeks, Mid October to June.

Course Fees

Course fees for September 2017 have been set at £1200.00 per year for a two year part time course. This includes examination/certification fees.

Should you have any queries or questions please contact us.

Contact Details

Newtown Campus

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Pearson Higher Nationals in Engineering

BTEC

General Engineering

This is a two year part time course design for students who have completed a level three engineering qualification or are mature students currently working in an engineering environment with a suitable mathematical ability.

The BTEC Higher National qualifications in Engineering are designed to address an increasing need for high quality professional and technical education pathways.

Progression from this level maybe to a level 5 HND or to degree level at a partner university.

This award can also be used by those on the Higher Apprenticeship Framework.

General Engineering Structure

Pearson BTEC Level 4 Higher National Certificate in (120 credits)		Unit Credit	Level
Core Unit 1 *Mandatory*	**Engineering Design**	15	4
Core Unit 2 *Mandatory*	**Engineering Mathematics**	15	4
Core Unit 3 *Mandatory*	**Engineering Science**	15	4
Core Unit 4 *Mandatory*	**Managing a Professional Engineering Project**	15	4
Unit 8 *Optional*	**Mechanical Principles**	15	4
Unit 9 *Optional*	**Materials, Properties and Testing**	15	4
Unit 14 *Optional*	**Production Engineering for Manufacture**	15	4
Unit 23 *Optional*	**Computer Aided Design and Manufacture CAD/CAM**	15	4

Unit Aims

Unit 1 Engineering Design

The aim of this unit is to introduce students to the methodical steps that engineers use in creating functional products and processes; from a design brief to the work, and the stages involved in identifying and justifying a solution to a given engineering need.

Unit 2 Engineering Mathematics

The aim of this unit is to develop students' skills in the mathematical principles and theories that underpin the engineering curriculum. Students will be introduced to mathematical methods and statistical techniques in order to analyse and solve problems within an engineering context.

Unit 3 Engineering Science

This unit introduces students to the fundamental laws and applications of the physical sciences within engineering and how to apply this knowledge to find solutions to a variety of engineering problems.

Unit 4 Managing a Professional Engineering Project

This unit introduces students to the techniques and best practices required to successfully create and manage an engineering project designed to identify a solution to an engineering need.

Unit 8 Mechanical Principles

The aim of this unit is to introduce students to the essential mechanical principles associated with engineering applications.

Unit 9 Materials, Properties and Testing

This unit introduces students to the atomic structure of materials and the way it affects the properties, physical nature and performance characteristics of common manufacturing materials; how these properties are tested, and modified by various processing treatments; and problems that occur which can cause materials to fail in service.

Unit 14 Production Engineering for Manufacture

This unit introduces students to the production process for key material types; the various types of machinery used to manufacture products and the different ways of organising production systems to optimise the production process.

Unit 23 Computer Aided Design and Manufacture CAD/CAM

This unit introduces students to all the stages of the CAD/CAM process and to the process of modelling components using CAD software specifically suitable for transferring to CAM software.