

Person BTEC Level 3 Diploma in Construction and Built Environment (Civil Engineering)



Course Code: HL3012

BTEC Centre no. 75879

Pearson BTEC Level 3 Diploma is potential for the qualification to prepare learners for employment in the appropriate vocational sector and it is suitable for those who have decided that they wish to enter a particular area of work. It is broadly equivalent to two GCE A Levels. Some learners may wish to gain the qualification in order to enter a specialist area of employment or to progress to a level 4 programme.

Other learners may want to extend the specialism they studied on the Pearson BTEC Level 3 Certificate, Pearson BTEC Level 3 Subsidiary Diploma or the Pearson BTEC Level 3 90-credit Diploma programme.

Study Duration

Number of modules: 12 modules

Length of study: 1 year in evening part-time mode

Assessment

100% Assignment, requires 6,000 words for each Assignment

12 Assignments is required, each unit carry one Assignment

Course Outcome

- B3C01 Health, Safety and Welfare in Construction and the Built Environment
- B3C02 Sustainable Construction
- B3C03 Mathematics in Construction and the Built Environment
- B3C04 Science and Materials in Construction and the Built Environment
- B3C05 Construction Technology and Design in Construction and Civil Engineering
- B3C10 Surveying in Construction and Civil Engineering
- B3C14 Structural Mechanics in Construction and Civil Engineering
- B3C21 Project in Construction and the Built Environment
- B3C29 Construction in Civil Engineering
- B3C30 Public Health Engineering in Civil Engineering
- B3C47 Measurement Techniques in Construction
- B3C51 Civil Engineering Construction

Course Content

- B3C01 Health, Safety and Welfare in Construction and the Built Environment
Know the responsibilities of employers and employees under current health, safety and welfare legislation. Know how to undertake risk assessments using appropriate principles and formats. Understand the control measures used to reduce risk and meet legal requirements. Know their own role in accident recording and reporting procedures.
- B3C02 Sustainable Construction
Know the important features of the natural environment that need to be protected. Understand how the activities of the construction and built environment sector impact on the natural. Environment. Understand how the natural environment can be protected against the activities of the construction and built environment sector. Understand sustainable construction techniques that are fit for purpose.
- B3C03 Mathematics in Construction and the Built Environment
Be able to use basic underpinning mathematical techniques and methods to manipulate and/or solve formulae, equations and algebraic expressions. Be able to select and apply mathematical techniques correctly to solve practical construction problems involving perimeters, areas and volumes. Be able to select and apply geometric and trigonometric techniques correctly to solve practical construction problems. Be able to select and apply graphical and statistical techniques correctly to solve practical construction problems.
- B3C04 Science and Materials in Construction and the Built Environment
Know the basic factors that affect human comfort. Understand how forces act on structures. Know the performance criteria applicable to construction materials and the techniques used to produce such materials. Understand construction materials and the techniques used to prevent their deterioration.
- B3C05 Construction Technology and Design in Construction and Civil Engineering
Know the factors that influence the design process. Be able to communicate ideas between various members of the design and production teams. Know about construction methods. Be able to

translate construction details into written and graphical instructions.

- B3C10 Surveying in Construction and Civil Engineering
Be able to perform linear surveys to produce drawings. Be able to perform levelling surveys to produce drawings. Be able to measure angles and produce results from calculations. Be able to perform the setting out of small buildings.
- B3C14 Structural Mechanics in Construction and Civil Engineering
Understand how structural elements behave under load. Be able to solve structural mechanics problems. Be able to design simple beams and columns. Be able to design mass retaining walls to withstand pressure from water and soils. Understand the use of computer software in structural analysis and design.
- B3C21 Project in Construction and the Built Environment
Be able to create a specification for a construction project. Be able to plan a construction project. Be able to implement a construction project. Be able to present the outcome of the construction project.
- B3C29 Construction in Civil Engineering
Know about fundamental techniques, processes and materials used in the construction of civil engineering works. Know the factors that constrain civil engineering work. Be able to select plant, materials and methods for civil engineering projects. Understand civil engineering infrastructure projects.
- B3C30 Public Health Engineering in Civil Engineering
Understand below ground drainage systems. Understand the methods used to treat domestic sewage. Know the methods used to dispose of solid waste. Know the processes used to produce drinking water.
- B3C47 Measurement Techniques in Construction
Be able to apply standard measurement techniques. Know about the standard methods of measurement. Be able to undertake measurement tasks, applying mathematical calculations to the measurement process. Be able to produce quantity abstracts and bills of quantities pages of measured works using manual techniques.
- B3C51 Civil Engineering Construction
Know the methods commonly used to perform earthwork activities and control groundwater. Understand the methods and techniques used in civil engineering substructures. Understand the methods and techniques used in civil engineering superstructures. Understand health and safety issues associated with civil engineering construction activities.