

Bradford's City Park - Post 16 Diplomas Educational Involvement Ideas

Diplomas	Main areas of Study	City Park
<p>Construction and the Built Environment</p>	<p>The Construction and the Built Environment Diploma is an innovative new employer-endorsed qualification that introduces young people to the nature of the built environment and its impact on both individuals and communities.</p> <p>Construction and the Built Environment Principal Learning Structure</p> <p>Construction Create the Built Environment: Structures Create the Built Environment: Using Tools Value and Use of the Built Environment: Communities Value and Use of the Built Environment: Facilities Management Design the Built Environment: The Design Factors Design the Built Environment: Stages in Design and Planning Processes Design the Built Environment: Physical and Environmental Influences Create the Built Environment: Health, Safety and Environmental Influences Create the Built Environment: Management Processes Value and Use of the Built Environment: Protecting and Maintaining and adding value to the wider community</p>	<p>Constructing the City Park – from plans to reality Construction programme and economic and environmental sustainability (local labour, supply chain and disposal of site waste).</p> <p>Considerations Making the design appropriate to Bradford Choosing/sourcing materials – cost implications, sustainability, durability Safety – slip resistance Tools</p> <p>Process: Sequence to close Channing Way: Highways Police station demolition Bus re-routing Mirror pool - construction</p> <p>Utilities Cofferdam for pavilion building Highway works Programme of works Remaining construction sequence Commissioning and completion (all the details are contained in the downloadable presentation – Constructing the City Park)</p>
<p>Engineering</p>	<p>The Diploma in Engineering gives young people a broad understanding of engineering and its related sectors in industry. The employer-endorsed content is up-to-date and relevant, reflecting the blend of technical, interpersonal and project skills needed by someone who is thinking about a career in the engineering sector.</p> <p>Introducing the Engineering World Exploring the Engineering World Investigating Engineering Design Engineering Applications of Computers Producing Engineering Solutions Electrical and Electronic Circuits and Systems Application of Manufacturing Techniques in Engineering Application of Maintenance Techniques in Engineering Exploring Engineering Innovation, Enterprise and technological</p>	<p>What's under the park: From acoustics to boreholes</p> <p>Project management , designs, CAD & CAM</p> <p>Considerations: Natural features – topography, bedrock, flood plains, water - Bradford Beck Boreholes – water source, aquifers Filtration process – from tank to pool and back Fountains, mist and lighting effects Made features – sewers, utilities</p> <p>Engineering Roles within the City Park Team</p> <ul style="list-style-type: none"> • Geotechnical • Hydrogeological (Groundwater) • Civil Engineering • Highway/Transport Engineering • Environmental Engineering

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<p>Practical Engineering and Communication Skills Introduction to Computer Aided Engineering Developing Routine Maintenance Skills Introduction to Engineering Materials Electronic Circuit Construction and Testing Engineering the Future Investigating Engineering Business and the Environment Applications of Computer Aided Designing Selection and Application of Engineering Materials Instrumentation and Control Engineering Maintaining Engineering Plant, Equipment and Systems Investigating Modern Manufacturing Techniques used in Engineering Innovative Design and Enterprise 60 Internal Mathematical Techniques and Applications for Engineers Principles and Application of Engineering Science</p>	<ul style="list-style-type: none"> • Structures • Acoustics • Mechanical and Electrical <p>Civil Engineering</p> <ul style="list-style-type: none"> • Earthworks • Drainage • Utility Diversion, disconnections and new supplies • Pavement Design • Access (pedestrians, cyclists, vehicles) • Retaining Walls <p>Structural engineering covers areas such as structural analysis and design, structural mechanics, foundation design and properties of materials</p> <p>Transport and Highway Engineers work on the strategic transport network</p> <p>Electrical Engineers have determined the total power consumption for the City Park. This required co-ordination with the Fountain Designers, Lighting Designers and Mechanical engineers to ensure that there is adequate supply for the City Park. Mechanical Engineers have developed the heating and ventilation design for the Pavilion and Media Pod. In addition the M&E engineers have designed the water pumps to deliver the various fountain sequences within the Mirror Pool</p>
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