

Pearson BTEC Level 5 HND in Construction and the Built Environment (Building Services Engineering-Electrical)

(Distance Learning)

英國國家電機工程高級文憑

課程簡介

本課程為投身電機工程界別人士鋪路，銜接相關大學課程，及取得工作所須學歷。學生亦可加入英國屋宇設備工程師學會(CIBSE)成為副會員 Associate Member。學生畢業後可進行學術評審，經評審後可符合機電工程署電牌 B 牌的學歷要求。

課程特色

BTEC (Business & Technology Education Council) 是由英國最大的頒證機構組織 Pearson 培生集團認證。Pearson 作為世界上最成功及最受歡迎的應用學習品牌之一，BTEC 資歷證書已經幫助眾多學生提升實際工作技巧，人際交流及思考技能超過 30 多年。BTEC 課程亦重視雇主的需​​求，提供職業導向性的資格證書，協助於學生在職業發展或進入大學邁出第一步。

- **國際學歷 多元出路**

BTEC 學歷由英國最大頒證機構 Edexcel 所認可，全球超過 120 個國家提供 BTEC 課程，多國大學及政府認受(部份國家須進行學術評審)，可作入讀大學，在職進入修以及移民的出發點。

- **靈活彈性化學習模式**

以網上教學模式(Tutor Live) 教授，學生即使未能按時上課亦可日後重溫課堂錄影。

課程以功課作評核，學校無須應付考試壓力，更適合在職人士業餘修讀。修讀時間也可因學生的目標而調整，更貼合學生不同時期的需要。

- **實用與理論並重**

BTEC 課程結合理論及現實行業實際需要，令學生除了學習到知識外亦強化工作到所須要的技能。

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入學條件

DSE 畢業或中六學歷

中五學歷及三年工作經驗

中三學歷需通過入學面試

課程總覽

SPT01 Individual Project

SPT02 Construction Technology

SPT03 Science & Materials

SPT04 Construction Practices and Management

SPT08 Mathematics for Construction

SPT09 Principles of Heating Services Design & Installation

SPT10 Principles of Ventilation & Air Conditioning Design & Installation

SPT19 Principles of Electrical Design & Installation

SPT22 Group Project

SPT28 Further Mathematics for Construction

SPT32 Building Management Systems

SPT33 Advanced Electrical Design & Installation

SPT40 Alternative Energy Systems Design & Installation

SPT21 Electrical Machines

SPT31E Electrical Systems and Fault

SPT53 Utilization of Electrical Power

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課程內容

SPT01 Individual Project (Pearson-set)

The aim of this unit is to support students in using and applying the knowledge and skills they have developed through other areas of their studies to complete and present an individual project. In addition, this unit will provide students with key study skills that will support them in further study.

SPT02 Construction Technology

This unit will introduce the different technological concepts used to enable the construction of building elements; from substructure to completion, by understanding the different functional characteristics and design considerations to be borne in mind when selecting the most suitable technological solution.

SPT03 Science & Materials

This unit aims to support students to make material choices to achieve the desired outcomes of a brief. This is approached from the perspective of materials being fit for purpose; as defined by testing standards and properties, but also by consideration of the environmental impact and sustainability. Awareness of Health & Safety is considered alongside the need to meet legislative requirements.

SPT04 Construction Practice & Management

The unit compares and investigates small, medium and large construction companies within the market place and how construction processes, for development, have evolved.

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SPT08 Mathematics for Construction

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

SPT09 Principles of Heating Services Design & Installation

This unit will introduce students to the principles of the design and installation of heating systems for non-domestic buildings. Subjects included in this unit are: the design process, pre-design/design brief, the production of design data, thermal comfort, calculation of Li-values, heat loss calculation, total heating loads and heating plant capacity, heating media and distribution systems, system layouts, heat emitters, heat sources, heating system components, sizing and specification of heating system components, and commissioning, testing and handover procedures.

SPT10 Principles of Ventilation & Air-Conditioning Design & Installation

This unit will introduce students to the principles of the design and installation of these ventilation and air conditioning systems that are present in all of the buildings we use in everyday life. Subjects included in this unit are: the production of pre-design/design briefs, design data, cooling loads, total cooling loads, cooling plant capacity, building overheating, peak summertime temperatures, sizing and specification of ventilation and air conditioning system components, and the commissioning, testing and handover procedures. On successful completion of this unit students will understand the principles of ventilation and air conditioning systems.

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SPT19 Principles of Electrical Design & Installation

This unit aims to provide the students with a broad understanding of electrical machines, distribution of electric energy and lighting design basics. This unit develops the skills needed to design simple electrical and lighting installations in compliance with relevant legislation and standards.

SPT22 Group Project

Through this collaborative project-based unit, students will explore how to define roles within a collaborative team, recognising the skills (and 'skills gaps') of each member of the group. Together students will work to develop a construction project; based on their research and analysis, in response to the Pearson-set 'theme'.

SPT28 Further Mathematics for Construction

The aim of this unit is to teach students to analyse and model civil engineering or building services engineering situations using mathematical techniques.

Among the topics included in this unit are: number theory, complex numbers, matrix theory, linear equations, numerical integration, numerical differentiation, and graphical representations of curves for estimation within an engineering context. Finally, students will expand their knowledge of calculus to discover how to model and solve problems using first and second order differential equations.

SPT32

The aim of this unit is to explore the rapidly growing range of services provided by Building Management System technology and assess its contribution to the renewable energy debate. There is also an opportunity to apply this research by carrying out a design of a Building Management System.

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SPT33 Advanced Electrical Design & Installation

On successful completion of this unit students will be in a position to be able to assist senior colleagues with electrical systems design and installation. In addition, students will have the advanced knowledge and skills to progress on to a higher level of study.

SPT40 Alternative Energy Systems Design & Installation

The objective of this unit is to provide students with the knowledge and skills necessary to implement suitable alternative energy technologies and understand their economic, social and environmental benefit within a broader context. Topics covered in this unit will include: energy systems, solar power systems, energy conservation, passive solar heating, wind energy, ocean energy technologies, hydro and micro-hydro turbines, geothermal energy, air pollution abatement, carbon dioxide sequestration and carbon trading economics.

SPT21 Electrical Machines

This unit introduces students to the characteristics and operational parameters of a range of electromagnetic powered machines that are used in a variety of applications. Among the topics included in this unit are: principles underlying the operation and construction of transformers, induction motors, synchronous machines, electromagnetic transducers, actuators, and generators; and operating characteristics of electrical machines such as voltage, current, speed of operation, power rating, electromagnetic interference (EMI) and efficiency.

SPT31E Electrical Systems and Fault Finding

This unit introduces students to the characteristics and operational parameters of a range of electrical system components that are used in a variety of applications; and how to fault find when they go wrong.

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SPT53 Utilisation of Electrical Power

The aim of this unit is to develop students' understanding of electrical power systems and power distribution, giving consideration to the advantages and disadvantages of alternative power sources.

課程資料

學費資料:

每科學費: HK \$3,000 (共 16 科)

BTEC 註冊費: HK \$3800

英文能力要求(IELTS 5.5)修讀時間約為一至兩年

*如沒有 IELTS 成績或英文能力未達到 IELTS5.5 的學生, 可選擇修讀 Journey2English online system, 學費 HK \$3,500 (包括一年 online English learning 和證書)

夜間授課(特別情況下會以網上授課形式上課)

上課時間: 晚上 7:00 至 10:00

教學語言: 粵語輔以英文講義

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報名及留位

請先填妥報名表, 然後以以下方式繳交費用

報名表: <https://drive.google.com/file/d/1M-g9CMk0OHPtN9CyuSMtu3VqPdJof24M/view?usp=sharing>

繳費方法

A. 銀行轉帳

恆生銀行/ 戶口名稱: Shinny Performance Training Group Limited

(024) 370-224-792001

中國銀行/ 戶口名稱: Lee Wai Yu

(012) 394-1-018-2295

B. 轉數快

電話號碼: 94643122 (匯豐銀行)

C. PayPal (信用卡)

請先聯絡職員以取得發票

D. 現金

E. 支票

抬頭: Shinny Performance Training Group Limited

繳費後請保留收據及報名表並電郵到

info@sptraining.org 或 Whatsapp 5112 8649/9317 3131。

傳送後只須等候職員確認及核對收據, 即完成報名手續。

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