

# Pearson BTEC Level 5 HND in Construction and the Built Environment (Civil Engineering)

Registration Number / Course Code: 252266 / 013N



Centre no. 75879

It is a matter of discretion for individual employers to recognize any qualifications to which this course may lead to.

個別僱主可酌情決定是否承認本課程可令學員獲取的任何資格

## 英國國家高級文憑--土木工程

### Pearson BTEC 簡介

英國愛德思 (Pearson) 國家職業學歷與學術考試機構，是英國規模最大的學歷與職業資格頒證機構之一。Pearson 由英國主要職業資格考試機構「商業與技術教育委員會“BTEC”」和倫敦大學考試與評估委員會 (ULEAS) 合併而成。Pearson 的所有課程都由英國教育與技能部“DfEs”和英國教學大綱與學歷管理委員會“QCA”共同監管。Pearson 跟政府機構、學術機構及企業緊密合作。Pearson BTEC HND 在全球獲 120 個國家的大學認可。

### 課程簡介

- ◆ 課程內容由英國愛德思國家職業學歷與學術考試機構(BTEC)提供，並結合本港實際工程界的需要，由香港設施工程學院(HKCE)主辦的晚間兼讀制課程。
- ◆ 此課程給予學員廣泛而全面的知識，為學生建立良好的學術基礎，學員可自行報讀英國或海外大學的學位課程。
- ◆ 以學生為主的互動式教學，讓學生通過完成與職業相關的課程，學以致用，注重應用操作、團隊合作、案例分析、實踐創新。除專業及關鍵技能外，重視職業通用技能的培訓。
- ◆ 摒棄傳統考試的學習評估模式，每學科以習作成績作為評核標準，令學員能輕鬆學習。

### 證書頒發

- ◆ 學員需在指定時間內成功完成指定 15 科，所有功課經 BTEC 審核合格，並及通過英文考試合格 (相等於 IELTS 5.5 或 CEFR 或 PTE 51 或相同資格; 或本校的校內英文試(由本校與 Wall Street English 合辦)，將獲得由英國愛德思國家職業學歷與學術考試機構(BTEC)頒發國際認可英國國家高級文憑 (Higher National Diploma)。

### 課程認受性

- ◆ 成功取得 BTEC HND 之學員，可自行向香港學術及職業資歷評審局 (評審局)，取得本港認可的資格。
- ◆ Pearson BTEC HND 在全球獲 120 個國家的大學認可，本學院介紹或自行報讀海外大學。
- ◆ 成功取得 BTEC HND 之學員，可申請英國一些相關學會，成為副會員 (須符合相關要求)
- ◆ 成功取得 BTEC HND 之學員，可申請屋宇署 T3 資格，唯須符合屋宇署相關要求。

### 申請 T3 適任技術人員資格要求

- 持有土木 / 結構 / 土力工程學、建築工藝學、建築測量學或建築學的高級證書或高級文憑；需有相關 5 年的工作經驗 (資料來源: 屋宇署網頁)

[https://www.bd.gov.hk/doc/tc/resources/codes-and-references/code-and-design-manuals/SS2009\\_c.pdf](https://www.bd.gov.hk/doc/tc/resources/codes-and-references/code-and-design-manuals/SS2009_c.pdf)

## 入學條件

標準入學條件	非標準入學條件(需年滿 21 歲)
<ul style="list-style-type: none"><li>◆ 中七畢業 (F.7); 或</li><li>◆ 中學文憑試畢業 (DSE); 或</li><li>◆ 持有基礎文憑 (OD/PD); 或</li><li>◆ 持有英國國家高級證書/專業證書(HNC/HC);</li><li>◆ 英文要求<ol style="list-style-type: none"><li>1. IELTS 5.5 分或以上 or</li><li>2. HKDSE Level 3 or</li><li>3. HKCEE Level D or</li><li>4. A Level Grade E or</li><li>5. 完成本校英文試</li></ol></li></ul>	<ul style="list-style-type: none"><li>◆ 中五畢業並有最少 5 年工作經驗及面試; 或</li><li>◆ 毅進課程畢業並有最少 3 年工作經驗及面試; 或</li><li>◆ 有關 10 年工作經驗及面試</li><li>◆ 英文要求<ol style="list-style-type: none"><li>1. IELTS 5.5 分或以上 or</li><li>2. HKDSE Level 3 or</li><li>3. HKCEE Level D or</li><li>4. A Level Grade E or</li><li>5. 完成本校英文試</li></ol></li></ul>

## 學費 (全期學費分 4-8 期繳交, 每期可選擇修讀 1-5 個單元)

基本學費	每單元 HK\$4800
優惠學費:	每單元 HK\$3200
9 月早鳥優惠	
現金/EPF 支付:	每單元 HK\$2,800
支票(以期票方式繳付):	每單元 HK\$2,700

## 其他費用

- ◆ 報名費 : HK\$500 (9 月成功報名, 可獲豁免報名費)
- ◆ 筆記影印費 : 每科 HK\$100 (學生可自由選擇)
- ◆ BTEC 註冊費 : 兩年註冊費 HK\$3,800, 四年註冊費 HK\$4,800,
- ◆ 兩年註冊之後需要延期, 延期費為 HK\$2,000
- ◆ 英語備試班及考試 : HK\$2,200 (03/2021 開課)

## 申請豁免條款 (一經報名, 恕不接受任何豁免申請)

- ◆ 申請獲豁免科目必須與 BTEC 課程內容相吻合, 為確保豁免科目符合 BTEC 要求, 學員需跟從指示提供相關的學術文件、成績、申請豁免科目的 Assignment, 以供本學院審核並由 BTEC 最終審核。

## 授課詳情

- ◆ 授課語言 : 以粵語教授, 英文輔助, 英文講義
- ◆ 課程師資 : 講師皆為註冊工程師或同等學歷; 或持有大學學位及最少 10 年以上工作經驗。
- ◆ 單元 : 15 單元 (共 4-8 個學期)
- ◆ 筆記 : 僅提供電子筆記
- ◆ 課程長度 : 學生最快一年內完成, 最長 4 年內完成相關課程, (由註冊日起計)
- ◆ 授課時間 : 7:00pm - 10:00pm
- ◆ 開課日期 : 每年的 3 月、6 月、9 月、12 月
- ◆ 截止報名 : 課程開課前兩星期 (詳情請向職員查詢)

## **課程內容 Course Content**

### **N5E01 – Individual Project**

Formulate a project that will provide a solution to an identified problem. Manage a project within agreed timescales and specification; documenting the process throughout. Evaluate potential project management solutions. Produce a project report and deliver a presentation of the final project outcomes.

### **N5E02 Construction Technology**

Explain the terminology used in construction technology. Describe the different techniques used to construct a range of substructures and superstructures, including their function and design selection criteria. Identify the different types of civil engineering/infrastructure technology used in support of buildings. Illustrate the supply and distribution of a range of building services and how they are accommodated within the building.

### **N5E03 Science & Materials**

Review health and safety regulations and legislation associated with the storage, handling and use of materials on a construction site. Discuss the environmental and sustainability factors which can impact on and influence the material choices for a construction project. Present material choices for a given building using performance properties, experimental data, sustainability and environmental consideration. Evaluate the performance of a given building in respect of its human comfort requirements.

### **N5E04 Construction Practice & Management**

Describe the construction industry with reference to company structures and other activities. Explain different types of construction companies in the market and their relationships within the tendering process. Discuss the key stages in a construction project, and how Building Information Modelling informs the different stages. Analyse how the construction industry has developed suitable collaboration strategies in support of greater recognition of health & safety.

### **N5E06 Construction Information (Drawing, Detailing, Specification)**

Evaluate different types of construction information in the context of diverse project types. Develop construction drawings, details, schedules and specifications in support of a given construction project. Interpret different types of construction information in order to explain a construction project. Assess ways in which construction professionals collaborate in the production of construction information.

### **N5E08 Mathematics for Construction**

Identify the relevance of mathematical methods to a variety of conceptualized construction examples. Investigate applications of statistical techniques to interpret, organise and present data by using appropriate computer software packages. Use analytical and computational methods for solving problems by relating sinusoidal wave and vector functions to their respective construction applications. Illustrate the wide-ranging uses of calculus within different construction disciplines by solving problems of differential and integral calculus.

### **N5E18 Civil Engineering Technology**

Explain the methods and techniques used in civil engineering for earthworks and substructures. Present a site safety plan, risk assessment and method statement for a given civil engineering activity. Evaluate a given civil engineering problem and propose a solution. Prepare a design proposal for a new infrastructure project.

### **N5E20 Principles of Structural Design**

Calculate bending moments and shear forces for simply supported steel and concrete beams. Determine deflection for simply supported steel beams. Calculate the axial load carrying capacity of steel and reinforced concrete columns. Explore design methods for steel, reinforced concrete beams and columns.

### **N5E22 Group Project**

Assess individual and group skills in order to allocate roles within a collaborative team. Prepare tender documentation; undertaking work appropriate to a defined role within a team. Evaluate own work, and the work of others, in a collaborative team. Plan a construction project, based on the Pearson-set theme, in collaboration with others to ensure good practice in resource management, staffing and project scheduling.

### **N5E28 Further Mathematics for Construction**

Apply instances of number theory in practical construction situations. Solve systems of linear equations relevant to construction applications using matrix methods. Approximate solutions of contextualized examples with graphical and numerical methods. Review models of construction systems using ordinary differential equations.

### **N5E29 Geotechnics & Soil Mechanics**

Review rock types, their formation and uses within civil engineering. Explore and classify soils to current codes of practice. Analyse soil properties determined by geotechnical procedures. Produce a proposal to address identified geotechnical weaknesses and problems.

### **N5E30 Advanced Structural Design**

Explore deflection due to wind loadings, on fixed structures, and strategies to resist wind loading. Determine bending, shear and deflection for complex support conditions. Design complex columns and piled foundations based on calculation. Explore the design of tensile structures.

### **N5E35 Alternative Methods of Construction**

Examine how the construction industry impacts on the environment, and how changes in the industry can create broader social and economic benefits. Explore alternative construction methods which are fit for purpose in a given context. Discuss government policy implications and health & safety constraints associated with alternative construction methods. Present a design proposal, utilising a selected alternative construction method.

### **N5E43 Hydraulics**

Apply concepts of physics to develop solutions for hydrostatic and hydrodynamic problems. Calculate forces related to fluids at rest and in motion. Develop practical solutions for the distribution of fluids within correctly sized pipes. Calculate the hydrostatic pressure exerted on substructures for a given context.

### **N5E47 Construction Data Management**

Assess the importance of information management within the construction industry. Evaluate the role of information management and how it can benefit and support intelligent information exchanges. Illustrate the information delivery cycle, in regard to BIM, and how the information management process aids the design, construction and occupation of an asset. Discuss the ways in which information can be captured, shared and managed throughout a project lifecycle.

## 報名時需提供:

- 已填妥的報名表, 報名費 500 元, 及首期學費, 及期票
- 身份證
- 履歷表
- 畢業證書
- 工作經驗證明

## 報名及付款方法

- ★ 報名時請備EPS, 現金或劃線支票(信用咭暫不接受)
- ★ 如付劃線支票·請在支票上註明收款人  
**Hong Kong College of Engineering O/B TD Professional Education Group LTD.”**  
If pay by crossed cheque, please specify the payee to be  
**“Hong Kong College of Engineering O/B TD Professional Education Group LTD.”**
- ★ 郵寄地址:香港設施工程學院, **九龍旺角廣東道982號, 嘉富商業中心15樓**
- ★ 或將學費直接存入銀行戶口, 連同銀行收據及填妥之報名表格WhatsApp至: 92330368。  
香港設施工程學院: 東亞銀行 213-68-00169-7  
尖端教育集團有限公司: 東亞銀行 514-40-55818-4  
尖端教育集團有限公司: 滙豐銀行 124-422288-001  
Or deposit the payment to our Bank A/C:  
Hong Kong College of Engineering : East Asia Bank A/C: 213-68-00169-7  
TD Professional Education Group Ltd: East Asia Bank A/C: 514-40-55818-4  
TD Professional Education Group Ltd: HSBC: 124-422288-001

and whatsApp us the bank receipt accompany your application form at 65286900.

- ★ 或連同報名表格及學費親臨本學院繳交。  
(Or submit the application form with the course fee in person
- ★ 或支付寶:
  - 首先開啟支付寶『掃一掃』
  - 再掃描二維碼及輸入金額
  - 交易完成
- 6. 如申請退學, 學生需於本課程開始前最少5個工作日以書面通知退學  
否則已繳學費概不退還。申請者申請退還學費需繳交手續費HK\$300。
- 7. 延遲交付學費的學生必須遵守本學院的規定, 按照申請書上的延遲日期  
為期限, 到期不交學費, 本院收取附加費用 5%。



## 注意事項

1. 香港設施工程學院已實施個人資料 (私隱) 政策, 有關資料單張可於報名處索閱, 或閣下可與本學院個人資料管理主任查詢。
2. 香港設施工程學院保留在任何情況下及以任何原因拒絕任何入學申請的權利。申請者繳付學費後, 仍須符合入學的所有條件, 其申請方可獲得接納。
3. 香港設施工程學院保留在任何情況下更改課程內容、授課地點、日期及時間的權利。
4. 如申請退學, 學生需於本課程開始前最少5個工作日以書面通知退學, 否則已繳學費概不退還。申請者申請退還學費需繳交手續費HK\$300。
5. 延遲交付學費的學生必須遵守本學院的規定, 按照申請書上的延遲日期為期限, 到期不交學費, 本院會收取每單元附加費用 5%。

查詢熱線 : 3165 8069  
電郵地址 : [enquiry@tdpedu.org](mailto:enquiry@tdpedu.org);

WhatsApp : 65286900  
學院網址 : <http://www.tdpedu.org>