

**电子商务、金融科技和  
电子商务网络编程技能的知识实践。**  
Knowledge of technologies and applications of E-Commerce,  
Financial Technology (FinTech) and E-Commerce Web programming skills.



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# 软件工程 电子商务与金融科技

SOFTWARE ENGINEERING  
E-Commerce and Financial Technology (SECEF)

- » 80% 实践训练  
80% Practical Skills
- » 20% 理论  
20% Theory
- » 2+1 课程  
2+1 Learning
- » 16岁以上即可报读, 无需入学资格  
Entry Requirement: 16 Years Old & Above
- » 教学媒介语以中文为主, 英文为辅  
Medium of Instruction: Chinese & Simple English

# 2+1 年课程

## Years Course

本课程为因应资讯科技的迅猛发展及有一下意愿的学生而设：  
**This qualification was developed to keep pace with the fast changing information technology sector and for candidates who want :**

- 在资讯与通讯科技(ICT)谋求职业发展。  
Career progression within the Information and Communication Technology (ICT) industry.
- 掌握资讯业必须具备的知识和技能，成为专业的电子商务网站程序员、电子商务流动应用程序开发者、系统架构师、网页开发商等等。  
To gain knowledge and skills needed to work in the E-Commerce industry as a professional software engineer, E-Commerce web programmer, E-Commerce mobile application developer, system architect, web developer and etc.
- 分析有助于成功应用电子商务的全球商业环境(例如“一带一路”)。  
Analyze global business environments (such as “The Belt and Road”) conducive to successful application of e-commerce.
- 专注于金融科技和金融创新。  
Focus on financial technologies and financial innovations.
- 了解金融科技行业发展的驱动力。  
Understand the drivers of the development of the FinTech industry.
- 熟练使用标准工具来处理大型财务数据集。  
Be proficient in employing standard tools for manipulating large financial datasets.

为期两年的软件工程技职课程为学生提供有关电子商务、金融科技(FinTech)、电子商务网络编程和电子商务移动应用程序开发技能的实践知识，以提高他们的教育和就业机会。

The two-year Vocational Course in software engineering provides student with hands-on knowledge of technologies and applications of E-Commerce, Financial Technology (FinTech), E-Commerce Web programming and E-Commerce mobile application development skills to enhance their educational and employment opportunities.

### 学生将学习 / Students will learn and be able to:

- 依据用户的要求以及系统与技术规范，掌握软件及应用程式的设计、开发、测试、维护及记录文档程式代码。  
Software and applications design, develop, test, maintain and document programme code according to user requirements and system and technical specifications.
- 如何创建、维护和优化电子商务平台、包括最重要的登录页面，用户友好的导航和购物车。  
How to create, maintain, and optimize a successful e-commerce site, including the all-important landing page, user-friendly navigation, and the shopping cart.
- 用C#、安卓移动(Android mobile)、Java及 iPhone/iPad、Objective C，在 Windows 视窗移动开发移动程式。  
Mobile application development for Windows mobile using C#, Android mobile using Java, RxJava, Kotlin and iPhone/iPad using XCode, Objective C, Swift and etc.
- 网络程式开发包含在三个关键方法中，即:PHP/MySQL, Java and C#.NET (ASP)。  
Web application development is included in three key approaches PHP/MySQL, Java and C#.NET (ASP).
- 具有R和Hadoop的大数据技术。通过Python学习数据科学。  
Big Data Technologies with R and Hadoop. Data Science with Python.
- 用MySQL、物件导向分析与设计，面向对象程序设计(Object Oriented Analysis and Design)，开发数据库技术，以及用Visual Basic.Net, Java, C++ 开发基于Window视窗的应用程式等技术。  
Skills in database development with MySQL, NoSQL, etc. Object Oriented Analysis and Design, and Window-based application development with Visual Basic.Net, Java, C++ and etc.
- 标记语言、网络设计、脚本、客户端编程、服务器端编程及数据库集成等。  
Markup languages, web design, scripting, client-side programming, server-side programming, database integration and etc.
- 实践技能，例如：  
Practical skills such as :
  - 电子商务基础架构，软件和硬件  
E-commerce infrastructure, software and hardware
  - 电子零售和在线支付系统  
Electronic retailing, and online payment systems
  - 电子商务协议和标准  
Protocols and standards for e-commerce
  - 电子商务网站的设计、维护和管理  
Design, maintenance and administration of e-commerce sites
  - 电子商务网站的安全性和隐私  
Security and privacy of e-commerce sites

## 课程内容 / Course Outline

### YEAR 1 第一学年

#### 第一学期 / Semester 1

- 编程概论  
Introduction to Programming
- ICT实务技能  
Practical ICT Skills
- 操作系统(Linux)  
Operating System (Linux)
- 软件工程概论  
Introduction to Software Engineering
- 职场英语(1)  
Workplace English communication (1)

#### 第二学期 / Semester 2

- 资讯科技与社会  
IT and Society
- 管理资讯系统  
Managing Information Systems
- 电脑网络  
Computer Networking
- 数码影像  
Digital Imaging
- 系统分析与设计  
Systems Analysis and Design
- 以Java编写物件导向程式  
Object-oriented Programming using Java

#### 第三学期 / Semester 3

- 以C++进行物件导向程式设计  
Object-oriented Programming using C++
- 网络安全  
Cyber Security
- 人机互动(HCI)  
Human Computer Interaction (HCI)
- 电子商务网站设计与开发(HTML 5, Java Script & XML)  
E-Commerce Web Design and Development (HTML 5, Java Script & XML)
- 财务管理创新技术  
Technological Innovations in Finance
- 与工作相关的软技能  
Work-based Soft Skills

### YEAR 2 第二学年

#### 第四学期 / Semester 4

- 电子商务网络应用程式开发(PHP)  
E-Commerce Web Application Development (PHP)
- 数据库管理系统(MySQL, NoSQL)  
Database Management Systems (MySQL, NoSQL)
- 移动应用程式开发 - Android(安卓) (RxJava & Kotlin)  
Mobile Application Development - Android (RxJava & Kotlin)
- 软件开发方法论  
Software Development Methodologies
- 电子商务应用程式  
E-Commerce Applications
- 职场英语(2)  
Workplace English communication (2)

#### 第五学期 / Semester 5

- 数据结构与算法  
Data Structures and Algorithms
- 区块链安全与隐私  
Blockchain Security and Privacy
- 以C#进行物件导向程式设计  
Object-orientated Programming using C#
- 区块链技术:应用和挑战  
Blockchain Technologies: Applications and Challenges

#### 第六学期 / Semester 6

- 电子商务移动应用程式开发- iOS (Objective-C和Swift)  
E-Commerce Mobile Application Development - iOS (Objective-C and Swift)
- Python编程  
Python Programming
- 大数据、云端和机器技术  
Big Data, Cloud Computing and Machine Learning
- 多链动手实验  
Hands-on Lab with Multichain
- 电子商务/金融科技软件开发(毕业制作)  
E-Commerce / Financial Technology Software Development (Major Project)

\* Please note that the modules listed are indicative and may be subject to change.

## OFQUAL认证

OFQUAL 为英国政府资历及考试规例局，受英国议会监察。

所有学习材料均由该领域的专业人士和专业学术作者设计和编写，以便每个互动模块都符合OFQUAL规定的特定学习标准，OFQUAL是英国高等教育学术标准的英国政府机构。这些标准确保学生获得高质量的教育以及大学的认证和雇主认可。

## OFQUAL Recognition

The Office of Qualifications and Examinations Regulation (OFQUAL) regulates qualifications, examinations and assessments in England.

All learning materials are designed and written by expertise in the field and professional academic authors so that each interactive module is aligned against specific learning criteria specified by OFQUAL, the defining UK Government body for Academic Standards in UK Higher Education. These standards ensure those that learn with us receive a high quality education along with certification that is recognised universally by Universities and employers.



## 评估标准 / ASSESSMENT

100%作业及实践练习，本课程提供电子商务与金融科技的理论20%与实践80%，聚焦于工作场所的实际应用。鼓励团队合作，让学生学会分组合作或单独工作以完成专题作业。

100% Assignment and Practical Exercises. The course offers both the theory (20%) and practice (80%) of Software Engineering with specialization in E-Commerce and Financial Technology skills, with a focus on the practical application of these skills in the workplace. Teamwork is encouraged and students learn to work in groups to complete their projects.



## 考取资格 / QUALIFICATIONS

英国国立西苏格兰学院专业文凭和专业高级文凭  
Diploma and Advanced Diploma awarded by West College Scotland, UK

台湾文凭(由台湾各大学颁发)  
Diploma Qualification from Taiwan University

第五级专业文凭(资格获得OFQUAL英国政府学历及考试评审局承认)[选择性]  
Level 5 Diploma (Regulated by OFQUAL - Office of Qualification & Examination Regulation) [Optional]



## 就业前景 / CAREER PATHWAYS

电子商务软件工程师、金融科技软件工程师、软件开发工程师、软件工程师、软件系统分析师、互联网应用程序工程师、软件设计开发工程师、数据软件开发工程师、软件测试师、移动应用程序工程师、系统架构师、主程式员、IT研发工程师、网页软件工程师、网页设计师、多媒体软件工程师、IT项目经理等等。

E-Commerce Software Developer, Financial Technology Software Developer, Software Engineer, Systems Analyst, Web Programmer, UI Software Developer, Database Developer, Software Testing Engineer, Mobile Application Engineer, Systems Architect, Team-Lead Programmer, IT Developer, Web Application Developer, Web Designer, Multimedia Software Engineer, IT Project Manager, etc.