## 資訊科技 Information Technology

## Python程式編寫證書課程

**Certificate Programme in Python Programming** 

**U** 3943-9131 / 3943-9045



New 🕍

Course Code: 212000

Python is an open-source and popular general purpose programming language that can be used to develop many different types of desktop and web applications. Recently, with the rise of data science applications like Machine Learning, Data Analytic and Quantitative Trading, there has been a high demand for learners to study Python, including school students, educators, managers, financial experts and IT experts. The target participants of this programme will be those with little or no programming experience, and hope to learn programming in Python systematically, with an aim to develop more advanced Python programming skills in various application fields in future.

#### **Programme Structure**

Module	Title	Hours
179000	Fundamentals of Programming	30
179010	Python Programming	30
179020	Python Application Project	30

#### **Assignment Methods and Award**

Assignment, Case Studies, Project and Final Exam.

#### **Admission Requirements**

Applicants should:

- have completion of secondary education, or equivalent; or
- be a mature student aged 21 or above.

### **Application Fee: HK\$150**

- CUSCS Instructors Cantonese (supplemented with English)
- 90 hours **S** HK\$14,700
- Central Learning Centre
- November 2021 (please refer to CUSCS website for details.)



OF Level: 3 QR Registration No: 20/000683/L3 Registration Validity Period: 21/10/2020 - On-going

This course has been included in the list of reimbursable courses under the Continuing Education Fund. This course is recognised under the Qualifications Framework (OF Level 3) CEF Course Code: 34C13354A

CEF Course Name: Certificate in Python Programming

#### 資料探勘及機器學習證書課程

Certificate Programme in Data Mining and **Machine Learning** 

3943-9131

scs-it@cuhk.edu.hk

Course Code: 212300



This programme is targeted for participants who are interested to learn how to extract and analyse data to obtain valuable information and knowledge by using the popular data mining and machine learning algorithms. While theoretical and mathematical knowledge will also be introduced, the programme will focus on real-life applications of readily available data mining and machine learning techniques and algorithms to help participants to apply the knowledge at their own context. Common data mining tools such as R and Python will be used for the students to do hands-on practices. Ethical and privacy issues will also be discussed.

### **Programme Structure**

Module	Title	Hours
169945	Introduction to Data Mining	30
191115	Machine Learning Algorithms	30
169955	Applications of Data Mining and Machine Learning	30

#### **Admission Requirements**

Applicants shall have basic knowledge of database\* and computer programming\*, and

- have completion of secondary education, or equivalent; or
- be a mature student aged 21 or above.

#### Remark:

- \* database such as Access, MySQL, etc
- # computer programming such as Python, Java, etc.

### **Application Fee: HK\$150**

- CUSCS Instructors Cantonese (supplemented with English)
- MK\$16,800 90 hours
- Central Learning Centre
- September 2021 (please refer to CUSCS website for details.)



QR Registration No: 18/000239/L3 Registration Validity Period: 21/03/2018 - On-going

This course has been included in the list of reimbursable courses under the Continuing Education Fund. This course is recognised under the Qualifications Framework (QF Level 3).

CEF Course Code: 34C121177
CEF Course Name: Certificate in Data Mining and

Machine Learning

## 網絡保安證書課程

Certificate Programme in Cyber Security scs-it@cuhk.edu.hk 3943-9131

Course Code: 212100



With the rapid growth of Information and Communication Technology (ICT), people are more connected than ever, new threats related to Cyber Security are also spreading in similar rapid rate. Thus, increasing awareness of Cyber Security in both personal and corporate levels is certainly a significant and undisputable obligation to the society. This programme aims to help participants to understand basic computer and networking knowledge, as well as essential cyber security technologies to allow them to apply in personal and work environment. Participants shall be able to identify potential security threats and apply early intervention to common cyber security problems.

#### **Programme Structure**

Module	Title	Hours
149320	Fundamentals of Computer and Networking	30
149325	Introduction to Secure Programming Practices	30
149330	Practical Cyber Security	30

#### **Admission Requirements**

Applicants shall have basic computer literacy and understand operations of computing devices (PC/Mac/Mobile Devices), and

- have completion of secondary education, or equivalent; or
- be a mature student aged 21 or above.

#### **Application Fee: HK\$150**

S HK\$12,600

- CUSCS Instructors Cantonese (supplemented with English)
- Central Learning Centre
- October 2021 (please refer to CUSCS website for details.)

90 hours



QR Registration No: 16/000657/L3 Registration Validity Period: 06/07/2016 - On-going

This course has been included in the list of reimbursable courses under the Continuing Education Fund. This course is recognised under the Qualifications Framework (QF Level 3).
CEF Course Code: 34C121150

CEF Course Name: Certificate in Cyber Security

## 辦公室及行政支援文憑課程

Diploma Programme in Office and Executive Support scs-it@cuhk.edu.hk 3943-9131

Course Code: 203100



This programme is designed to develop students' necessary skills to be supervisory and supportive roles in small and large professional offices. Skills include: essential office text and data processing, effective office communication and business presentation through speaking and writing practices. Graduates of the programme are prepared to take up positions such as executive secretary, receptionist, executive assistant and so on.

### **Programme Structure**

Module	Title	Hours
190030	Business English for Effective Communication	30
119107	Modern Word Processing Techniques	15
119207	Modern Spreadsheet Processing (Excel)	15
119407	Business Graphics and Presentation (PowerPoint)	15
189307	Database Software and Application (Access)	15
119117	Advanced Word Processing Techniques	15
119217	Advanced Spreadsheet Processing (Excel)	15
190040	Office Procedures	30
190050	Office Automation and Management	15
190060	Practical Chinese for Business	35

#### **Admission Requirements**

- Form 5 graduates with basic computer processing skills; OR
- Equivalent qualifications; OR
- Mature students aged 21 or above with basic computer processing

#### **Application Fee: HK\$150**

- CUSCS Instructors Cantonese (supplemented with English)
- MK\$20,800 (Installment 1: HK\$10,400; Installment 2: HK\$10,400)
- 200 hours
- Central Learning Centre
- October 2021 (please refer to CUSCS website for details.)



OF Level: 3 QR Registration No: 07/000672/3 Registration Validity Period: 05/05/2008 - On-going This course has been included in the list of reimbursable

courses under the Continuing Education Fund. This course is recognised under the Qualifications Framework (QF Level 3).

CEF Course Code: 34L121323 CEF Course Name: Diploma in Office and Executive Support

## 資訊科技 Information Technology

精選短期課程 Selected General Courses

## 資訊科技基礎及管理

### IT Fundamentals & Management

## 微軟Excel試算表製作深造班 Advanced Spreadsheet Processing (Excel)

3943-9131 Scs-it@cuhk.edu.hk

This course will equip participants with advanced skills in Excel to complete more powerful data organisation, analysis and management tasks. Advanced functions, filters and pivot table skills for extracting and analysing data will be taught, as well as more macro programming for automation of tasks. Additional data analytic tools like What-if analysis and Scenario Manager will also be introduced.

## Excel VBA程式編寫 **Excel VBA Programming**

Visual Basic for Applications (VBA) is a macro programming tool in Microsoft Excel for developers to create sophisticated user-oriented applications for automating tasks like data analysis. Topics include:(1) Getting start with recording macros; (2) VBA Programming fundamentals; (3) Creation of specific user forms; (4) VBA interaction with charts; (5) Data analysis in Excel; (6) Case studies.

### CUSCS Instructor

Course Code: 213-119217-01

Cantonese (supplemented with English)

Tsim Sha Tsui Oriental Learning Centre

15 hours (5 sessions)

6 September 2021, Monday (6:45p.m.-9:45p.m.)

Course Code: (Class A) 212-119260-02 (Class B) 213-119260-01

(Class C) 213-119260-02

CUSCS Instructor

Cantonese (supplemented with English)

3 HK\$2,010 15 hours (5 sessions)

O Class A & C Tsim Sha Tsui Oriental Learning Centre Class B Central Learning Centre

Class A 22 July 2021, Thursday (6:45p.m.-9:45p.m.) **Class B** 5 October 2021, Tuesday (6:45p.m.-9:45p.m.) Class C 8 November 2021, Monday (6:45p.m.-9:45p.m.)

## Excel VBA程式編寫深造班

**Advanced Excel VBA Programming** 

C 3943-9131 Scs-it@cuhk.edu.hk

This course is the continuation of 'Excel VBA Programming' course, and will teach participants more about Excel VBA programming techniques. Topics include: (1) Speed up applications with Arrays; (2) Automate Pivot Table; (3) Build web queries to obtain data from Internet; (4) Create customized classes and functions; (5) Interaction with databases; (6) Mini-project.

## Course Code: 213-119265-01

CUSCS Instructor

Cantonese (supplemented with English)

Tsim Sha Tsui Oriental Learning Centre

MK\$2,010

15 hours (5 sessions)

2 September 2021, Thursday (6:45p.m.-9:45p.m.)

## SQL實戰應用 **Practical SQL**

SQL (Structured Query Language) is a popular language for manipulating relational database management systems (RDBMS) because it is cross-platform and easy to use. This course will help participants to acquire the basic SQL skills for common database tasks. Topics include: (1) SQL structure, syntax and commands; (2) Managing databases; (3) Queries and sub-queries; (4) Views design; (5) SQL functions.

#### Course Code: (July Course) 212-189350-01 (November Course) 213-189350-02

CUSCS Instructor

Cantonese (supplemented with English)

MK\$2,000

2 15 hours (5 sessions)

July Course Tsim Sha Tsui Oriental Learning Centre November Course Central Learning Centre

July Course

12 July 2021, Monday (6:45p.m.-9:45p.m.)

#### **November Course**

16 November 2021, Tuesday (6:45p.m.-9:45p.m.)

## 商業信息系統

## **Business Information Systems**

## 區塊鏈實戰應用

**Practical Blockchain Applications** 

This course will introduce participants to the basic concepts and technologies of Blockchain and its common applications. Topics include: (1) What is Blockchain and its common applications; (2) Understanding Blockchain technologies; (3) Experimenting Blockchain using Javascript; (4) Smart contract and its business applications; (5) Creating smart contract on Ethereum Network.

## Course Code: 212-149820-01

CUSCS Instructor

Cantonese (supplemented with English)

Central Learning Centre

**S** HK\$1,890

2 15 hours (5 sessions)

9 July 2021, Friday (6:45p.m.-9:45p.m.)



## 系統開發及程式編寫

## System Development & Programming

## 使用者體驗與介面概述 Introduction to UX / UI Design



This course is targeted for mobile application developers to help them understand UX/UI (User Experience / User Interface) design concepts and applications, identify the importance of UX/UI design and equip them with the foundation of design thinking. Topics includes: (1) Introduction to UX/UI Design; (2) Mobile Application in UX/UI design; (3) Design and Thinking; (4) Mobile Apps design workshop.

### Course Code: (August Course) 212-179763-02 (October Course) 213-179763-01

CUSCS Instructor

Cantonese (supplemented with English)

MK\$1,580

2 12 hours (4 sessions)

Tsim Sha Tsui Oriental Learning Centre

August Course

17 August 2021, Tuesday (6:45p.m.-9:45p.m.)

**October Course** 

12 October 2021, Tuesday (6:45p.m.-9:45p.m.)

### Java入門攻略

Java Programming for Beginners

3943-9131

scs-it@cuhk.edu.hk

Java is a very popular programming language for creating desktop and mobile applications. This course will teach basic Java programming techniques for beginners with little or no programming experience. Topics include: (1) Setting up computer for Java programming; (2) Basic Java structures and syntax; (3) Branching and looping; (4) Basic HTML; (5) Introduction to Object Oriented Programming concepts.

### Course Code: (July Course) 212-179852-02 (November Course) 213-179852-01

CUSCS Instructor

Cantonese (supplemented with English)

B HK\$1,910

15 hours (5 sessions)

Tsim Sha Tsui Oriental Learning Centre

July Course

7 July 2021, Wednesday (6:45p.m.-9:45p.m.)

**November Course** 

16 November 2021, Tuesday (6:45p.m.-9:45p.m.)

## Python程式編寫入門

**Introduction to Python Programming** 

3943-9131

scs-it@cuhk.edu.hk

Python is a general purpose scripting language that are being used to develop websites like Google and Yahoo. This course is desgined for beginners and will cover Python from basic to feature like using Google Web Services. Topics include:1) Basic Python structure and syntax; 2) Control and Iteration; 3) Functions; 4) Files, Strings and Lists; 5) Regular Expressions; 6) Network and Web Services.

## (Class B) 212-179600-02

Course Code: (Class A) 212-179600-01

(Class C) 213-179600-01

CUSCS Instructor

Cantonese (supplemented with English)

MK\$3,750

2 30 hours (10 sessions)

O Class A Central Learning Centre

Class B & C Tsim Sha Tsui Oriental Learning Centre

Class A 13 July 2021, Tuesday (6:45p.m.-9:45p.m.) **Class B** 23 August 2021, Monday (6:45p.m.-9:45p.m.)

Class C 21 October 2021, Thursday (6:45p.m.-9:45p.m.)

## Dreamweaver之時尚網頁設計 Trendy Web Page Design Using Dreamweaver

3943-9131

scs-it@cuhk.edu.hk

The objective of this course is to introduce how to design web pages with proper user interface (UI) design. Topics include: (1) Dreamweaver basic controls; (2) Basic web page layout design; (3) Using CSS style sheets; (4) Responsive design consideration; (5) Adding multimedia elements to web page; (6) Basic UI design by using Adobe XD; (7) Use of templates; (8) HTML5 basics; (9) Adding Interactivies.

#### Course Code: 213-159937-01

CUSCS Instructor

Cantonese (supplemented with English)

Tsim Sha Tsui Oriental Learning Centre

MK\$1,900

15 hours (5 sessions)

19 November 2021, Friday (6:45p.m.-9:45p.m.)

## WordPress之快捷網站製作 **Rapid Web Site Production Using Wordpress**

3943-9131 **scs-it@cuhk.edu.hk** 

This course will help participants to use WordPress to build professional-look responsive web sites rapidly. Topics include: (1) Building first web page with WordPress; (2) Understanding essential elements of a web site; (3) User interface design basics; (4) Managing web site content; (5) Adding multimedia elements; (6) Web hosting consideration; (7) Adding functions with plugins and widgets.

### Course Code: 212-159936-01

CUSCS Instructor

Cantonese (supplemented with English)

Tsim Sha Tsui Oriental Learning Centre

MK\$1,500

2 12 hours (4 sessions)

9 July 2021, Friday (6:45p.m.-9:45p.m.)

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Selected General Courses

## 資訊科技 Information Technology

## 精選短期課程 Selected General Courses

## Excel之數據分析入門

**Introduction to Data Analytic Using Excel** 



This course will introduce participants to the basic concepts of statistical and data analysis, and how to perform basic analytical tasks using Excel. Topics include: (1) Data Visualisation techniques using Excel; (2) Statistical Analysis basics; (3) Time Series Analysis and Forecasting; (4) Principal Component Analysis; (5) Use of Clustering; (6) How to link Excel with R for data mining tasks.

### Python之量化交易應用

**Quantitative Trading with Python** 

3943-9131 Scs-it@cuhk.edu.hk

This course will help participants to use Python to perform automated quantitative finance and trading. Topics include: (1) Python basics; (2) Data management with Python; (3) Database Integration; (4) Web scraping with Beautiful soup and Selenium; (5) Automatic performance monitoring; (6) Backtesting techniques; (7) Introduction to Machine Learning techniques for forecasting.

## Python之統計分析

Statistical Analysis with Python

3943-9131 Scs-it@cuhk.edu.hk

This course will help participants to perform basic statistical analysis using Python. Topics include: (1) Python basics - syntax, data type, control and functions; (2) Using Pip and Anaconda; (3) Use of Python libraries and packages (e.g. Pandas, Numpy, Scipy and iPython, etc.); (4) Basic data cleaning and processing techniques; (5) Introduction to Analytical and Statistical modelling techniques.

## Python之機器學習應用

Machine Learning with Python

This course will explain the motivation and impact of Machine Learning and Deep Learning, and teach how to design intelligent systems that can learn from complex and large-scale datasets using Python. Topics include: (1) Data management with Python; (2) Web scraping; (3) Data Visualisation; (4) Introduction to Machine Learning; (5) Use of Scikit-learn; (6) Deep learning with Tensorflow; (7) Mini project.

### 深度學習入門

**Introduction to Deep Learning** 

This course is an introducion to Deep Learning, a branch of Machine Learning in development and applications of Modern Neural Networks. Topics include: (1) Deep Learning (DL) basics; (2) Math review, Learning in Neural Networks, Backpropagation; (3) Keras/TensorFlow; (4) CNNs, RNNs, Deep Belief Nets; (5) Neural Turing Machines, Unsupervised DL; (6) Deep Reinforcement Learning; (7) DL Applications reviews.

## Unreal Engine 3D電腦遊戲設計入門 Introduction to 3D Game Design Using Unreal Engine

This course will help participants to learn how to develop basic 3D computer games using the popular Unreal Engine platform. Topics include: (1) Familiar with Unreal Engine environment; (2) Setup basic Projects; (3) Level Editor; (4) Actors and Resources; (5) Introduction to Blueprints; (6) Game Controls and User Interfaces; (7) Collisions management; (8) Mini-project.

#### Course Code: 212-169935-02

CUSCS Instructor

Cantonese (supplemented with English)

Tsim Sha Tsui Oriental Learning Centre

2 15 hours (5 sessions)

18 August 2021, Wednesday (6:45p.m.-9:45p.m.)

### Course Code: 212-169955-01

CUSCS Instructor

Cantonese (supplemented with English)

Central Learning Centre

2 30 hours (10 sessions)

23 August 2021, Monday (6:45p.m.-9:45p.m.)

### Course Code: 213-179607-01

CUSCS Instructor

Cantonese (supplemented with English)

Central Learning Centre

S HK\$3,750

20 30 hours (10 sessions)

6 October 2021, Wednesday (6:45p.m.-9:45p.m.)

### Course Code: (July Course) 212-191110-01 (October Course) 213-191110-01

CUSCS Instructor

Cantonese (supplemented with English)

Central Learning Centre

**S** HK\$3,750

2 30 hours (10 sessions)

July Course

14 July 2021, Wednesday (6:45p.m.-9:45p.m.)

**October Course** 

8 October 2021, Friday (6:45p.m.-9:45p.m.)

### Course Code: 212-169978-01

New

CUSCS Instructor

Cantonese (supplemented with English)

Central Learning Centre

MK\$1.950

2 15 hours (5 sessions)

20 August 2021, Friday (6:45p.m.-9:45p.m.)

### Course Code: 212-179995-01

CUSCS Instructor

Cantonese (supplemented with English)

Tsim Sha Tsui Oriental Learning Centre

S HK\$3,600

2 30 hours (10 sessions)

7 August 2021, Saturday (3:00p.m.-6:00p.m.)

# Apple Watch程式編寫入門

**Introduction to Apple Watch Programming** 

3943-9131

scs-it@cuhk.edu.hk

This course will introduce participants to the basic programming techniques for writing Apple Watch Apps by watchOS. Topics include: (1) Introduction - Setup and Using Xcode; (2) Your First Apple Watch App - User Interface Elements and Design; (3) Coding with The Swift Language - Variables, control, loop; (4) Multimedia and Live Contents; (5) Communicate and Integrate with iPhone.

## iOS之擴增實境 / 虛擬實境程式編寫入門

Introduction to AR / VR Programming on iOS

3943-9131

scs-it@cuhk.edu.hk

This course will introduce participants to the fundamental programming techniques to write iOS native AR / VR Apps. Topics include: (1) Concepts and architectural components; (2) Virtual Reality (SceneKit, Building a Scene and add objects); (3) Augmented Reality (AR Quick Look, Overlay 3D objects on physical images); (4) Special Effects (Reality Composer, Partical System); (5) Best Practices.

## Flutter之跨平台流動應用程式開發

Cross-platform Mobile Application Development Using Flutter

3943-9131 Scs-it@cuhk.edu.hk

Flutter is a mobile UI framework for building both iOS and Android applications natively. This course will teach participants to use Flutter with Dart language and Firebase to develop cross-platform applications. Topics include: (1) Flutter Setup; (2) Dart Basics; (3) Using Widgets; (4) Scaffold; (5) Notification; (6) Navigation; (7) Graphics and Animation; (8) Firebase Integration; (9) UX considerations.

### Kotlin之Android流動程式編寫入門

Introduction to Android Programming Using Kotlin

3943-9131 Scs-it@cuhk.edu.hk

This course will teach participants to build Android Apps using Kotlin, a concise and safe programming language supported by Android Studio. Topics include: (1) Environment setup for Kotlin; (2) Basic syntax of Kotlin; (3) Tools for Kotlin development; (4) Android Activities usage; (5) Interface design; (6) Using Kotlin to handle data storage in Android Apps; (7) Testing Android Apps on virtual device.

## **Hardware & Networking**

### 物聯網應用入門

硬件及網絡系統

Introduction to Internet of Things (IoT)

3943-9131

scs-it@cuhk.edu.hk

This course will introduce participants to what is Internet of Things (IoT), its business opportunities, and how to enhance an ordinary product into a loT enabled device. Topics include: (1) Demystifying IoT; (2) Levels of Mastery of IoT; (3) Leadership company capabilities; (4) Overview of IoTTechnologies; (5) Aligning IoT and Strategies; (6) Creating an IoT Roadmap; (7) Mini IoT project.

#### Course Code: 212-179290-01



CUSCS Instructor

Cantonese (supplemented with English)

Tsim Sha Tsui Oriental Learning Centre

15 hours (5 sessions)

13 July 2021, Tuesday (6:45p.m.-9:45p.m.)

#### Course Code: 212-179520-01



CUSCS Instructor

Cantonese (supplemented with English)

Tsim Sha Tsui Oriental Learning Centre

MK\$2,000

15 hours (5 sessions)

24 August 2021, Tuesday (6:45p.m.-9:45p.m.)

#### Course Code: 212-179275-01

CUSCS Instructor

Cantonese (supplemented with English)

Tsim Sha Tsui Oriental Learning Centre

**S** HK\$3,750

20 30 hours (10 sessions)

24 July 2021, Saturday (2:15p.m.-5:15p.m.)

#### Course Code: 213-179280-01

CUSCS Instructor

Cantonese (supplemented with English)

Tsim Sha Tsui Oriental Learning Centre

MK\$2.000

2 15 hours (5 sessions)

6 October 2021, Wednesday (6:45p.m.-9:45p.m.)

### Course Code: 213-149830-01

CUSCS Instructor

Cantonese (supplemented with English)

Tsim Sha Tsui Oriental Learning Centre

21 hours (6 sessions)

2 October 2021, Saturday (2:15p.m.-5:45p.m.)