

Academic Org: Dept of Computer Sci & Engg – Subject: Computer Science

Course: CSCI2040 **Course ID:** 012416 **Eff Date:** 2024-07-01 **Crse Status:** Active **Apprv. Status:** Approved **[Course Rev]**
Introduction to Python Python程序語言導論

This course aims to provide an intensive hands-on introduction to the Python scripting language. Topics include the basic Python language syntax, variable declaration, basic operators, programme flow and control, defining and using functions, file and operating system interface. Specific key features of the Python scripting language such as object-oriented support, functional programming support, lambda function, list comprehension, high level dynamic data types, embedding within applications, module creation etc. will be highlighted. Special topics include using Python for web/data access, animation, as well as using Python to develop a web crawler.

Advisory note: Students are advised to have basic programming experience before taking this course.

本科旨在密集介紹高階程序設計語言 Python。內容包括基本高階程序設計語言Python的語法、變數申明、基本運算符、程序編寫流程及控制、函數定義及應用、文件及操作系統接口。本科亦會介紹高階程序設計語言 Python 的特性，例如面向對象支援方法、函數式編程、lambda函數、列表解析、高階動態資料型式，嵌入於應用程式、創建模塊等。特別專題包括使用Python在網絡/數據訪問，動畫，以及使用Python開發網絡爬蟲。

參考意見: 選科者須具備編程的知識。

Grade Descriptor: A

EXCELLENT – exceptionally good performance and far exceeding expectation in all or most of the course learning outcomes; demonstration of superior understanding of the subject matter, the ability to analyze problems and apply extensive knowledge, and skillful use of concepts and materials to derive proper solutions.

有關等級說明的資料，請參閱英文版本。

B

GOOD – good performance in all course learning outcomes and exceeding expectation in some of them; demonstration of good understanding of the subject matter and the ability to use proper concepts and materials to solve most of the problems encountered.

有關等級說明的資料，請參閱英文版本。

C

FAIR – adequate performance and meeting expectation in all course learning outcomes; demonstration of adequate understanding of the subject matter and the ability to solve simple problems.

有關等級說明的資料，請參閱英文版本。

D

MARGINAL – performance barely meets the expectation in the essential course learning outcomes; demonstration of partial understanding of the subject matter and the ability to solve simple problems.

有關等級說明的資料，請參閱英文版本。

F

FAILURE – performance does not meet the expectation in the essential course learning outcomes; demonstration of serious deficiencies and the need to retake the course.

有關等級說明的資料，請參閱英文版本。

Equivalent Offering:

Units: 2 (Min) / 2 (Max) / 2 (Acad Progress)

Grading Basis: Graded

Repeat for Credit: N

Multiple Enroll: N

Course Attributes:

Topics:

COURSE OUTCOMES

Learning Outcomes:

1. Be able to write, compile and execute Python programs;
2. Be able to make use of Python's object-oriented methodology;

3. Be able to design and create applications using Python modules;
4. Be able to develop embedded applications using Python;
5. Be able to use Python for database and web access;
6. Be able to use Python for some simple computer animation;
7. Be able to apply Python for creating web crawler;

Course Syllabus:

This course aims to provide an intensive hands-on introduction to the Python scripting language. Topics include the basic Python language syntax, variable declaration, basic operators, programme flow and control, defining and using functions, file and operating system interface. Specific key features of the Python scripting language such as object-oriented support, functional programming support, lambda function, list comprehension, high level dynamic data types, embedding within applications, module creation etc. will be highlighted. Special topics include using Python for web/data access, animation, as well as using Python to develop a web crawler.

Assessment Type: Others : 100%

Feedback for Evaluation:

1. Course evaluation and questionnaire
2. Results of assignments and examination
3. Question-and-Answer sessions during class
4. Student consultation during office hours or online

Required Readings:

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Recommended Readings:

1. Official Python web site <http://www.python.org>
2. Beginners' guide to Python <http://wiki.python.org/moin/BeginnersGuide>

OFFERINGS

1. CSCI2040 Acad Organization=CSD; Acad Career=UG

COMPONENTS

LAB : Size=30; Final Exam=N; Contact=2
LEC : Size=30; Final Exam=Y; Contact=2

ENROLMENT REQUIREMENTS

1. CSCI2040

Enrollment Requirement Group:

Pre-requisite: ENGG1110 or CSCI1510 or CSCI1520 or CSCI1530 or CSCI1540 or ESTR1002
Not for students who have taken CSCI1040 or CSCI1550 or CSCI3230 or CSCI3320 or AIST1110.

New Enrollment Requirement(s):

Pre-requisite = Add ENGG1110 or CSCI1510 or CSCI1520 or CSCI1530 or CSCI1540 or ESTR1002
Exclusion = Change from "CSCI1040 or AIST1110" to " CSCI1040 or CSCI1550 or CSCI3230 or CSCI3320 or AIST1110"

Additional Information

eLearning hrs for blended cls 0
VTL-Onsite face-to-face hrs 0
VTL-Online synch. hrs 0
VTL-Online asynch. hrs 0
No. of micro-modules 0
Research components (UG) 0%

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