科目ナンバリング	U-LAS30 20042 SE11						
授業科目名 <英訳>	Programming Practice (Python) -E2 Programming Practice (Python) -E2			担当者所属 職名・氏名	情報学研究科 特定准教授 SEO Stela Hanbyeol		
群	情報学科目群		分野(分類)	(各論)		使用言語	英語
旧群		単位数	2単位	週コマ数	1コマ	授業形態	演習（対面授業科目）
開講年度・開講期	2026・後期	曜時限	火5/水5	配当学年	全回生	対象学生	全学向

[授業の概要・目的]

This course introduces Python programming to students with no prior experience. They will learn to write scripts, apply fundamental programming practices, and use common design patterns. The course aims to develop foundational Python skills and the principles for writing clean, effective code, preparing you for future academic and professional work.

[到達目標]

In this course, students will first learn the syntax of the Python language and the structure of a Python program. Then, they will learn to use some of the standard data structures provided by the Python language and some of its popular libraries. Finally, students will train in designing, writing, and testing their own programs.

After attending the course, students should be able to:

- Understand and modify existing simple programs.
- Design, implement, and test their own simple programs.
- Design, implement, and test their own simple graphical interfaces.

[授業計画と内容]

Module 1: Introduction (1 Session)
A brief history of computer hardware and an overview of the programming language landscape, establishing Python's role and its real-world applications.

Module 2: Python Fundamentals & Programming Practices (13 Sessions)
Learn core Python concepts and programming best practices through examples and hands-on exercises.
Topics include:

- Interactive Mode & Running Scripts
- Data Types (Numeric, Boolean, String)
- Variables, Naming, and Comments
- Control Flow (Conditionals and Loops)
- Data Structures (Lists, Dictionaries)
- Input and Output (I/O)
- Error and Exception Handling
- Object-Oriented Programming (OOP)
- Using Modules
- Graphical User Interface (GUI) Basics
- Introduction to Scientific Computing

Task: Assignments
Students will apply their knowledge by designing and developing a simple application.

Task: In-class Quizzes and Practice Sessions

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Programming Practice (Python) -E2(2)

Students are expected to attempt and complete in-class quizzes and practice tasks. The contents and difficulties will be adjusted based on class progress.

Course Structure consists of 14 instructional sessions and one (optional) feedback session.

Note: The schedule and content are subject to change based on class progress.

[履修要件]

No prior programming experience is required. Students must bring their own computer which can run Python 3 (Python 3 is available for Windows, macOS, and various Linux distros). The instructor can assist with installation if they need extra support. Sample programs will be provided. Some examples may involve mathematical concepts; however, the underlying mathematical theory may not be explained in the course.

[成績評価の方法・観点]

The evaluation will be based on:

1. Assignments given during the course
2. In-class quizzes and practice sessions

The detailed grading criteria will be explained during the lecture.

[教科書]

使用しない

[参考書等]

（参考書）

For an application-oriented presentation, you can see [1] for an in-depth presentation you can refer to [2]. There are many on-line resources about Python, check the official Python website (https://www.python.org/).

[1] Al Sweigart, Automate the Boring Stuff with Python, 2nd edition, (No Starch Press) ISBN: 978-1593279929 (Python3)
[2] Mark Lutz, Programming Python, 5th Edition, (O'Reilly Media, Inc.) ISBN: 9781449398712 (Python2 & Python3)

（関連ＵＲＬ）

https://www.python.org/(Python Software Foundation)

[授業外学修（予習・復習）等]

Students are expected to review the class material during the delivery week to follow the course materials. Students who cannot complete the tasks given during a class should complete them before the next class to follow the course materials.

[その他（オフィスアワー等）]

There are no specific office hours. Students can send emails to communicate with the instructor regarding their assignments, questions, and other inquiries.

[主要授業科目（学部・学科名）]