Dauphine | PSL★
UNIVERSITÉ PARIS

0IELSY09 – Computer Science

Lecturer: André Rossi
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Department: International affairs
Semester: 2

Course level: L3 Undergraduate, Graduate
Domain: Electives, Maths and Computer Science
Teaching language: English
Number of in-class hours: 30+3
Number of course sessions: 10 + Exam
ECTS:6

Course description and objectives

Content: - basic concepts of algorithms in Python: variable, affectation, use of the print() and output() functions - Conditional instructions and Boolean expressions - Repetitive instructions (loops) - Modular programming: functions and libraries in Python - Sequential data structures in Python: strings and lists - Reading and writing to text files.

Prerequisites

None.

Learning outcomes

This class is an introduction to algorithms and programming.

The students develop sound skills in Python programming language, which is now a reference language in many technical domains.

This class lets students design and code Python programs to extract and handle data.

Assignments and grading

- Mid-term exam (40%)
- Online quizzes (10%)
- Final exam (50%)

The passing grade for a course is 10/20.

Class participation: Active class participation – this is what makes classes lively and instructive. Come on time and prepared. Class participation is based on quality of comments, not quantity.
Exam policy: In the exam, students will not be allowed to bring any document. Unexcused absences from exams or failure to submit cases will result in zero grades in the calculation of numerical averages. Exams are collected at the end of examination periods.

Course structure

Session	Topic
1	**Variables, affectation, reading and writing**
2	**Conditional statements**
3	**while loop**
4	**User-defined functions and Libraries**
5	**Character strings**
6	**String methods**
7	**Lists: creation, access and traversal**
8	**Lists: operators and methods**
9	**Strings and lists in functions**
10	**Text files**
11	**Final Exam**

Bibliography

- https://www.w3schools.com/python/

Lecturer's biography

Prof. André Rossi holds an engineering degree in Automatic Control and Production Science from ENSIEG, INPG, a Master of Science in the same field and a PhD degree in Robust Scheduling. He defended an Habilitation à diriger des recherches in September 2012, on networks optimization.

Prof. Rossi is full professor of Computer Science at LAMSADE, Université Paris Dauphine - PSL, France, since 2018. He is currently deputy director of MIDO, the Mathematics and Computer Science department of Université Paris Dauphine - PSL. Before that, he was full professor of Operations Research at the Computer Science Department of Université d'Angers, France, from 2015 to 2018. Previously, he was Associate Professor at Université de Bretagne-Sud in Lorient, France, from 2005 to 2015 and served as an invited professor in the Department of Computer and Information Sciences in University of Hyderabad, India, from 2009 to 2014.

Moodle

This course is on Moodle: **Yes**

Academic integrity

Be aware of the rules in Université Paris Dauphine about plagiarism and cheating during exams. All work turned in for this course must be your own work, or that of your own group. Working as part of a group implies that you are an active participant and fully contributed to the output produced by that group.