- Faculté des sciences économiques
- www.unine.ch/seco

Computational Thinking (5MI2012)

Filières concernées	Nombre d'heures	Validation	Crédits ECTS
Master en développement international des affaires	**Atelier: 1 pg**	**Voir ci-dessous**	3
Master en économie appliquée	**Atelier: 1 pg**	**Voir ci-dessous**	3
Master en finance	**Atelier: 1 pg**	**Voir ci-dessous**	3
Master in General Management	**Atelier: 1 pg**	**Voir ci-dessous**	3
Master of Science en innovation	**Atelier: 1 pg**	**Voir ci-dessous**	3

ph=période hebdomadaire, pg=période globale, j=jour, dj=demi-jour, h=heure, min=minute

Période d'enseignement:

- Semestre Printemps

Equipe enseignante

Eric Simon
Information Management Institute
A.-L. Breguet 2
CH-2000 Neuchâtel
Tel. +41 32 718 1370
Email eric.simon@unine.ch

Contenu

Computational Thinking is an approach to problem solving that aims at defining a solution in a form ready to be programmed in a computer. During the course, the student will train to apply a subset of concepts and techniques from Computer Science to solve an example problem using a computer and a programming language, Python. Since problem solving is a skill and not merely a knowledge, the course is focused on practice. Like in real situations, the students will tackle a problem in small teams and solve it from it's definition, through decomposition, abstraction and modeling, to the presentation of a working computer solution.

The first part of the course will present some key concepts of Computational Thinking and put them in perspective, as well as some elements of Python programming.

The second part of the course will be dedicated to team work and tutoring. The goal is to present a solution and the process leading to it to the other group members at the end of the week, and produce a written report. Both presentation and report will be graded according to the modalities below.

Forme de l'évaluation

Group presentation: 40% of the final grade
Group report: 60% of the final grade

Re-take: 2-hour written exam in session
- No documentation allowed
- All personal connected objects (smart-phones, watches, tablets, etc.) are forbidden. In case of violation of this rule, the students are in a situation of fraud and the unauthorized items will be removed. The exam could be deemed as failed.

Documentation

Beecher, Karl. Computational thinking: A beginner's guide to problem-solving and programming. BCS, The Chartered Institute for IT, 31/08/2017.

Pré-requis

None. However, a basic knowledge of programming, in any language, is highly recommended.

Forme de l'enseignement

The exact course plan and the detailed schedule will be announced a few days prior to the beginning of the course on Moodle.

URLs	1) https://moodle.unine.ch/course/view.php?id=3782

- Faculté des sciences économiques
- www.unine.ch/seco

Computational Thinking (5MI2012)

Important: A personal laptop is required to work on the presentation and the report.

URLs	1) https://moodle.unine.ch/course/view.php?id=3782