

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

Programming (5AF2029)

Filières concernées	Nombre d'heures	Validation	Crédits ECTS
Master en finance	Cours: 2 ph	écrit: 2 h	3
Master en sciences économiques, orientation politique économique	Cours: 2 ph	écrit: 2 h	3
Master en statistique	Cours: 2 ph	écrit: 2 h	3

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

Période d'enseignement:

- Semestre Printemps

Equipe enseignante:

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Objectifs:

- Understanding the basic concepts of structured programming.
- Being able to use basic data structures.
- Developing basic programs to manipulate and analyse data.
- Developing simple solutions for managing data in the context of research applications.

Contenu:

- Introduction to MATLAB (operators, variables, assignment statements).
- Definition and use of the main MATLAB data structures (scalars, vectors, matrices).
- MATLAB Programming (selection statements, loop statements, vectorized code, scripts, functions).
- Advanced MATLAB data structures (cell arrays, structures)
- Plotting techniques (two-dimensional and three-dimensional plots)
- Data Import and Export
- Statistics and Mathematics (built-in statistical functions, matrix representation of equation systems)
- Introduction to Financial Toolbox (portfolio optimisation, risk analysis)

Forme de l'évaluation:

2-hour written exam during the last lecture of semester.

Re-take exam: 2-hour written exam during session.

During exam:

- Only accepted documentation : course slides with annotations

- All 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:

Online MATLAB documentation

S. Attaway. MATLAB A Practical Introduction to Programming and Problem Solving, Elsevier 2012

Forme de l'enseignement:

Lectures: 2 hours per week.