

- Faculté des sciences économiques
- [www.unine.ch/seco](http://www.unine.ch/seco)

## Programming (5AF2029)

Filières concernées	Nombre d'heures	Validation	Crédits ECTS
<b>Master en développement international des affaires</b>	<b>Cours: 2 ph</b>	Voir ci-dessous	3
<b>Master en finance</b>	<b>Cours: 2 ph</b>	Voir ci-dessous	3
<b>Master of Science en innovation</b>	<b>Cours: 2 ph</b>	Voir ci-dessous	3

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

### Période d'enseignement:

- Semestre Automne

### Equipe enseignante

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### Contenu

Basics of MATLAB programming:

- \* Introduction
- \* Variables, Constants, Keywords
- \* Data Types
- \* Vectors and Matrices
- \* Operators and functions
- \* Logical vectors/matrices
- \* Scripts and Functions
- \* Conditional Statements
- \* Loop statements
- \* String manipulation
- \* Plotting Functions
- \* Advanced user-defined functions
- \* Performance considerations

### Forme de l'évaluation

2-hour exam on the computer during session.

During the evaluation:

- The solution shall be produced exclusively on the computers provided by the university in the computer lab. No personal device will be allowed.
  - The solution shall be submitted in Moodle in time in the form required: MATLAB scripts
  - All documentation deemed necessary is accepted, including online resources.
  - All personal connected objects (smartphones, watches, tablets, etc. ) are forbidden. All communication by any mean is also forbidden.
- In case of violation of these rules, the students are in a situation of fraud. The unauthorized items will be removed and the student denounced. The exam could be deemed as failed.

### Modalités de rattrapage

Identical to the above

### Documentation

In-house course material and exercises

### Pré-requis

None

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### **Forme de l'enseignement**

Mixed lectures and practical exercises in class.

### **Objectifs d'apprentissage**

Au terme de la formation l'étudiant-e doit être capable de :

- Identify the basic concepts of structured programming
- Use basic data structures
- Select appropriate algorithmic approaches to solve problems
- Develop simple solutions for managing data in the context of research applications
- Develop basic programs to manipulate and analyse data
- Justify the steps necessary for solving a problem
- Explain the algorithm solving strategy
- Analyse simple algorithms
- Explore additional documentation for solving a specific problem in an independent manner

### **Compétences transférables**

- Apply knowledge to new situations
- Design projects
- Discuss complex issues