

## Module description

Field of study: *Business, Management and Services*

Degree course: *Bachelor of Science HES-SO in International Business Management*

1. Title of module	Business Tools I	2017-18
Code: 3071	Type of course: (Compulsory – 1 possible response) <input checked="" type="checkbox"/> Bachelor's <input type="checkbox"/> Master's <input type="checkbox"/> MAS <input type="checkbox"/> DAS <input type="checkbox"/> CAS <input type="checkbox"/> Other: ...	
Level: (Optional – 1 possible response) <input checked="" type="checkbox"/> Basic module <input type="checkbox"/> Further studies module <input type="checkbox"/> Advanced module <input type="checkbox"/> Specialised module <input type="checkbox"/> Other: ...	Characteristic: (Optional – 1 possible response) <input checked="" type="checkbox"/> Module where failure may lead to final dismissal from the degree course in accordance with Art.25 of the Framework directives on the Bachelor and Master degrees at the HES-SO	
Type: (Optional – 1 possible response) <input checked="" type="checkbox"/> Main module <input type="checkbox"/> Module linked to main module <input type="checkbox"/> Optional or subsidiary module <input type="checkbox"/> Other: ...	Time schedule: (Optional – multiple responses possible) <input type="checkbox"/> Module over 1 semester <input checked="" type="checkbox"/> Module over 2 semesters <input checked="" type="checkbox"/> Spring semester <input checked="" type="checkbox"/> Autumn semester <input type="checkbox"/> Other: ...	

## 2. Organisation

ECTS credits 11

Language:  
(Compulsory – multiple responses possible)

<input type="checkbox"/> French	<input type="checkbox"/> Italian
<input type="checkbox"/> German	<input checked="" type="checkbox"/> English
<input type="checkbox"/> Other: ...	

## 3. Prerequisite

(Compulsory – 1 possible response)

To have validated the module  
 To have followed the module  
 No prerequisite  
 Other: ...

## 4. Skills to be gained / general learning objectives

(Compulsory – write in as required)

### IT Systems 1

- To acquire a general understanding of Information Systems (IS) and Information Technologies (IT), and understand their importance for Business strategy and Business management.
- To be able to use the basic functions of a spreadsheet tool (EXCEL) in a business environment.

### IT Systems 2

- To be able to use the advanced functions of a spreadsheet tool (Excel) in a business environment.
- To know and understand the concepts of "Decision Support Systems", and experiment a "Business Intelligence" (BI) tool

**Mathematics 1 & 2:**

- To use mathematics tools to model and solve problems in the fields of economics, management and finance.
- To master Calculus techniques

**Statistics 1**

- To summarize and describe data using numerical measures, and represent data with appropriate graphical tools.
- To understand basic notions of probability, and use some probability distributions.

**5. Teaching and content***(Compulsory – write in as required)***IT Systems 1**

- Definition of the concepts of Information Systems (IS) ; Hardware (HW) ; Software (SW) ; Data management.
- Basic knowledge of the structure of a network and Internet.
- Knowledge of the technical and nontechnical risks related to Information Systems (IS) and the use of New Information and Communication Technologies (NICT). Basic principles of precaution and security measures.
- Introduction to spreadsheets and presentation tools (Basic functions) through business problems exercises.

**IT Systems 2**

- Advanced practice of the Excel spreadsheet tool (advanced functions and complex formulas, graphs, data tables, pivot tables, advanced filters, databases functions, scenarios, Goal seek, Solvers, data validation).
- Master a presentation tool.
- Data modelling overview ; Use of a SW tool (PhpMy Admin) and SQL language to create data bases and queries.
- Use a "Business Intelligence" (BI) tool (Cognos) to discover how to make educated decisions through a business case.

**Mathematics 1**

- Calculus 1: functions of one variable, operations on functions, derivatives, differentiation rules, and applications of the derivative.
- Selected topics chosen by the instructor.

**Mathematics 2**

- Calculus 1: applications of the derivative, curve sketching, optimization in one variable, applications of optimization.
- Financial mathematics: interest rates, present value, annuities, net present value, portfolio return, etc.
- Matrix algebra: operations on matrices, determinant, inverse.
- Selected topics chosen by the instructor.

**Statistics 1**

- Introduction to descriptive statistics (sampling techniques, data types, graphs and charts).
- Numerical measures (measures of location and variation, correlations).
- Fundamental notions and rules of probability.
- Some discrete and continuous probability distributions.
- Selected topics chosen by the instructor.

**6. Assessment and validation methods***(Compulsory – write in as required)*

The grading of the module shall be based on:

- A written exam in week 16/32 of the semester; **and/or**
- Mid-term assessments during weeks 1 to 14 according to the decision of the instructor.

(The methods and weightings are communicated by the instructor before the evaluations.)

**7. Reassessment requirements***(Compulsory – multiple responses possible)*

- Reassessment possible  
 No reassessment  
 Other (please specify): ...

**7a Reassessment requirements (if module is repeated)***(Compulsory – multiple responses possible)*

- Reassessment possible  
 No reassessment  
 Other (please specify): ...

***other reassessment modalities***

Reassessment if the module grade is between 3.5 (included) and 3.9 (included).

After reassessment, the maximum grade is 4.0

**8. Remarks***(Optional – write in as required)***9. Bibliography****IT Systems***Excel 2013 : The missing manual by Matthew MacDonald Editor : O'Reilly***Mathematics 1 and Mathematics 2:**

Introductory Mathematical Analysis, for Business, Economics and Life and Social Sciences, Pearson New International Edition, E.F. Hauessler, R.S. Paul, R.J. Wood. Pearson Ed., 13th edition, 2013. ISBN13: 9781292021140

**Statistics 1**

Business Statistics, A Decision-Making Approach, Pearson New International Edition, D. F. Groebner, P. W. Shannon, P. C. Fry. Pearson Ed., 9th edition, 2013. ISBN13: 9781292023359

**10. Teaching staff***(Optional – write in as required)*

Thierry Ceillier / André Jelcic / Julien Mariéthoz / Alexandre Caboussat / Daniele Lamponi

**Name of the person responsible for the module:**

Alexandre Caboussat

**Module description validated on***(Compulsory)***Module description validated by***(Compulsory)*