

Module description

Field of study: *Business, Management and Services*

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

1. Title of module	Economics III	2025-26
Code: 3053	Type of course: <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: <input type="checkbox"/> Basic module <input type="checkbox"/> Further studies module <input checked="" type="checkbox"/> Advanced module <input type="checkbox"/> Specialised module <input type="checkbox"/> Other: ...	Characteristic: <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: <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: <input checked="" type="checkbox"/> Module over 1 semester <input type="checkbox"/> Module over 2 semesters <input checked="" type="checkbox"/> Spring semester <input type="checkbox"/> Autumn semester <input type="checkbox"/> Other: ...	

2. Organisation

ECTS credits 4

Language:

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

3. Prerequisite

- To have validated the module
 To have followed the module
 No prerequisite
 Other: to have validated the first-year assessment

4. Skills to be gained / general learning objectives

Objectives for the course: Economics of competition

The goal is to understand how to measure how much firms gain from anticompetitive behaviors. To achieve this, you will learn:

- How to measure competition
- How to create a counterfactual scenario to measure these gains
- How to theoretically identify the various gains and costs to society

Objectives for the course: Applied mathematics

At the end of the course, the student will be able to:

- Use mathematics tools to model and solve problems in the fields of economics, management and finance.
- Apply optimization techniques to find the best solution to minimization or maximization problems.
- Perform numerical simulations for management problems.
- Develop multivariate calculus techniques.

5. Teaching and content

Course: Economics of competition

- Building a counterfactual scenario.
- Defining a market, measure competition and market power
- Monopoly
- Collusion
- Horizontal and vertical mergers
- History of competition policy

Course: Applied mathematics

- Linear programming (graphical methods, use of Excel solver, application to management)
- Multivariate calculus (partial derivatives, optimization, optimization under constraints, quadratic programming)
- Monte-Carlo simulations
- Applications to finance (portfolio, options).
- Selected topics chosen by the instructor.

6. Assessment and validation methods

Each course syllabus available on the moodle platform Cyberlearn describes the assessment and validation methods.

7. Reassessment requirements

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

7a Reassessment requirements (if module is repeated)

- 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