

DESCRIPTION OF ELECTIVE COURSE

Name of the school: Haute école de gestion de Genève	Academic Year: 2023-2024
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FIRST PART: DESCRIPTION OF MODULE	
1. Domain	Business and Services
2. Department	International Business Management
3. Course name	Forecasting and Decision-Making
4. Code	31003
5. Type of education	<input checked="" type="checkbox"/> Bachelor <input type="checkbox"/> Master <input type="checkbox"/> MAS <input type="checkbox"/> <input type="checkbox"/> DAS / CAS / single days
6. Number of ECTS Credits	5
7. Prerequisites	<input checked="" type="checkbox"/> Validation of the modules in semesters 1 and 2 <input checked="" type="checkbox"/> Attendance of the modules in semesters 3 and 4 for full-time students, and semesters 5 and 6 for part-time students <input type="checkbox"/>
8. Teaching language	<input type="checkbox"/> French <input type="checkbox"/> German <input checked="" type="checkbox"/> English <input type="checkbox"/> Other:
9. Objectives	<p>Today's business world is data-driven. Many sectors and many functions are overwhelmed with data that is unfortunately often unused. However, data can be transformed into information and knowledge with the proper tools.</p> <p>This course is articulated into three main parts. The first objective is to be able to handle data, from the collection to the visualization, and to be able to use it as a communication tool. The second objective is to master (quantitative) forecasting and analysis techniques to use data for business purposes. The final objective is to bridge the gap between forecasts and decision-making.</p> <p>More precisely, at the end of this course, students should be able to:</p> <ul style="list-style-type: none"> • Gather and consolidate data for forecasting and decision-making • Visualize and explain data in a management context • Identify the principles and advantages of various forecasting methods • Describe and apply various statistical techniques for forecasting • Generate forecasts with different patterns: trends, seasonality • Experiment various decision-making models, with uncertainty or risks • Link forecasting with other strategic aspects of business, in particular innovation

	<p>management</p> <p>Examples and use cases cover various areas of business, such as, e.g., marketing and sales, trading, finance, innovation strategy, or technology, for the students to be able to apply the generic tools and techniques in various contexts.</p>
<p>10. Contents <i>(General themes and descriptions, the accurate content may change)</i></p>	<p>The course is articulated along the following themes:</p> <ol style="list-style-type: none"> 1. Introduction to innovation forecasting. Why is it important for decision makers to incorporate data-driven decision making in innovation processes? A zoom on management of technology and technological forecasting. <p>Data:</p> <ol style="list-style-type: none"> 2. Gathering data. How to search and gather data, how to clean data, how to ensure quality? 3. Using data. Dashboarding and data presentation. <p>Forecasting and analysis:</p> <ol style="list-style-type: none"> 4. Basics and general notions. Qualitative and quantitative methods. 5. Forecasting techniques (components and smoothing, regression, time series). 6. Analysis techniques (factor analysis, principal components, as time allows). <p>Decision making:</p> <ol style="list-style-type: none"> 7. Decision making in a certain/uncertain future. Decision trees. 8. Multicriteria decision making. How to balance multiple objectives? 9. Scenario analysis. <p>10. Forecasting and strategic planning. How to manage the present from the future?</p>
<p>11. Evaluation</p>	<p>The grading of the module shall be based on:</p> <ul style="list-style-type: none"> • Mid-term assessments during weeks 1 to 15 according to the decision of the instructor. <p>(The methods and weightings are communicated by the instructor before the evaluations)</p>
<p>12. Remediation/repetition</p>	<p><input checked="" type="checkbox"/> Compulsory remediation if the module grade is between 3.5 and 3.9 / 6. When subject to a remediation, only the grade of the remedial exam will be taken into account (maximum grade 4.0). A repeated module cannot benefit from a remedial exam.</p> <p><input type="checkbox"/> No remediation</p>
<p>13. Coordinator / main instructor</p>	<p>Alexandre Caboussat</p>
<p>SECOND PART: LOCATION OF THE MODULE IN THE STUDY PLAN</p>	

14. Level	<input type="checkbox"/> Basic module <input type="checkbox"/> Advanced module <input checked="" type="checkbox"/> Specialized module <input type="checkbox"/> Other:
15. Characteristics	<input checked="" type="checkbox"/> Module is mandatory (which could lead to final dismissal from the program, cf. art.15, al.1, « Statut des étudiant-e-s bachelor »)
16. Type	<input checked="" type="checkbox"/> Main module <input type="checkbox"/> Module linked to main module <input type="checkbox"/> Optional module <input type="checkbox"/> Other:
17. Time organization	<div> <input checked="" type="checkbox"/> Module over 1 semester <input type="checkbox"/> Module over 2 semesters </div> <div> <input checked="" type="checkbox"/> Spring semester <input type="checkbox"/> Fall semester <input type="checkbox"/> Other </div>