

DESCRIPTION OF MINOR COURSE

Name of the school : Haute école de gestion de Genève	Academic Year: 2018-2019
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FIRST PART: DESCRIPTION OF MODULE	
1. Domain	Business and Services
2. Department	International Business Management
3. Minor name	Data Analysis
4. Code	31018
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	6
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	At the end of this course, students should be able to: <ul style="list-style-type: none"> • Assess the quality of datasets and prepare them for analysis • Combine heterogeneous data sources in a single analysis model • Handle complex and large datasets • Create custom datasets based on SLQ language • Analyze different data types (numeric, text, time series) • Integrate geo-located datasets into existing map layers and add custom geographic areas to marketing and logistics analysis models • Use data analysis to answers quantitative business questions • Use data exploratory technics to identify patterns, spot opportunities and find possible causes to business issues • Design a business dashboard • Design an interactive map • Present analysis results to various stakeholders using data-driven storytelling

<p>10. Contents <i>(General themes and descriptions, the accurate content may change)</i></p>	<p>The course will be given in combination with Tableau, a leading data analysis software.</p> <p>It will cover following topics:</p> <p>First part</p> <ul style="list-style-type: none"> • Data sources selection (qualitative, operational and legal aspects) • Connection with data sources: text files (.csv, Excel), relational databases (MySQL, SQL Server...), Web APIs (e.g.: Google Analytics) • Data preparation (Excel vs professional solutions) • Basic / Advanced SQL language • Visual data analysis • Working with groups and sets to focus the analysis • How to use filters and parameters to make the analysis more dynamic • Calculations & Levels of details (LOD) expressions • Geo-located data analysis • Building an interactive dashboard • Presenting analysis results <p>Second part</p> <p>Finally students will work in groups to analyse a complex dataset and answer to a business questions. They will use the technics learned throughout the semester and Tableau as a tool to perform their analysis and to present their findings.</p> <p>The first part will be partly done on a reverse class base. Students will have to learn technics before the class based on video and text tutorials. Class hours will be reserved for practice and external speakers' presentations.</p> <p>In the second part of the course, groups will work on a group assignment and the teacher will be a facilitator, helping them to solve technical issues related to the analysis tool and validating their analytical approach.</p>
<p>11. Evaluation</p>	<p>The grading of the module shall be based on:</p> <p>An individual test to verify student's ability to use Tableau to answer business questions in relation to different datasets.</p> <p>A group work testing students' ability to explore a complex dataset in order to identify patterns, spot opportunities and issues in a business context.</p> <p>(The methods and weightings will be communicated by the instructor at the beginning of the semester)</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>André Jelcic</p>

SECOND PART: LOCATION OF THE MODULE IN THE STUDY PLAN	
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	<input checked="" type="checkbox"/> Module over 1 semester <input type="checkbox"/> Module over 2 semesters <input type="checkbox"/> Spring semester <input checked="" type="checkbox"/> Fall semester <input type="checkbox"/> Other