

DESCRIPTION OF ELECTIVE COURSE

Name of the school : Haute école de gestion de Genève	Academic Year: 2026-2027
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FIRST PART: DESCRIPTION OF MODULE	
1. Domain	<i>Business and Services</i>
2. Department	<i>International Business Management</i>
3. Course name	Design Thinking for AI & Digital Innovation
4. Code	XXXX
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. Description & Objectives	<p><i>1. Course Description</i> This course applies the Design Thinking strategic framework specifically to the creation of AI-driven products and services. Students will learn to navigate the shift from deterministic software to probabilistic AI systems, ensuring technology addresses genuine human needs. The focus is on designing the application of AI—defining where AI adds unique value (prediction, personalization, automation)—rather than just using AI tools to generate ideas. Students will master the design cycle (empathy, definition, ideation, prototyping, testing) to validate AI use-cases, manage user expectations, and address ethical implications like bias and transparency before writing code.</p> <p><i>2. Learning Objectives</i> By the end of this semester, students will be able to:</p> <ul style="list-style-type: none"> - Human-Centric AI Strategy: Identify and frame problems where AI provides a specific solution to a verified user need, avoiding "technology push." - Designing for Probability: Create user flows that account for AI uncertainty, error handling,

	<p>and confidence levels (managing "happy paths" and edge cases).</p> <ul style="list-style-type: none"> - <i>Prototype AI Experiences: Build "Wizard of Oz" prototypes to test the value and usability of an algorithmic solution without requiring full backend development.</i> - <i>Ethics & Trust: Embed ethical considerations (transparency, explainability, data privacy) directly into the design of the product.</i> - <i>Viability Assessment: Evaluate the feasibility and desirability of an AI feature versus a traditional digital solution.</i>
<p>10. Contents (General themes and descriptions, the accurate content may change)</p>	<p>This flow follows the "Double Diamond" design model (Discover, Define, Develop, Deliver). We alternate between design theory, practical application, and structured coaching.</p> <p><i>Phase I: Calibration (The Setup)</i></p> <ul style="list-style-type: none"> • <i>Session 1: Designing for AI & Probabilistic Systems. Introduction to the specific challenges of designing for AI (black box, non-determinism). Analyzing successful vs. failed AI products.</i> • <i>Session 2: Problem Framing. Moving from "Can we build it?" to "Should we build it?". Selecting a challenge where AI might solve a friction point, not just automate a task.</i> <p><i>Phase II: The Problem Space (Empathy & Definition)</i></p> <ul style="list-style-type: none"> • <i>Session 3: User Research Strategy. Planning research to identify user intent and data availability. Understanding the "Human-in-the-loop" requirements.</i> • <i>Session 4: Fieldwork & Data Gathering. Conducting interviews and observations to understand the context where the AI will operate.</i> • <i>Session 5: Synthesis & Empathy Mapping. Mapping user pain points. Identifying specific moments in the user journey where prediction or generation adds value.</i> • <i>Session 6: The Insight & Value Proposition. Defining the core problem. Formulating the "AI Hypothesis": If the system predicts X, the user gains Y.</i> • <i>Session 7: Coaching & Gate Review. Validating the problem definition. Ensuring the team is solving a human problem, not a technical puzzle.</i> <p><i>Phase III: The Solution Space (Ideation & Prototyping)</i></p> <ul style="list-style-type: none"> • <i>Session 8: Divergent Ideation. Brainstorming session. We use techniques like "SCAMPER" or "Crazy 8". AI is used as a stimulus generator to widen the pool of ideas, but human intuition is required to select the most viable concepts.</i> • <i>Session 9: Concept Selection & Trust Design. Selecting the best concept. Designing for trust: How does the user know the AI is working? How do we explain results?</i> • <i>Session 10: Prototyping Flows (Low-Fidelity). Sketching the user journey. Mapping the inputs (data) and outputs (actions) of the AI system.</i> • <i>Session 11: Experience Prototyping (High-Fidelity). Creating a "Wizard of Oz" prototype or clickable mockup that simulates the AI's behavior to test the interaction</i>

	<p><i>model.</i></p> <ul style="list-style-type: none"> • <i>Session 12: Testing Strategy. Designing a test protocol to validate the utility of the AI output, not just the interface usability.</i> <p><i>Phase IV: Integration (Testing & Storytelling)</i></p> <ul style="list-style-type: none"> • <i>Session 13: The Feedback Loop. Teams test their prototypes with real users. They gather feedback. We analyze the gap between the design intent and the actual user behavior.</i> • <i>Session 14: Storytelling & The Pitch. Data alone does not convince people. Stories do. We work on the narrative of the product, ensuring the "User Hero" is at the center of the story, not the AI technology.</i> • <i>Session 15: Final Jury. The "Demolition Day." Teams present their final concepts. Feedback from the jury. A moment to celebrate the design journey.</i>
<p>11. Evaluation</p>	<p><i>We are not grading on rote memorization. We are grading on evolution.</i></p> <p><i>Continuous Assessment (40% - Individual)</i></p> <ul style="list-style-type: none"> • <i>The Design Process Journal: Documentation of the student's critical thinking. Focus on the evolution of the idea, the rationale for using AI in the specific context, and personal reflection on the design challenges (trust, ethics, data).</i> <p><i>Final Presentation (60% - Group)</i></p> <ul style="list-style-type: none"> • <i>The Solution: Is it desirable, viable, and feasible?</i> • <i>The Design Rationale: Did they follow the Design Thinking methodology rigorously?</i> • <i>The Narrative: Can the team explain why this solution matters to the user?</i>
<p>12. Remediation/repetition</p>	<p><input checked="" type="checkbox"/> <i>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.</i></p> <p><input type="checkbox"/> <i>No remediation</i></p>
<p>13. Coordinator / main instructor</p>	<p><i>Patrick Bellair</i></p>
<p>SECOND PART: LOCATION OF THE MODULE IN THE STUDY PLAN</p>	
<p>14. Level</p>	<p><input type="checkbox"/> <i>Basic module</i></p> <p><input type="checkbox"/> <i>Advanced module</i></p> <p><input checked="" type="checkbox"/> <i>Specialized module</i></p> <p><input type="checkbox"/> <i>Other:</i></p>
<p>15. Characteristics</p>	<p><input checked="" type="checkbox"/> <i>Module is mandatory (which could lead to final dismissal from the program,</i></p>

	<i>cf. art.15, al.1, « Statut des étudiant-e-s bachelor »)</i>
16. Type	<input checked="" type="checkbox"/> <i>Main module</i> <input type="checkbox"/> <i>Module linked to main module</i> <input type="checkbox"/> <i>Optional module</i> <input type="checkbox"/> <i>Other:</i>
17. Time organization	<input checked="" type="checkbox"/> <i>Module over 1 semester</i> <input type="checkbox"/> <i>Module over 2 semesters</i> <input type="checkbox"/> <i>Spring semester</i> <input checked="" type="checkbox"/> <i>Fall semester</i> <input type="checkbox"/> <i>Other</i>