The Hang Seng University of Hong Kong
Module Outline

<table>
<tr><td>School/Department:</td><td colspan="3">School of Business</td></tr>
<tr><td>Module Code & Title:</td><td colspan="3">SBUS3001 Foundations of Business AI</td></tr>
<tr><td>Credit Units:</td><td>3</td><td>Year:</td><td>1 / 2 / 3/ 4</td></tr>
<tr><td>QF Level[1] (2-6):</td><td>5</td><td>Duration:</td><td>45 hours</td></tr>
<tr><td rowspan="3">Module Classification:</td><td colspan="3">☐ Major[2] [] (mapping with relevant PILO)
☐ Minor[3] []</td></tr>
<tr><td colspan="3">☐ Business Core[4]
Business Elective[5] [Please refer to programme information of relevant programme]</td></tr>
<tr><td colspan="3">☐ Common Core Curriculum[6] (mapping with relevant learning outcomes)
☐ Chinese ☐ English ☐ Information Technology ☐ Quantitative Methods
☐ General Education[7] [Cluster (☐ 1/ ☐ 2/ ☐ 3/ ☐ 4)] ☐GEN1000</td></tr>
<tr><td>Medium of Instruction[8]:</td><td>☐ Chinese (☐ Cantonese/ ☐ Putonghua)
☑ English
☐ Others (please specify): _____</td><td>Assessment Language:</td><td>☐ Chinese ☑ English
☐ Others (please specify):
_____</td></tr>
<tr><td>Mode(s) of Delivery:</td><td>☐ Lecture (____hours/week)
standard class size: 40</td><td>☑ Laboratory (3 hours/week)
standard class size: 40</td><td>☐ Tutorial (____hours/week)
standard class size: 25</td></tr>
<tr><td>MOOC (if applicable):</td><td colspan="3">☐ Learning Mode _____hours Online learning plus _____hours Face-to-face teaching</td></tr>
<tr><td>Prerequisites[9]:</td><td colspan="3">Nil</td></tr>
<tr><td>Exclusions[10]:</td><td colspan="3">Nil</td></tr>
<tr><td>Module Description:</td><td colspan="3">This module serves as an introductory course on Artificial Intelligence (AI) designed for business students across various undergraduate programmes. It aims to unpack AI by exploring its history, fundamental principles, and current capabilities, including Generative AI and Machine Learning in a business context.

The module focuses on the practical application of AI tools in business processes and daily lives, while critically examining the ethical, legal, and social implications of a data-driven society. Students will develop the "AI literacy" necessary to collaborate effectively with intelligent systems and navigate the future of work.</td></tr>
<tr><td rowspan="6">Module Intended Learning Outcomes (MILO):</td><td colspan="2">Upon completion of this module, students should be able to:</td><td>Weighting
(if applicable)</td></tr>
<tr><td colspan="2">a. Describe the fundamental concepts, history, and key terminologies of Artificial Intelligence (AI).</td><td>10%</td></tr>
<tr><td colspan="2">b. Apply generative AI models and tools (e.g., LLMs, image generators, Agentic AI tools) to solve practical problems and enhance productivity.</td><td>40%</td></tr>
<tr><td colspan="2">c. Analyse the impact of AI technologies on various business processes and workflows in traditional and start-up businesses</td><td>30%</td></tr>
<tr><td colspan="2">d. Critically evaluate ethical and legal issues related to AI, such as bias, privacy, copyright, and misinformation. Formulate strategies for responsible AI adoption in professional and personal contexts.</td><td>20%</td></tr>
<tr><td colspan="2">Total:</td><td>100%</td></tr>
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Notes:

1. ***QF Level*** *is determined in accordance with the Generic Level Descriptors (GLD)*
2. ***Major****: A core/elective module for any Major/Concentration/Stream of Study*
3. ***Minor****: A core/elective module for any Minor Study*
4. ***Business Core****: A business core module for any Major/Concentration/Stream of Study*
5. ***Business Elective****: A business elective module for any Major/Concentration/Stream of Study*
6. ***Common Core Curriculum****: A CCC module that has been approved by the Common Core Curriculum Committee*
7. ***General Education****: Cluster 1 – Humanities Cluster 2 – Social Sciences Cluster 3 – Science and Technology Cluster 4 – Moral Reasoning*
8. *The official* ***Medium of Instruction*** *is English, unless otherwise approved by Academic Board*
9. ***Prerequisites****: Prior knowledge in these modules are required for taking the existing module*
10. ***Exclusions****: Any modules which are* ***mutually exclusive*** *from the existing module in a course of study*
11. *All modules will be regarded as* ***Free Elective*** *except those excluded modules*
12. ***Pedagogical Methods****: Lecture, Tutorial, Guest speaker, Internship, Case study, Field study, Role playing, Company visit, Student presentation, e-learning / Computer software application, Project, Independent study, Simulation game, Service learning, Exercise and problem, Others (please specify)*

		Learning Outcomes:				Total
		a	b	c	d	
Module Content:	1. Fundamental Concepts, History, and Terminology 1.1 **Evolution of Intelligence:** From Rule-based systems to Connectionism and Deep Learning breakthroughs. 1.2 **The Data-Compute-Energy Nexus:** Understanding the physical infrastructure and specialized chips powering 2026 models. 1.3 **Taxonomy of Learning:** Supervised (prediction), Unsupervised (clustering), Self-training/Reinforcement models and sequence generation models. 1.4 **Neural Networks & Transformers:** A non-technical breakdown of the architecture that allows machines to process context. 1.5 **The AI Hype Cycle:** Distinguishing between Predictive AI (stats-driven) vs. Generative AI (synthesis-driven).	✓				
	2. Generative AI and productivity 2.1 **Advanced Prompt Engineering (APE)**: Moving beyond basic chat to structured frameworks like Chain-of-Thought and Few-Shot and Reverse Prompting for complex logic. 2.2 **Multimodal Workflows:** Combining text (LLMs), image and video (e.g. Nano-banana, Veo, Gamma), and data visualization tools to create complete business presentations. 2.3 **Agentic AI Systems:** How to create chatbots and agents (e.g., Google Gems, n8n, Google Opal) to automate workflows, email management, and competitive analysis, etc. 2.4 **Coding Basics & Vibe-coding:** Using AI as a "Co-pilot" to write SQL queries and Python scripts to handle large-scale data manipulation. Vibe-coding using Gemini AI. 2.5 **AI-Enhanced Research:** Leveraging tools like Google Deep Research, NotebookLM and Perplexity to synthesize academic and market data while avoiding "hallucinations."		✓			
	3. AI Transformation in traditional and start-up businesses – Processes and Workflows 3.1 **Legacy Transformation:** The challenges of integrating modern AI into "Old Economy" businesses with fragmented data and siloed departments. 3.2 **The "Lean Startup" 2.0 and One-Person Unicorn**: How AI lowers the barrier to entry by automating MVP (Minimum Viable Product) development and initial lead generation. 3.3 **Hyper-Personalized Marketing**: Moving from broad "segments" to individual customer journeys using AI-driven recommendation engines. 3.4 **HR and the Talent Lifecycle:** Analyzing the impact of AI on recruitment (automated screening and assessment) and employee retention (sentiment analysis).			✓		

	4. Ethics, Legal Issues, and Responsible AI 4.1 **Algorithmic Bias & Fairness**: Case studies on how historical data can lead to discriminatory outcomes in lending, hiring, and insurance. 4.2 **Compliance Landscape**: EU AI Act, PRC's Administrative Measures for Generative AI Services, and the Ethical AI Framework proposed by Hong Kong's DPO. 4.3 **Intellectual Property in the Age of GenAI:** Navigating the "Fair Use" debate and understanding who owns the output of an AI model. 4.4 **Data Privacy & Security:** Managing "Shadow AI" (employees using unauthorized tools) and the risks of leaking proprietary data into public models. 4.5 **The Misinformation Economy:** The business risk of Deepfakes, synthetic media, and the erosion of trust in digital communications. 4.6 **A Strategy for Responsible AI:** Developing a corporate "AI Manifesto" that balances aggressive innovation with safety and human oversight.				✓	
Pedagogical Methods:	1. Computer laboratory		✓	✓		
	2. Exercises and problems	✓	✓	✓	✓	
	3. Case studies	✓	✓	✓	✓	
	4. e-learning / Computer software application		✓	✓		
Assessment Methods:	1. Class participation	✓	✓	✓	✓	10%
	2. Individual assignments (including quizzes)	✓	✓	✓	✓	20%
	3. Group Project – Report, Presentation and Demonstration	✓	✓	✓	✓	30%
	4. Examination	✓	✓	✓	✓	40%

Texts & References:

Core Course Textbooks

1. **Dhamani N. & Emgler M.** (2025) Introduction to Generative AI, 2nd ed. Manning.
2. **Iansiti, M., & Lakhani, K. R.** (2020). *Competing in the Age of AI: Strategy and Leadership When Algorithms and Networks Run the World*. 1st ed. Harvard Business Review Press.
3. **Agrawal, A., Gans, J., & Goldfarb, A.** (2022). *Prediction Machines, Updated and Expanded: The Simple Economics of Artificial Intelligence*. Updated ed. Harvard Business Review Press.

Strategic & Leadership Reference Books

1. **Mollick, E.** (2024). *Co-Intelligence: Living and Working with AI*. 1st ed. Portfolio/Penguin.
2. **Woods, G.** (2026). *The AI-Driven Leader: Harnessing AI to Make Faster, Smarter Decisions*. 1st ed. Wiley.

Applied Tools & Technical Handbooks

1. **Huyen, C.** (2025). *AI Engineering: Building Applications with Foundation Models*. 1st ed. O'Reilly Media.
2. **Biswas, A.** (2025). *Building Agentic AI Systems: Create Intelligent, Autonomous AI Agents*. 1st ed. Packt Publishing.
3. **Harvard Business Review.** (2025). *HBR Guide to Generative AI for Managers*. 1st ed. Harvard Business Review Press.

Ethics, Law, and Responsible AI Reference Books

1. **Rahman, A.** (2026). *The Responsible Machine: Compliance and Ethics in the Era of Global AI Acts*. 1st ed. Oxford University Press.
2. **Christian, B.** (2020). *The Alignment Problem: Machine Learning and Human Values*. 1st ed. W. W. Norton & Company.

	3. **Crawford, K.** (2021). *Atlas of AI: Power, Politics, and the Planetary Costs of Artificial Intelligence*. 1st ed. Yale University Press.
Other Information:	**AI Fundamentals & Research** • MIT News: Artificial Intelligence https://news.mit.edu/topic/artificial-intelligence • The Berkeley Artificial Intelligence Research (BAIR) Blog https://bair.berkeley.edu/blog/ • Google DeepMind Blog https://deepmind.google/blog/ • NVIDIA Blog: Artificial Intelligence https://blogs.nvidia.com/category/deep-learning/ **AI Tools & Productivity** • Synthesia AI Video Blog (Multimodal AI) https://www.synthesia.io/blog • Zapier AI Automation Blog (Workflow Integration) https://zapier.com/blog/category/ai/ • Perplexity AI (Next-Gen Research) https://www.perplexity.ai/ • Section (Formerly Section4) AI Insights https://www.sectionschool.com/blog **Business Process & Strategic Impact** • Harvard Business Review: Artificial Intelligence Topic https://hbr.org/topic/artificial-intelligence • MIT Sloan Management Review: AI & Machine Learning https://mitsloan.mit.edu/ideas-made-to-matter/topic/artificial-intelligence • PwC Tech Effect: AI & Emerging Tech https://www.pwc.com/us/en/tech-effect/ai.html • BCG (Boston Consulting Group): Artificial Intelligence https://www.bcg.com/capabilities/digital-technology-data/artificial-intelligence **Ethics, Law, and Responsible Adoption** • Hong Kong's Ethical Artificial Intelligence Framework (https://www.digitalpolicy.gov.hk/en/our_work/data_governance/policies_standards/ethical_ai_framework/ • EU AI Act Official Portal (Regulatory Compliance) https://artificialintelligenceact.eu/ • UNESCO: Ethics of Artificial Intelligence https://www.unesco.org/en/artificial-intelligence/recommendation-ethics • Ada Lovelace Institute (AI Policy & Ethics) https://www.adalovelaceinstitute.org/ • Stanford HAI (Human-Centered AI) Policy Briefs https://hai.stanford.edu/policy/policy-briefs

QF5 Generic Level Descriptors - Competency Mapping:	**MILO**	**QF5 Generic Level Descriptors (GLD):**	
		Knowledge and Intellectual Skills	
	a, b, c, d	K1	Demonstrate and/or work with in-depth specialised technical or theoretical knowledge of a field of work or study
	a, b, c, d	K2	Use a wide range of specialised intellectual skills in support of established practices in a subject/discipline/ sector
	b, c, d	K3	Critically analyse, evaluate and/or synthesise concepts, information and issues drawn from a wide range of sources to generate ideas
		Processes	
	a, b, c, d	P1	Apply knowledge and skills in a range of technical, professional or management activities
	b, c, d	P2	Identify and analyse both routine and abstract technical/ professional problems and issues, and formulate evidence-based responses
	b, c	P3	Exercise appropriate judgement in planning, design, technical and/or management functions related to products, services, operations or processes
		Autonomy and Accountability	
	a, b, c, d	A1	Accept responsibility and accountability, within broad parameters, for determining and achieving personal and/or group outcomes
	b, c	A2	Work under the mentoring of senior qualified practitioners
	d	A3	Deal with ethical issues, seeking guidance of others where appropriate
		Communication, ICT and Numeracy	
	a, b, c, d	C1	Use some advanced and specialised skills in support of established practices in a subject/discipline/ sector
	a, b, c, d	C2	Participate constructively in group discussions and make formal and informal presentations to a range of audiences on standard/mainstream topics in a subject/discipline/sector
	a, b, c, d	C3	Use some advanced features of ICT applications to support and enhance work
	b, c	C4	Interpret, use and evaluate numerical and graphical data to set and achieve goals/ targets