

THE EDUCATION UNIVERSITY OF HONG KONG

Course Outline

Part I

Programme Title	:	4-year Undergraduate Programmes
Programme QF Level	:	5
Course Title	:	Technology Entrepreneurship in AI-enhanced Business
Course Code	:	GEL1032
Department	:	Department of Mathematics and Information Technology
Credit Points	:	2
Contact Hours	:	26 contact hours • Lectures: 8 contact hours • Experiential Learning 1: ○ 9 contact hours (13.5 experiential learning hours) from the CEIE entrepreneurship and innovation activities • Experiential Learning 2: ○ 3 contact hours (4.5 experiential learning hours): workshops and consultations on business proposal development and presentation • Course debriefing, reflection and group sharing: ○ 6 contact hours
Pre-requisite(s)	:	Nil
Medium of Instruction	:	English
Course Level	:	1

Part II

The University's Graduate Attributes and seven Generic Intended Learning Outcomes (GILOs) represent the attributes of ideal EdUHK graduates and their expected qualities respectively. Learning outcomes work coherently at the University (GILOs), programme (Programme Intended Learning Outcomes) and course (Course Intended Learning Outcomes) levels to achieve the goal of nurturing students with important graduate attributes.

In gist, the Graduate Attributes for Sub-degree, Undergraduate, Taught Postgraduate, Professional Doctorate and Research Postgraduate students consist of the following three domains (i.e. in short "PEER & I"):

- Professional Excellence;
- Ethical Responsibility; &
- Innovation.

The descriptors under these three domains are different for the three groups of students in order to reflect the respective level of Graduate Attributes.

The seven GILOs are:

1. Problem Solving Skills

2. Critical Thinking Skills
3. Creative Thinking Skills
- 4a. Oral Communication Skills
- 4b. Written Communication Skills
5. Social Interaction Skills
6. Ethical Decision Making
7. Global Perspectives

1. Course Synopsis

Technology entrepreneurship is defined as launching new ventures and exploiting new business opportunities with advances in science and technology. The recent development of emerging technologies including artificial intelligence (AI) and machine learning, robotic process automation and edge computing has transformed the nature of uncertainty inherent in entrepreneurial processes and outcomes. The rapid evolution of information technology has facilitated the transmission of information and stimulated innovation in business.

In this course, students can explore how entrepreneurs commercialize technologies and create ventures to launch successful new businesses. Topics on the nature of digital value creation in business, AI-enhanced business models and digital creativity in social media communication will be included to equip students with the key elements of technology entrepreneurship for enhancing the quality of decisions. Business cases of successful startups will be discussed to understand how scientific research and innovative studies were transformed into marketed products and services. To further nurture the entrepreneurial mind-set in the industry, students need to participate in the entrepreneurship activities organized by the Centre for Entrepreneurship and Innovation Education (CEIE) to gain deeper insights into digital business models in real-life context. Technological trend in business also heightens social and ethical concerns in different dimensions such as information rights, property rights, accountability, and control. In this course, students should also evaluate how social, legal and ethical implications are considered and their effects on technology entrepreneurship.

2. Course Intended Learning Outcomes (CILOs)

Upon completion of this course, students will be able to:

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| CILO ₁ | identify the characteristics of digital and AI-enhanced technologies to create new business opportunities |
| CILO ₂ | examine customer needs with AI technologies to recalibrate resources for business planning and social media marketing |
| CILO ₃ | interpret the trend and readiness of start-ups and enterprises |
| CILO ₄ | appraise the role of technology and evaluate the social, legal and ethical concerns when creating strategic business opportunities |

3. Content, CILOs and Teaching & Learning Activities

Course Content	CILOs	Suggested Teaching & Learning Activities
Technological Framework and Changes in Business - Features and opportunities of technological entrepreneurship - Framework for Technological Entrepreneurship Development - Role of technology in the development of innovativeness of enterprises	<i>CILO_{1,3}</i>	Lectures, group discussions, sharing, case studies and interview with practitioners
AI-enhanced Business Models for Digital Transformation in Business - Relevance of AI for technology entrepreneurs - AI strategies - Development of basic AI applications in business - Use of AI and machine learning technology in decision-making and business analytics - Leverage AI to optimise customer service outcomes and business planning - Socio-economic impacts of AI - Social, legal and ethical concerns in technology entrepreneurship and AI-enhanced business	<i>CILO_{1,2,3,4}</i>	Lectures, group discussions, workshops, case studies, class exercises and reporting
Digital Creativity and Social Media Communication - Creative thinking in digital marketing - Social media communication strategies for startups - Impact of social media on business growth and performance - Ethical and legal implications in social media communications	<i>CILO_{3,4}</i>	Lectures, case studies, sharing, and group discussions

Entrepreneurship Site Visits and Activities - Visits to local innovative tech startups - Workshops on innovation and creativity - Workshops on social media marketing - Talk on entrepreneurship by founders of startups or social enterprises	<i>CILO</i> _{3,4}	Site visits ¹ and selected CEIE activities
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4. Assessment

Assessment Tasks	Weighting (%)	CILO
a. Business pitching Students will work in groups of four to six to develop a business idea that leverages technological opportunities for commercialization and venture creation. Their work should draw upon lecture materials, case studies, site visit experiences, and CEIE entrepreneurial experiential activities. This business idea will be presented in a 30-minute business pitch that compares the business value proposition before and after the integration of AI, estimates implementation costs, and outlines a social media and digital marketing strategy for product promotion.	60% (50% for group mark; 10% for individual performance during presentation)	<i>CILO</i> _{1,2,3}
b. Reflective case study Each student needs to write a reflective essay (about 600 English words) with three sections: 1) Explain an AI-enhanced business model with a real business case including process, analysis, and discussions to cover the technological factors and their effectiveness and sustainability, supported by artefacts such as photos and linked videos; 2) Discussion on the effectiveness of the social media marketing channel in the real business case; and 3) Challenges, social, ethical, and legal issues. Students are advised to make reference to the materials from lectures, case studies, site visits, CEIE	40%	<i>CILO</i> _{1,2,3,4}

¹ Potential partnered organizations are not limited to HKSTP, SenseTime and Cyberport. On-site visits to these organizations are subject to their availability.

entrepreneurial experiential activities, class sharing and company websites/ reports.		
c. Reflection for CEIE activities: Students are required to complete an assessment form with a 700-word reflection to identify TWO key knowledge or skills learnt from the E&I activities and describe how they would enhance: - their skills of analysis to identify strategies - their innovation For details and assessment of the E&I activities organised by CEIE, please refer to the supplementary information which is available at https://ceie.eduhk.hk/ei-activities-supporting-ge-curriculum/	Pass/ Fail	

5. Use of Generative AI in Course Assessments

Please select one option only that applies to this course:

☐ **Not Permitted:** In this course, the use of generative AI tools is not allowed for any assessment tasks.

☒ **Permitted:** In this course, generative AI tools may be used in some or all assessment tasks. Instructors will provide specific instructions, including any restrictions or additional requirements (e.g., proper acknowledgment, reflective reports), during the first lesson and in relevant assessment briefs.

6. Required Text(s)

Nil

7. Recommended Readings

- Baber, Ojala, A., & Martinez, R. (2019). Effectuation logic in digital business model transformation. *Journal of Small Business and Enterprise Development*, 26(6/7), 811–830. <https://doi.org/10.1108/JSBED-04-2019-0139>
- Bican, & Brem, A. (2020). Digital Business Model, Digital Transformation, Digital Entrepreneurship: Is There A Sustainable “Digital”? *Sustainability (Basel, Switzerland)*, 12(13), 5239. <https://doi.org/10.3390/su12135239>
- Chae, & Goh, G. (2020). Digital Entrepreneurs in Artificial Intelligence and Data Analytics: Who Are They? *Journal of Open Innovation*, 6(3), 56. <https://doi.org/10.3390/joitmc6030056>
- Chalmers, MacKenzie, N. G., & Carter, S. (2021). Artificial Intelligence and Entrepreneurship: Implications for Venture Creation in the Fourth Industrial Revolution. *Entrepreneurship Theory and Practice*, 45(5), 1028–1053. <https://doi.org/10.1177/1042258720934581>
- Ebrahimi, Ahmadi, M., Gholampour, A., & Alipour, H. (2019). CRM performance and development of media entrepreneurship in digital, social media and mobile commerce. *International Journal of Emerging Markets*, ahead-of-print(ahead-of-print). <https://doi.org/10.1108/IJOEM-11-2018-0588>

- Harding, Kadiyono, A. L., Hafiar, H., Mamun, T. N., Wibowo, H., Nugraha, Y., & Siswadi, A. G. P. (2020). Readiness of technology adaptation towards digital-based entrepreneurship. *International Journal of Entrepreneurship*, 24(1), 1–5.
- IGI Global, Information Resources Management Association. editor, & Ideal Group. (2018). Digital marketing and consumer engagement : concepts, methodologies, tools, and applications. *IGI Global*.
- Khosrow-Pour, D.B.A., Mehdi, & Khosrow-Pour, D. B. A. (2018). Advanced Methodologies and Technologies in Digital Marketing and Entrepreneurship. *IGI Global*.
- Matejun. (2016). Role of technology entrepreneurship in the development of innovativeness of small and medium-sized enterprises. *Management (Zielona Góra)*, 20(1), 167–183. <https://doi.org/10.1515/manment-2015-0032>
- Moghadamzadeh, Ebrahimi, P., Radfard, S., Salamzadeh, A., & Khajeheian, D. (2020). Investigating the Role of Customer Co-Creation Behavior on Social Media Platforms in Rendering Innovative Services. *Sustainability (Basel, Switzerland)*, 12(17), 6926. <https://doi.org/10.3390/su12176926>
- Olanrewaju, Hossain, M. A., Whiteside, N., & Mercieca, P. (2020). Social media and entrepreneurship research: A literature review. *International Journal of Information Management*, 50, 90–110. <https://doi.org/10.1016/j.ijinfomgt.2019.05.011>
- Passiante. (2020). Innovative Entrepreneurship in Action. *Springer International Publishing AG*.
- Runge, W. (2014). Technology Entrepreneurship : A Treatise on Entrepreneurs and Entrepreneurship for and in Technology Ventures. Band 2. *Karlsruhe: KIT Scientific Publishing*.
- Shaikh. (2020). Demystifying Azure AI Implementing the Right AI Features for Your Business (1st ed. 2020.). *Apress : Imprint: Apress*.
- Soltanifar, Hughes, M., & Göcke, L. (2021). Digital Entrepreneurship Impact on Business and Society (1st ed. 2021.). *Springer International Publishing: Imprint: Springer*.
- Turan, & Kara, A. (2018). Online social media usage behavior of entrepreneurs in an emerging market. *Journal of Research in Marketing and Entrepreneurship*, 20(2), 273–291. <https://doi.org/10.1108/JRME-09-2016-0034>
- Upadhyay, Upadhyay, S., & Dwivedi, Y. K. (2021). Theorizing artificial intelligence acceptance and digital entrepreneurship model. *International Journal of Entrepreneurial Behaviour & Research*, ahead-of-print(ahead-of-print). <https://doi.org/10.1108/IJEBR-01-2021-0052>
- Weber, Beutter, M., Weking, J., Böhm, M., & Krcmar, H. (2021). AI Startup Business Models. *Business & Information Systems Engineering*. <https://doi.org/10.1007/s12599-021-00732-w>

8. Related Web Resources

AI for Business

<https://aiforbusiness.withgoogle.com/>

Eureka

<https://www.eurekanetwork.org/>

Extreme Tech Challenge

<https://extremetechchallenge.org/>

Google Startups

<https://startup.google.com/>

Hong Kong Science & Technology Parks Corporation

<https://www.hkstp.org/>

Kickstarter

<https://www.kickstarter.com/>

Orange Data Mining

<https://orangedatamining.com/>

WHub

<https://www.whub.io/>

9. Related Journals

Journal of Ethics in Entrepreneurship and Technology

Journal of Innovation and Entrepreneurship

Entrepreneurship Theory and Practice

Journal of Research in Marketing and Entrepreneurship

Strategic Entrepreneurship Journal

International Journal of Technoentrepreneurship

International Journal of Entrepreneurship

International Journal of Emerging Markets

International Journal of Entrepreneurial Behaviour & Research

10. Academic Honesty

The University upholds the principles of honesty in all areas of academic work. We expect our students to carry out all academic activities honestly and in good faith. Please refer to the *Policy on Academic Honesty, Responsibility and Integrity* (<https://www.eduhk.hk/re/uploads/docs/000000000016336798924548BbN5>). Students should familiarize themselves with the Policy.

11. Others

Nil

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