2nd Semester
(Intensive Course)

THE UNIVERSITY OF HONG KONG
DEPARTMENT OF DATA AND SYSTEMS ENGINEERING

Timetable for 2025-26 MSc(Eng): 2 January, 2026 to 13 January, 2026 (Intensive Course)

MSc(Eng)(RIS)

Programme	MONDAY	TUESDAY	WEDNESDAY	THURSDAY	FRIDAY	SATURDAY
Robotics and Intelligent Systems	DASE7155 Intelligent technologies for systems engineering B Instructor(s): Prof. Abdullah Konak and Prof. Sadan Kulturel-Konak Room: TBC **January 5, 2026** **2:00pm-5:00pm** **January 12, 2026** **2:00pm-5:00pm**	DASE7155 Intelligent technologies for systems engineering B Instructor(s): Prof. Abdullah Konak and Prof. Sadan Kulturel-Konak Room: TBC **January 6, 2026** **2:00pm-5:00pm** **January 13, 2026** **2:00pm-5:00pm**	DASE7155 Intelligent technologies for systems engineering B Instructor(s): Prof. Abdullah Konak and Prof. Sadan Kulturel-Konak Room: TBC **January 7, 2026** **2:00pm-5:00pm**	DASE7155 Intelligent technologies for systems engineering B Instructor(s): Prof. Abdullah Konak and Prof. Sadan Kulturel-Konak Room: TBC **January 8, 2026** **2:00pm-5:00pm**	DASE7155 Intelligent technologies for systems engineering B Instructor(s): Prof. Abdullah Konak and Prof. Sadan Kulturel-Konak Room: TBC **January 2, 2026** **2:00pm-5:00pm** **January 9, 2026** **2:00pm-5:00pm**	DASE7155 Intelligent technologies for systems engineering B Instructor(s): Prof. Abdullah Konak and Prof. Sadan Kulturel-Konak Room: TBC **January 3, 2026** **2:00pm-5:00pm** **January 10, 2026** **2:00pm-5:00pm**

The add/ drop period is the first 2 lessons of this course.

\# **Examination (2 hours): March 14, 2026 (Thursday), 3:00pm-5:00pm.**
(Note: The examination results of DASE7155 will be released together with all other courses to be offered in the 2nd Semester).

Theme of the course:

Applications and Adaptations of Large Language Models (LLMs) in Manufacturing Systems

This course will introduce students to the capabilities, technologies, and methodologies associated with Large Language Models (LLMs), focusing particularly on their adaptation and implementation within manufacturing systems. Students will develop practical skills to deploy LLM solutions that address real-world manufacturing challenges while understanding the theoretical foundations, ethical considerations, and integration requirements. The first part of the course will cover the fundamentals of LLMs and technologies for customizing LLMS in manufacturing and production systems, such as automated reasoning, retrieval-augmented generation, fine-tuning, etc. In addition, topics such as data access issues and the complexities of LLMs in existing business processes will be introduced. Students will create a short case study focusing on redesigning business processes for LLMs to increase productivity. The second part of the course will cover applications of LLMs in manufacturing systems, such as the integration of LLMs in intelligent shop floors, agent-based manufacturing resource management, engineering design automation, manufacturing information and knowledge extraction, manufacturing decision support systems, predictive maintenance and quality control, and workforce training. The final part of the course will discuss implementation and integration issues, including data management governance, security, and ethical considerations. The assessment of the student learning will include short project-based evaluations, hands-on laboratory assignments, and exams. By the end of the course, students will be able to describe LLM technologies to address specific manufacturing challenges, evaluate and implement appropriate customization techniques for different manufacturing applications, learn hands-on skills to integrate LLMs into existing systems and create adaptation and implementation road maps for manufacturing.

Jun 26, 2025

You can also contact them directly for further procedure:
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Sadan Kulturel-Konak- sxk70@psu.edu

Regarding the teaching planning, the visiting professors prefer to schedule the course on dates 2-13 Jan 2026, one session per day.

The proposed theme of the course:
Applications and Adaptations of Large Language Models (LLMs) in Manufacturing Systems
This course will introduce students to the capabilities, technologies, and methodologies associated with Large Language Models (LLMs), focusing particularly on their adaptation and implementation within manufacturing systems. Students will develop practical skills to deploy LLM solutions that address real-world manufacturing challenges while understanding the theoretical foundations, ethical considerations, and integration requirements. The first part of the course will cover the fundamentals of LLMs and technologies for customizing LLMS in manufacturing and production systems, such as automated reasoning, retrieval-augmented generation, fine-tuning, etc. In addition, topics such as data access issues and the complexities of LLMs in existing business processes will be introduced. Students will create a short case study focusing on redesigning business processes for LLMs to increase productivity. The second part of the course will cover applications of LLMs in manufacturing systems, such as the integration of LLMs in intelligent shop floors, agent-based manufacturing resource management, engineering design automation, manufacturing information and knowledge extraction, manufacturing decision support systems, predictive maintenance and quality control, and workforce training. The final part of the course will discuss implementation and integration issues, including data management governance, security, and ethical considerations. The assessment of the student learning will include short project-based evaluations, hands-on laboratory assignments, and exams. By the end of the course, students will be able to describe LLM technologies to address specific manufacturing challenges, evaluate and implement appropriate customization techniques for different manufacturing applications, learn hands-on skills to integrate LLMs into existing systems and create adaptation and implementation road maps for manufacturing.