The Hong Kong University of Science and Technology

UG Course Syllabus Template (Simplified version uploading to SENG website)

[Course Title] Robotics Special Project: Intelligent Racing Competition 2026

[Course Code] ENGG3961M

[No. of Credits] 4 (3 credits in the spring semester and 1 credit in the summer semester)

[Any pre-/co-requisites] No pre-/co-requisites

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Course Description

Student teams will design and manufacture racing model cars to tackle various missions and challenges provided by the organizer. Each team will create a programmable car, competing against other school teams to showcase their engineering and design skills.

Learning goals and objectives for HKUST undergraduate students enrolled in this project are:

- To participate actively in team discussions and decision-making processes.
- To enhance students' robotics skill sets through targeted activities.
- To implement design thinking principles in tackling robotics solution.
- To collaborate and communicate effectively within a multidisciplinary and multinational team.
- To acquire professional and technical knowledge in robot design, research, and development processes.
- To develop soft skills in team management and collaboration.
- To enhance safety awareness by educating students about potential hazards and promoting proactive measures to prevent accidents.

Course requirement for HKUST undergraduate students enrolled in this project are:

- Each student is required to submit both peer and self-evaluations throughout the course.
- Each student or group must submit a project proposal and a final report to the Project Supervisor(s).
- Attendance at the Robot Design Contest is mandatory for all students.
- All students should adhere to agreed-upon deadlines and demonstrate commitment to the time devoted to all interactions—punctuality and thorough preparation are essential.

Assessments:

[List specific assessed tasks, exams, quizzes, their weightage]

Assessment Task	Contribution to Overall Course grade (%)
Team Building Activities	0%
Safety Training	0%
Tidiness and Safety Awareness	15%
Peer evaluations	15%
Progress Report	15%
Final Report	15%
Final Presentation	40%

Required Texts and Materials

All students must attend the Robot Design Contest as required

[Optional] Additional Resources

N/A