

The Hong Kong University of Science and Technology

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

[Course Title] Robotics Special Project: SmartCar Challenge 2025

[Course Code] ENGG3961H

[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 car for tackling different missions and challenges which are provided by the organizer. SmartCar Challenge is a national competition held in late May to August. Student teams will design a programmable car and to completed with other school teams.

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.

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 (%)
Peer Evaluation	20%
Presentation	50%
Final Project Demonstration	15%
Final Report	15%

Required Texts and Materials

All students must attend the Robot Design Contest as required

[Optional] Additional Resources

N/A