

# Engaging Undergraduates in RESEARCH and INQUIRY: A Scholarly Dialogue

## Engineering Special Project: Robotics

### Course Instructor/Project leader

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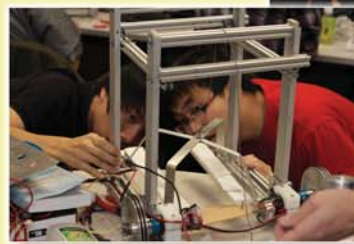
### Project/Course Objectives

It is a project-oriented and multidisciplinary course in engineering design and applications, with a special focus on robotics.

Students will

- i) learn robotic design, construction and programming techniques, and
- ii) conduct a group project to build robots for the defined task.

Students enrolled in this course will have the opportunities to represent HKUST in local and/or international robot competitions.



### Inquiry Based Learning Activities

- Senior students coached junior students in elementary and advanced training tutorials.
- Senior students organized an internal contest with the aid of supporting staff.
- Junior students participated in an internal contest.
- Team members co-operated with others to learn and improve time management and problem-solving skills.
- Team leaders facilitated the communication between staff and team members.



### How did you assess the effectiveness of students' learning?

Students were assessed on their performance in the holistic development by the instructor, self and peers using the grading rubrics.

### What were the major outcomes of this project/course? Do they match with your objectives?

Students acquired strong hands-on experience and opportunities in working with different nationalities from different engineering disciplines.

Through coaching newcomers and helping fellow students, members had personal development. With participation in the team meeting, the students appreciated the helps from the supporting staff.