Symposium on Engaging Undergraduates in Research And Inquiry:

A scholarly Dialogue, May 20, 2011, HKUST

1. Project/Course title

Engineering Special Project: Robotics

2. Project/Course team

Name	Institute	Post	Department/ Division	E-mail
Course Instructor/Project leader: Prof Tim WOO	HKUST	Visiting Assistant Professor	ECE	eetim@ust.hk
Prof Zexiang LI		Professor	ECE	eezxli@ust.hk
Members (if any):				

3. Project/Course objectives (or Intended Learning Outcomes) *(Suggested number of words 30-40 words)*

What did you intend students to learn from this project/course?

It is a project-oriented course in engineering design and applications, with a special focus on robotics which involves multidisciplinary subjects.   Students will learn robotic design, construction and programming techniques, and conduct a group project to build robots for the defined tasks. Students enrolled in this course will have the opportunities to represent HKUST in local and/or international robot competitions.

DURING

4. Inquiry Based Learning Activities (*Suggested number of words: 75-85 words*)
What did students do (inquiry-based learning activities) during the course/project?

- Senior students coached newcomers in elementary and advanced training tutorials.
- Senior students organized an internal contest with the aids 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

AFTER (*Suggested number of words for items 5 & 6: 50-60 words*)

5. How did you assess the effectiveness of students' learning?

Please give an account of the assessment methods and results.

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

6. What were the major outcomes of this project/course? Do they match with your objectives (or Intended Learning Outcomes)?

Examples of outcomes include educational software, improvement in student learning or change in student attitude.

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 management team meeting, the students appreciated the helps from the supporting staff.