

University-based Multi-disciplinary Study Projects (MUL7101)

18 Sep 2010 to Mar 2011

Co-organiser: Department of Applied Biology & Chemical Technology

The Hong Kong Polytechnic University

University-based Multi-disciplinary Study Projects is an outcome oriented programme. It creates an open and interactive learning environment for gifted students to conduct project learning with their gifted peers. Under the facilitation of university mentors, the programme aims to stimulate innovative ideas based on students' specialties. Students can enhance and further develop their investigation, research and problem solving skills through Enquiry and Outcome-Based learning. They will also have a deep understanding of subject-matter with knowledge / skills development for tracking complex problems that occur in real world.

Programme Details

Intended Learning Outcomes	<p>Upon completion of the programme, the students should be able to:</p> <ol style="list-style-type: none"> 1) Plan and conduct research and analysis on a selected topic as an active learning process; 2) Manage to finish study projects by working as a member of a team; 3) Identify and make use of suitable tools and techniques to support their study process; 4) Realize how they can bring values to the society through study project.
Date & Venue	<p><u>Commencement</u> Date: 18 Sep 2010 (Saturday) Time: 9:00am – 12:00noon Venue: Y410, Core Y (Lee Shau Kee Building), The Hong Kong Polytechnic University, Hung Hom, Kowloon</p> <p><i>* The programme will last until Mar 2011, exact date, time and venue for the meetings afterward are to be determined by individual mentor and the students. Field / industrial visit will also be arranged.</i></p>
Target Participants	<p>S3 to S7 student members (Max. 30 students)</p>
Language	<p>Cantonese and English</p>

Course Requirement	<p>Certificate of Completion will be awarded to participants who are able to fulfill all the course requirements which include:</p> <ul style="list-style-type: none"> ❖ At least 80% attendance AND ❖ Complete all the group-projects including a group written report and PowerPoint presentation 																								
Course fee	Free of charge																								
Mentors & Project Titles	<p>Students may choose a topic from the following Projects according to their preference: <i>(Please refer to the attached project details for more details)</i></p> <table border="1" data-bbox="448 495 1414 1272"> <thead> <tr> <th>Mentor</th> <th>Project Title</th> <th>Discipline</th> </tr> </thead> <tbody> <tr> <td>Dr. Gilbert Chan</td> <td>Application of Ozone Technology for Food Production having high levels of antioxidant and cancer preventive ingredients</td> <td>Environmental Science</td> </tr> <tr> <td>Dr. Eddo Choi</td> <td>Hormonal Control for Teenagers</td> <td>Medical Science</td> </tr> <tr> <td>Ms. Winsy Leung</td> <td>Relationship between Cognitive Performance and Omega</td> <td>Dietitian</td> </tr> <tr> <td>Mr. Patrick Fong</td> <td>Visual Communication for expressing our observation and insight in Hong Kong lifestyle</td> <td>Design</td> </tr> <tr> <td>Ms. Eva Lo</td> <td>Leadership Training at Work</td> <td>Leadership Training</td> </tr> <tr> <td>Dr. Andrew Ip</td> <td>Automation for a Sustainable Environment</td> <td>Automation</td> </tr> <tr> <td>Mr. V C Liu</td> <td>Innovative solutions for low cost and scalable cooling systems to improve solar PV panel efficiency</td> <td>Engineering</td> </tr> </tbody> </table> <p>Remarks:</p> <ul style="list-style-type: none"> • The first meeting with mentors will be on 18 Sep 2010, the remaining meeting date and time will be mutually agreed between the mentors and the students 	Mentor	Project Title	Discipline	Dr. Gilbert Chan	Application of Ozone Technology for Food Production having high levels of antioxidant and cancer preventive ingredients	Environmental Science	Dr. Eddo Choi	Hormonal Control for Teenagers	Medical Science	Ms. Winsy Leung	Relationship between Cognitive Performance and Omega	Dietitian	Mr. Patrick Fong	Visual Communication for expressing our observation and insight in Hong Kong lifestyle	Design	Ms. Eva Lo	Leadership Training at Work	Leadership Training	Dr. Andrew Ip	Automation for a Sustainable Environment	Automation	Mr. V C Liu	Innovative solutions for low cost and scalable cooling systems to improve solar PV panel efficiency	Engineering
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Application Procedure & Deadline	<ul style="list-style-type: none"> ❖ Students should download the Application Form from the following website: http://www.hkage.org.hk ❖ Students should submit the completed Application Form to <i>The Hong Kong Academy for Gifted Education</i> by mail or by fax (Fax number: 2490 4730) on or before 9 Sep 2010 (Thu). Late application will not be considered. ❖ The list of successful applicants will be posted on the website http://www.hkage.org.hk after 5:00pm on 14 Sep 2010 (Tue). No further notification will be made. ❖ Successful applicants should download a "Confirmation Slip" from the above website. Completed Confirmation Slip should be faxed to the Academy by 17 Sep 2010 (Fri). 																								
Enquiry	For enquiries, please contact Ms Yip at 3698 3498 or Mr Kwong at 3698 3494.																								

Attachment – Project Details

** Please state your preferred project in the application form*

	Project Title	Project Leader	Bio of Project Leader	Mode of Teaching
1	Application of Ozone Technology for Food Production having high levels of antioxidant and cancer preventive ingredients	Dr Gilbert Chan	<ul style="list-style-type: none"> - Chairman, Sino Ozone Association - Chairman, Certification Advisory Committee, Eco-product Certification Scheme, a quality system based on ISO/IEC Guide 65 - Chairman, Association for Agriculture and Fishery Sustainable Development - Advisor, Joint Committee of Hong Kong Fishermen's Organizations - The first invited speaker of the Research Grants Council Public Lecture "Oxidant, Antioxidant and Cancer preventive Foods", 18 April 2009. 	Students will be arranged to conduct experimental study in a university laboratory or field work.
2	Hormonal Control for Teenagers	Dr Eddo Choi	Registered Medical Officer	Seminar, tutorial training, and clinic visit will be arranged.
3	Relationship between Cognitive Performance and Omega -3 intake of gifted teenagers	Ms Winsy Leung	Registered Dietitian (USA), Accredited Dietitian (HKDA)	Literature study and/or questionnaire survey
4	Visual Communication for expressing our observation and insight in Hong Kong lifestyle	Mr Patrick Fong	<ul style="list-style-type: none"> - Creative Director & President, Can-Asian Advertising Ltd., Canada - Winners and Judges of numerous international creative awards - Visiting lecturer 	<ul style="list-style-type: none"> - Students will be arranged to attend brainstorm sessions in some of Hong Kong's less known neighbourhoods; - Visual presentation skills (video, photography, drawing etc.) will be the basic tools.
5	Leadership Training at Work	Ms Eva Lo	<ul style="list-style-type: none"> - A very experienced trainer, specializing in communications skills training and leadership skills training. - Currently, Director of Knowledge Management at Langham Place Hotel. - Prior to the current position, managed her own training business, serving clients in banking, shipping and hotels. 	<p>Students will participate in an in-house training programme at a 5-star hotel. The programme will include:</p> <ul style="list-style-type: none"> - workshop (introduction to hotel operations); - job shadowing, e.g. restaurants, rooms, concierge, security; - analysis of hotel operations, e.g. leadership, teamwork, service, efficiency - presentation of findings; and - feedback from mentor
6	Automation for a Sustainable Environment	Dr Andrew Ip	<ul style="list-style-type: none"> - Associate Professor, Industrial and Systems Engineering Department, The Hong Kong Polytechnic University - Has more than 25 years of experience in industry, education and consulting. - Teaching and research interests are: Green Logistics and Supply Chain, AI and Machine Vision systems, Mechatronics and product innovation. 	Students will be arranged for laboratory work, field visit and mini-group project.

	Project Title	Project Leader	Bio of Project Leader	Mode of Teaching
7	Innovative solutions for low cost and scalable cooling systems to improve solar PV panel efficiency.	Mr V C Liu	<p>Technical Director & Founder of Jet Data Co.,Ltd., a hardware, firmware and system design house for electronics sub-systems.</p> <ul style="list-style-type: none"> - Designer of vertical axis micro wind turbine based on Gorlov helical structure. - Engineering project management for renewable energy micro-generations based on scalable integration of hybrids of solar PV panels, solar heat collectors, horizontal axis micro wind turbines and mini water turbines. 	Students will be arranged to fabricate their models at an engineering workshop and for field monitoring.