



# 香港資優教育學院 The Hong Kong Academy for Gifted Education

## Sciences Programme Object-Oriented Design and Programming with Java

13 Jul 2010 to 24 Aug 2010

*Co-organiser: The Hong Kong Polytechnic University*

This summer course aims to enrich students with basic software engineering methodologies and enable students to build software tools in Java for solving problems through hands-on learning.

Students will be given an individual project for developing a software solution for a real-world problem in a competition setting. The product can be an Online Ticketing System, Interactive Applets or Java Games etc. During the course, students will learn to design, develop and test their own software written in Java using an Integrated Development Environment.

### Programme Details

<b>Date</b>	13/7, 16/7, 20/7, 23/7, 27/7, 30/7, 3/8, 6/8, 10/8, 13/8, 17/8, 20/8 and 24/8 (Please refer to appendix 1 for details)
<b>Time</b>	2:00 pm to 5:00 pm
<b>Venue</b>	Room CF004, Tang Ping Yuan Building, The Hong Kong Polytechnic University Hung Hom, Hong Kong
<b>Quota</b>	40 student members
<b>Language</b>	English
<b>Target participants</b>	S1 or above student members (Priority will be given to members in Sciences and Mathematics domain).
<b>Course requirement and merit</b>	<b><u>Certificate of Completion</u></b> will be awarded to participants who are able to fulfill all the course requirements which include: <ul style="list-style-type: none"><li>❖ attendance of 11 sessions AND</li><li>❖ complete all the assignments with satisfactory performance</li></ul>
<b>Course fee</b>	Free of charge

<b>Application procedure &amp; deadline</b>	<ul style="list-style-type: none"> <li>❖ Students should download the Application Form from the following website: <a href="http://www.hkage.org.hk">http://www.hkage.org.hk</a></li> <li>❖ Students should submit the completed Application Form to <i>The Hong Kong Academy for Gifted Education</i> by mail or by fax (<i>Fax number: 2490 4730</i>) on or before <b>5 Jul 2010 (Mon)</b>. Late application will not be considered.</li> <li>❖ The list of successful applicants will be posted on the website <a href="http://www.hkage.org.hk">http://www.hkage.org.hk</a> after 5:00pm on <b>7 Jul 2010 (Wed)</b>. No further notification will be made.</li> <li>❖ Successful applicants should download a “Confirmation Slip” from the above website. Completed Confirmation Slip should be faxed to the Academy by the deadline mentioned on the slip.</li> </ul>
<b>Address of the HKAGE:</b>	Room 326, East Block, Kowloon Tong Education Services Centre, 19 Suffolk Road, Kowloon Tong, Hong Kong
<b>Enquiry</b>	For enquires, please contact Mr Kwong at 3698 3494.

## Appendix 1: Schedule

Day	Contents	Activities	Instructor
Day 1 13/7/10	Introduction to computer programming	Lecture (1.5 hrs)	Dr. Mak
	Appreciation of advanced software	Tutorial/Lab (1 hr)	Dr. Mak and a tutor
		Lab tour (0.5 hr)	Dr. Mak and a tutor
Day 2 16/7/10	Java data types, operators, and syntax	Lecture (1.5 hrs)	Dr. Mak
		Tutorial/Lab (1.5 hrs)	Dr. Mak and a tutor
Day 3 20/7/10	Control statements	Lecture (1.5 hrs)	Dr. Mak
		Tutorial/Lab (1.5 hrs)	Dr. Mak and a tutor
Day 4 23/7/10	Control statements	Lecture (1.5 hrs)	Dr. Mak
		Tutorial/Lab (1.5 hrs)	Dr. Mak and a tutor
Day 5 27/7/10	Method and problem solving strategies	Lecture (1.5 hrs)	Dr. Mak
		Tutorial/Lab (1.5 hrs)	Dr. Mak and a tutor
Day 6 30/7/10	Object-oriented concepts	Lecture (1.5 hrs)	Dr. Mak
		Tutorial/Lab (1.5 hrs)	Dr. Mak and a tutor
Day 7 3/8/10	Java string and I/O	Lecture (1.5 hrs)	Dr. Cheung
		Tutorial/Lab (1.5 hrs)	Dr. Cheung and a tutor
Day 8 6/8/10	Object-oriented design	Lecture (1.5 hrs)	Dr. Cheung
		Tutorial/Lab (1.5 hrs)	Dr. Cheung and a tutor
Day 9 10/8/10	Object-oriented design	Lecture (1.5 hrs)	Dr. Cheung
		Tutorial/Lab (1.5 hrs)	Dr. Cheung and a tutor
Day 10 13/8/10	Data structure	Lecture (1.5 hrs)	Dr. Cheung
		Tutorial/Lab (1.5 hrs)	Dr. Cheung and a tutor
Day 11 17/8/10	Java libraries	Lecture (1.5 hrs)	Dr. Cheung
		Tutorial/Lab (1.5 hrs)	Dr. Cheung and a tutor
Day 12 20/8/10	Java libraries	Lecture (1.5 hrs)	Dr. Cheung
		Tutorial/Lab (1.5 hrs)	Dr. Cheung and a tutor
Day 13 24/8/10	Software engineering basic and software quality assurance	Lecture (1.5 hr)	Dr. Cheung
	Project presentation	Presentation by students (1.5 hrs)	Dr. Mak and Dr. Cheung (Staff from HKAGE will be invited)