# Department of Computing

## Brief Departmental Action Plan on Outcome-Based Education (OBE)

The undergraduate curriculum has been revised according to the principles of Outcome-based Learning in the Curriculum Review exercise in 2005-06. Both program level and subject level learning outcomes have been specified. There are two major areas of focus in 2005-2008:

- The realization of program-level learning outcomes
- The realization of subject-level learning outcomes

The realization of subject-level learning outcomes is mainly the responsibilities of each subject lecturer. The teaching staff are developing and refining teaching methods, exercises, assessments, etc. to ensure that the students acquire the essential knowledge to demonstrate their satisfaction to those learning outcomes.

The realization of program-level learning outcomes is the responsibility of the program committee and of the department. The current focus is on assessment – how to measure the achievement of, or the lack of, the specified learning outcomes?  The professional and academic learning outcomes are achieved and measured mainly through the regular teaching subjects. The general (all-roundedness) learning outcomes are more difficult to assess.

The department's action plan is as follows:

1) Develop methods to measure program-level outcomes in an **Outcome-based Assessment** (OBA) project (details presented in the attached proposal)

2) Set up a departmental OBE web site to provide resources and information relevant to the implementation of OBE in the department. It will be part of the OBA project and will contain:
   a) OBE-related departmental guidelines.
   b) Links to and samples/references/good practices of OBE relevant to engineering/computing in other departments in PolyU and other universities.
   c) Samples, experiences and good practices from within the department.

3) Continue to leverage on our strengths in the following areas of strength to achieve and assess learning outcomes. The assessment components will be part of the proposed OBA project.
   a) strong  and popular industrial placement program,
   b) numerous industrial collaboration projects involving students, and
   c) service learning (a variety of projects with strong student participation).

4) Integrate the processes and results of object-based assessment at the program level into the Quality Assurance Process of the department for continuous improvement to program and subject design.

5) Invite colleagues to propose sub-projects particularly related to the implementation of OBE at the subject level.

# Proposal to request for funding support for the implementation of OBE

**Project Title:** Outcome-based Assessment (OBA) Project

**Project Investigator:** Dr. Stephen Chan & Dr. Leong Hong-va

**Department:** Department of Computing

**Duration of project:** 12 months (September 2007 – August 2008)

**Project Objective:**

A systematic approach for assessment of program-level student learning outcomes.

**Methodology:**
The main objective of this project is to develop a systematic approach for outcome-based assessment, as one of the important and integrated element in the outcome-based learning process and for its continuous improvement. We distinguish between two levels of learning outcomes:

- The realization of program-level learning outcomes
- The realization of subject-level learning outcomes

This project concentrates on the realization and assessment of program-level learning outcomes, particularly the general (all-roundedness) learning outcomes which tend to be more difficult to assess compared to professional and academic learning outcomes, probably not only because the teaching staff are generally less familiar with them, but also of their variety and existence in different flavours.

Our proposed methodology includes the following key elements:

a) Direct assessment of general outcomes in relevant teaching subjects such as industrial placement, work-integrated education, Final Year Project and other project-oriented subjects including project methodology and implementation, etc.

b) Assessment of general outcomes through extra-curricula activities such as community services (service learning) and industrial projects – from the department's perspective.

c) Assessment of learning outcomes using indirect means, such as survey of employers (of placement students and graduates), service learning recipients and collaborators, recent graduates (e.g., in the past 5 years), etc.

d) Set up a departmental portal for communication purposes, dissemination of information, archival of good practices, taking into account of feedback by users, including subject lecturers and students, etc.