



Ref. No.
For official use only

**Projects on Promoting Outcome-Based Approaches in Student Learning  
2007-08  
Application for OBA Funding**

**PART I: General Information**

**1. Title**

Learning platform for problem-based capstone projects to facilitate assessment of learning outcome by students

**2. Name(s) of Applicant(s)**

Project Leader

Name	Dept	Post	Groupwise	Ext.
Lam Siu Shu Eddie	CSE	Associate Prof	cesslam	6058

Team Member(s)

Name	Dept	Post	Groupwise	Ext.
Cheng Yung Ming	CSE	Associate Prof	ceymchen	6042
Tung Wai Kwong	CSE	Technician	cekwong	6055

**3. Total funding requested**

**4. Expected duration of project:** eight months

Proposed commencement date: May 2008

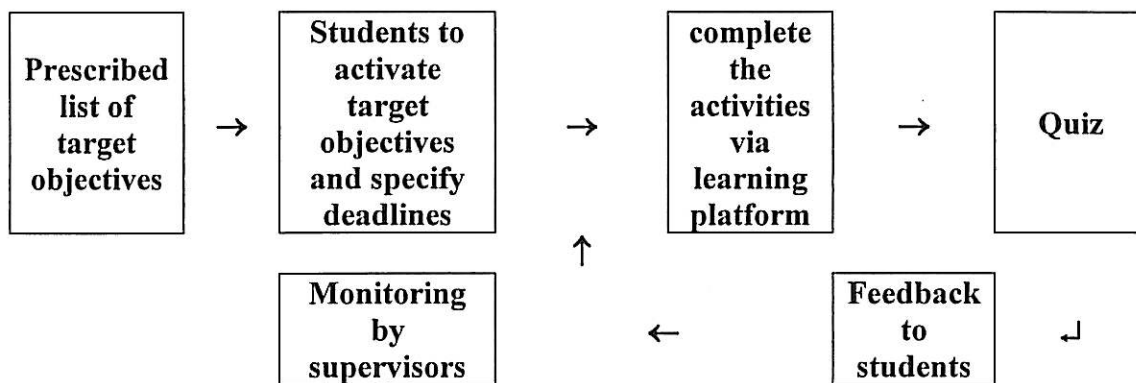
Expected completion date: December 2009

## PART II: DETAILS OF PROPOSAL

### 1. Project objectives and significance

Design project is a final-year core subject in our Civil Engineering Degree Programme (“the Design Project”). It is a problem-based subject conducted through continuous assessment. It encourages, facilitates and nourishes the students to solve complex real-life projects with substantial reliance on effective learning of the students. As the Design Project is intended for applying a board range of engineering application skills including awareness of local constraints and socio-political issues, it is therefore not conducted through conventional lectures/tutorials. Rather, there is strong emphasis on self-learning and continuous progress throughout the semester. Align with the institutional goals on outcome-based approaches in student learning, the investigators propose herein to develop a problem-based learning platform (“the learning platform”) for the Design Project. In particular, the learning platform will enhance and stimulate the students to appreciate critical thinking to the craft of civil engineering.

To facilitate the assessment of learning outcome by the students, the learning platform will allow each and every student to set up his weekly target and deadlines. We hope this will further enhance the responsibility of students, both individually and as a group. The learning platform will keep track with the progress and prepare weekly summary (e.g. in the form of work sheets). A schematic flow-diagram of this is as follows:-



The learning platform will enable the students to setup their milestones so that each and every student can map his learning outcome with the targeted programme outcome.

The following main components will be developed in the proposed study:-

1. The Design Project will be described by series of target objectives with expected learning outcomes.
2. The students will be allowed to setup his milestones by completing some or all of the target objectives.
3. Each target objective will comprise, *inter alia*, reading materials, examples and references. To assist the students in appreciation of his progress, quiz will be provided for students to attempt and scores will feedback to the students.
4. At various stages of the teaching weeks, the students will report their progress (e.g. on various technical matters related to the milestones) through the learning platform. For instance, the students may provide basic information in relation to environmental issues, safety constraints, loading schedules, number of piles, total uplift, wind

reactions, thickness of members, etc. There will be timely feedback to the students on their progress/performance so that they can keep track with their learning outcome.

5. A Design Project Handbook will be prepared for students and supervisors and it will contain a user manual of the learning platform, target objectives, milestones, teaching methodologies, etc.

The proposed development will assist effective implementation of outcome-based learning in the Design Project. We will make use of real-life projects to initiate learning with strong emphasis on students setting/mapping their learning outcomes and to provide the students with the learning platform to attain their learning outcomes. Through the learning platform, we may also measure the learning outcome achieved by the each and every student and for individual student to keep track with his learning outcome.

## 2. Target users

Deliverables of the proposed development will be implemented in the 2008-2009 for our students and is assessable on the webpage for all students.

*If the target users are students, complete the table below:*

Programme/ subject code	Programme/subject title	Credit units	Mode of study	Student intake quota per year
31069/ CSE404	BEng(Hons) in Civil Engineering (Full-time and Sandwich)/Design Project	3	Continuous assessment	90
31072/ CSE404	BEng(Hons) in Civil Engineering (Part-time)/Design Project	3	Continuous assessment	40

## 3. Outcomes and deliverables

### (a) Major outcomes and deliverables

	Major outcomes and deliverables with descriptions
(a)	The learning platform specifically developed for the Design Project will be uploaded to the website making it freely assessable by students.
(b)	New components on Outcome Based Learning will be added to the Design Project. Target objectives, milestones and teaching methodologies of the Design Project will be adjusted and integrated with the learning platform.
(c)	A Design Project Handbook for students and supervisors.

### (b) Plan for developing and piloting / implementing the deliverables

Period	Description of development
May-Jun 2008	To define the target objectives and research on learning materials To setup the framework of the learning platform To enhance and redevelop the outcome based learning methodologies
Jul-Aug 2008	To research on means of assessments To develop learning materials for the Design Project To test the learning platform To prepare a Design Project Handbook

Sep-Dec 2008	To develop, implement, test and improve the learning platform To design a questionnaire for student feedback of the new approach to outcome based learning
--------------	---

In setting up the target objectives, bi-monthly meetings will be held with the external supervisors, namely two officers of the Buildings Department.

Planned pilot / implementation period of the deliverables:

Start Date (dd/mm/yyyy): 01/09/2008 (date of first implementation of the learning platform for the Design Project)

End Date (dd/mm/yyyy): 31/12/2008

#### 4. Dissemination and sharing plan

Experience obtained through the development will be shared to others through the internet and the learning platform will also be made available to all students through the department's homepage.

#### 5. Evaluation plan

We will prepare a questionnaire to assess the effectiveness of the new approach to outcome-based learning. The survey conducted through the questionnaire will quantify the impact on this teaching approach to student learning as well as providing useful hints for further development.

#### 6. Impact

*(How will the project contribute to the success of the implementation of outcome-based approaches in student learning in the PolyU/ department/ programme/ subject?)*

As the Design Project provides an overall assessment of the students' learning outcome achieved from progression through the Programme, therefore assessment grades obtained from the Design Project may provide some indication on the learning outcomes achieved by the Programme.

Through the learning platform, information, such as learning progress of the students, will be useful for possible improvement on the learning methodology of the Design Project.

#### 7. Target date(s) for submission of progress and completion reports

	Planned submission date (mm/yyyy)
1. Progress report <i>(for projects whose duration lasts more than 1 year; to be submitted mid-way through the proposed project period)</i>	December 2008
2. Completion report <i>(to be submitted within 3 months after the project completion date)</i>	March 2008

## PART III: BUDGET OF PROPOSAL

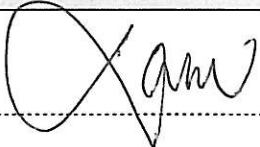
### \*Important Notes

1. Funding requests for equipment and/ or software will be considered only if:
  - a. the equipment / software is essential to the successful implementation of the project, AND
  - b. it is not available in the department concerned. The Project Leader has the responsibility to check this out.
2. The purchasing policies and procedures of FO must be followed for the procurement of approved items.
3. Funding request for conference attendance will not be considered.

### Project Leader

Name: Lam Siu Shu Eddie

(in block letters)

Signature: 

Dept: CSE

Date: 

**PART IV: DEPARTMENTAL ENDORSEMENT**

**Endorsement by Chair of ~~FETC~~/ DLTC:**

Comments on the proposal:

*Strongly support!*

Name: K.T. CHAU (in block letters) Signature: *Tim Chau* Date: Jan 28, 08

---

**Endorsement by ~~Dean~~ HoD:**

Comments on the proposal:

*By endorsing this proposal, I agree that:*

1. The proposal suitably addresses the School/Department's needs in promoting and implementing outcome-based approaches in student learning and will be considered as part of the School's/Department's Business Plan.
2. The School/Department will receive a funding as calculated for item (e) in the Budget section which I will use for providing the time release recommended by the project proposers, based on the Total Workload Model, to support them to work effectively on the project.

Name: Y L Xu (in block letters) Signature: *[Signature]* Date: 28/01/08

---

Please return this form to Miss Miranda Fung, Secretary of Working Group on Outcome-based Education,  
c/o Educational Development Centre  
by 31 January 2008