

THE CHINESE UNIVERSITY OF HONG KONG

Micro-Module Courseware Development Grant

Scheme 2: Studies in Foundation Courses

Interim Report (2015-16)

Report due 30 June 2016.

Please return by email to mmcd@cuhk.edu.hk

PART I

Project title: Consolidation of pre-calculus knowledge with mirco-modules

Principal supervisor: Dr. CHAN Kai Leung

Department / Unit: Mathematics

Project duration: From January 2016 to December 2016

Date report submitted: 28 June 2016

1. Project objectives

This project aims at helping student to consolidate their pre-calculus knowledge via the e-learning environment so that they have a better preparation on studying year one calculus courses. It remains unchanged during the development of the project.

2. Progress on process, outcomes or deliverables

We have finished 3 micro-modules so far, including mathematical induction, binomial theorem, polynomial and rational functions. Each module consists of

- entry test which helps students to analyze their prerequisite knowledge and understanding of the topic;
- teaching materials including notes, examples, follow-up exercises, video clips and geogebra for the self-study of students;
- finishing exercise which helps students to check their understanding of the topic after reading the module.

As supplements for reading the modules, we also prepared two supplementary notes on summation notation and sequences. To facilitate discussion between lecturers and students, we also included the function “embedded comments” provided by Facebook so that every user can leave comments or raise questions easily.

We planned to develop 3 more modules, including set and logic, properties of functions, trigonometry. In accordance with the current progress, the project should be finished before the grant expiry date.

3. Evaluation Plan

We are still exploring the possibility of embedding our materials in the Blackboard in order to take the advantage of using its statistical functions to carry out evaluations as stated in the proposal.

We are also planning to open the finished modules to students in the coming September and conduct a preliminary evaluation of the project.

4. Dissemination Activities (reports, websites, video links, products, *etc.*)

All the finished materials can be found from the following link:

<http://appsrv.cse.cuhk.edu.hk/~jczhuo4//MathDept/learn.html#>