

# THE CHINESE UNIVERSITY OF HONG KONG

## Micro-Module Courseware Development Grant

### Scheme 1: Basic Scheme

#### Final Report (2015-16)

Report due 31 December 2016

Please return by email to The Ad hoc Committee on Planning of eLearning Infrastructure  
[mmcd@cuhk.edu.hk](mailto:mmcd@cuhk.edu.hk)

#### PART I

Project title: Translational stimulation by Micro-modules for case studies in Cardiology  
Therapeutics

Principal supervisor: Lee Wing Yan, Vivian

Co-supervisor(s)

Department / Unit: School of Pharmacy

Project duration: From January 2016 to December 2016

Date report submitted: 31 December 2016

#### **1. Project objectives**

The project is on track to meet its objectives. There is no change of the objectives.

#### **2. Process, outcomes or deliverables**

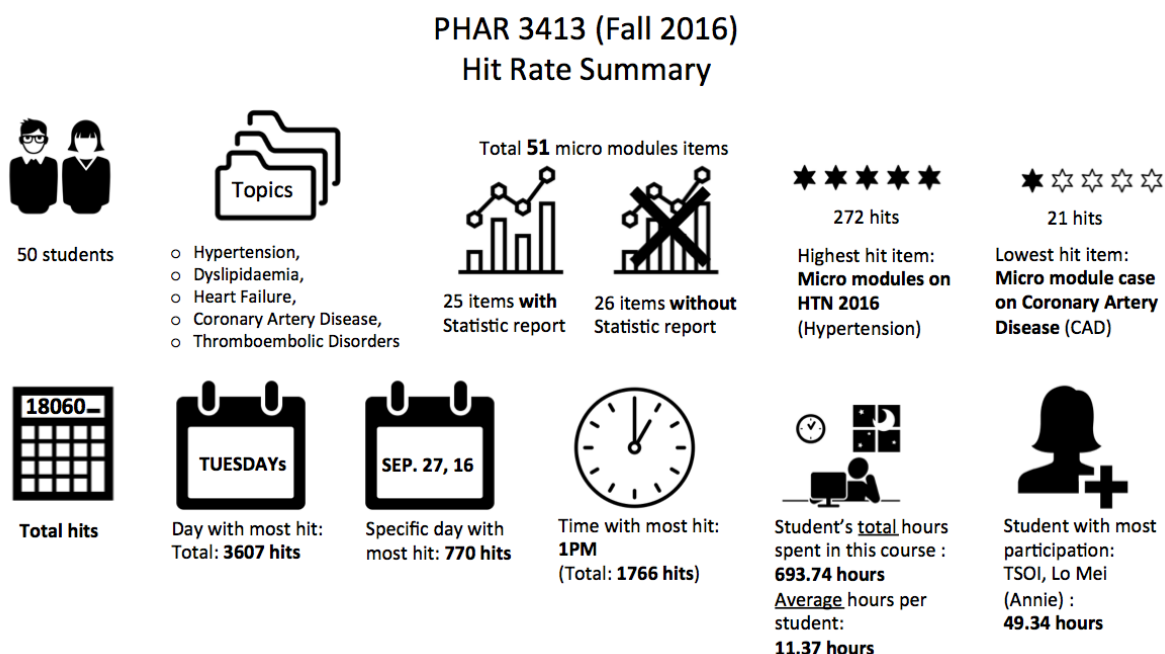
We have introduced micro-module into our PHAR 3413 course during the Fall semester already. The project is completed on time as scheduled in the proposal. We have developed a total of 51 micro-modules and case studies in (1) hypertension, (2) heart failure, (3) dyslipidaemia, (4) thromboembolic diseases, and (5) acute coronary syndrome. The current number of micro-modules prepared has exceeded by 155% than the original plan. Each disease topic has 8 micro-modules on related topic materials plus 2-3 micro-module e-cases on Blackboard. Additionally, another 1-3 clinical cases were further discussed in class for more student-teacher interactions to facilitate teaching and learning. We had not changed the nature of deliverables. We completed the project on time with satisfaction.

#### **3. Evaluation Plan**

We have not altered our evaluation plans. We have collected the access rates of the micro-modules. The data from the pre-post knowledge survey was also collected. The

comments from students at the focus-group discussion were documented. Our evaluation indicates that we have achieved our objectives.

Please see the summary of the access rates data below.



We have an accumulated hit rates of over 18,000 for PHAR 3413 cardiology micro-modules with an average of 11.37 hours spent per student during the course on e-learning.

In addition, there is a significant change on the students' attitude and understanding towards cardiology pharmacotherapy. Please see the summary of the pre-post test results in the attached file of Appendix 1.

#### 4. Dissemination, diffusion and impact

*Please provide examples of dissemination: website, presentations in workshops or conferences, or publications.*

*Please provide examples of diffusion: how the project results/process/outcomes/deliverables have been used in your unit and other parts of CUHK or other institutions?*

*Please provide examples of impact: how the project results (micro modules) can be adapted to other disciplines.*

Kindly see the links below:

Hypertension-related topic material links:

<https://www.youtube.com/playlist?list=PLtEd0IN1la00n1sJVd27ZaLiFq-XjTDQJ>

Hypertension Cases links:

<https://youtu.be/F2u97zeOmPM?list=PLhUMtEiv70Xr8WvD3Qw0enJkZZU3p68r0>  
<https://www.youtube.com/playlist?list=PLtEd0IN1la01QzMLzCK8wJ2XgaDCWZ3J5>  
<https://www.youtube.com/watch?v=L2HzoMSWIW8&feature=youtu.be>

Dyslipidaemia-related topic material links:

<https://www.youtube.com/playlist?list=PLtEd0IN1la00kTHdtZcjNtMqOV7LI9E0M>

Dyslipidaemia Cases links:

[https://www.youtube.com/playlist?list=PLtEd0IN1la03im\\_PyIZjHr9o7UvSsD06W](https://www.youtube.com/playlist?list=PLtEd0IN1la03im_PyIZjHr9o7UvSsD06W)

Heart failure-related topic material links:

<https://www.youtube.com/playlist?list=PLtEd0IN1la00kTHdtZcjNtMqOV7LI9E0M>

Heart failure Cases links:

<https://www.youtube.com/playlist?list=PLtEd0IN1la02DL2KIgv2KVQuUU6zgV3h3>

Coronary Artery Disease-related topic material links:

<https://www.youtube.com/playlist?list=PLtEd0IN1la03-u-J-4TZskvZFhfvqU6z7>

Coronary Artery Disease Cases links:

[https://www.youtube.com/playlist?list=PLtEd0IN1la019NDwnsu21YD2w\\_rWMJPFD](https://www.youtube.com/playlist?list=PLtEd0IN1la019NDwnsu21YD2w_rWMJPFD)

Thromboembolic Disease-related topic material links:

[https://www.youtube.com/playlist?list=PLtEd0IN1la03wtYeWvuKwUHp91pckQ\\_PG](https://www.youtube.com/playlist?list=PLtEd0IN1la03wtYeWvuKwUHp91pckQ_PG)

Thromboembolic Disease Cases links:

[https://www.youtube.com/playlist?list=PLtEd0IN1la03hPmztMbjO-y\\_tH2ZIYJK](https://www.youtube.com/playlist?list=PLtEd0IN1la03hPmztMbjO-y_tH2ZIYJK)

## PART II

### Financial data

Funds available:

Funds awarded from MMCDG	\$ 100,000
Funds secured from other sources (please specify _____)	\$ 0
Total:	\$ 100,000

Expenditure:

Item	Budget as per application	Expenditure	Balance
Staff Cost – Clerical Assistant	99,582	114,293.74	-14,711.74
Printer Toner	354	0	354
Printing Paper	64	0	64
Total:	100,000	114,293.74	-14,293.74

I have checked with Ms. Carmen Lam in the Bursary office. I shall settled the negative balance with my other project accounts by 31 December 2016.

### PART III

#### Lessons learnt from the project

*Please describe your way forward.*

*Please describe any of the following item(s) accordingly:*

- *Key success factors, if any*
- *Difficulties encountered and remedial actions taken, if any*
- *The role of other units in providing support, if any*
- *Suggestions to CUHK, if any*
  - *Example: what should be done differently?*

### PART IV

#### Information for public access

*Summary information and brief write-ups of individual projects will be uploaded to a publicly accessible CUHK MMCDG website. Please extract from Part I the relevant information to facilitate the compilation of the publicly accessible website and reports.*

#### **1. Keywords**

*Please provide five keywords (in the order of most relevant to your project to least relevant) to describe your micro-modules/pedagogies adopted.*

- (Most relevant)      Keyword 1: Cardiology
- Keyword 2: Case studies
- Keyword 3: Translational
- Keyword 4: Micro-modules
- (Least relevant)      Keyword 5:

#### **2. Summary**

*Please provide information, if any, in the following tables, and provide the details in Part I.*

**Table 1: Publicly accessible online resources (if any)****(a) Project website:**

*If a publicly accessible project website has been constructed, please provide the URL.*

*The project is accessible via Blackboard only.*

**(b) Webpage(s):**

*If information of your project is summarized in a webpage (say a page in the department's or faculty's website), please provide the URL(s) here.*

*Not applicable*

**(c) Tools / Services:**

*If you have used any tools or services for the project, please provide names of the tools or services in here.*

**(d) Pedagogical Uses:**

*If any flipped classroom activities have been conducted, please provide information in here.*

*If relevant, please indicate how your project output can be used to support flipped classroom activities.*

*We had conducted flipped classroom activities*

**(c) Others (please specify):****Table 2: Resources accessible to a target group of students (if any)**

*If resources (e.g. software) have been developed for a target group of students (e.g. in a course, in a department) to gain access through specific platforms (e.g. Blackboard, facebook), please specify.*

<u>Course Code/ Target Students</u>	<u>Term &amp; Year of offering</u>	<u>Approximate No. of students</u>	<u>Platform</u>
<i>PHAR 3413</i>	<i>Fall semester 2016</i>	<i>50</i>	<i>Blackboard</i>

**Table 3: Presentation (if any)**

*Please classify each of the (oral/poster) presentations into one and only one of the following categories*

	<b>Number</b>
(a) In workshop/retreat within your unit (e.g. department, faculty)	<i>1</i>
(b) In workshop/retreat organized for CUHK teachers (e.g. CLEAR workshop, workshop organized by other CUHK units)	<i>0</i>
(c) In CUHK ExPo jointly organized by CLEAR and ITSC	<i>1 (will plan to present at the expo)</i>

(d) In any other event held in HK (e.g. UGC symposium, talks delivered to units of other institutions)	0
(e) In international conference	1 (plan to submit abstract to the)
(f) Others (please specify)	0

<b>Table 4: Publication (if any)</b>	
<i>Please classify each piece of publication into one and only one of the following categories</i>	<b>Number</b>
(a) Project CD/DVD	0
(b) Project leaflet	0
(c) Project booklet	0
(d) A section/chapter in a booklet/ book distributed to a limited group of audience	0
(e) Conference proceeding	2 (Will be submitted to one local and one overseas conference)
(f) A chapter in a book accessible internationally	Please insert no
(g) A paper in a referred journal	1 (in progress)
(h) Others (please specify)	Please insert no

### **3. A one-page brief write up**

*Please provide a one-page brief write-up of no more than 500 words and a short video.*

Clinical case illustration is important for pharmacy students to understand the application of pharmacology and therapeutics knowledge that they have learned in class. However, actual ward round in the acute setting may not be feasible with a student group size of 50. Therefore, the use of micro-modules for clinical case presentation will be ideal for better translational applications in real world clinical environment. I have developed 51 micro-modules for the 5 areas of cardiology therapeutics including hypertension, coronary artery disease, lipid lowering management, heart failure and blood clotting disorders. The clinical cases were based on actual cases that we encounter at the acute cardiology ward at the Prince of Wales Hospital. PHAR 3413 is the second Pharmacology and Therapeutic Course of the Pharmacy curriculum covering the drug action on the cardiovascular system, urinary system and endocrine system. Cardiovascular system covers over 50% of the course in the 6 major areas listed above. The objectives of each of the micro-modules were (1) to prepare students to understand the clinical use of drugs in the cardiovascular system; (2) to use evidence-based medicine for positive clinical outcomes; and (3) to enhance translational teaching and learning environment. The current project had achieved its stated objectives. We have developed a total of 51 micro-modules and case studies in (1) hypertension, (2) heart failure, (3) dyslipidaemia, (4) thromboembolic diseases, and (5) acute coronary syndrome. The current number of micro-modules prepared has exceeded by 155% than the original plan. Each disease topic has 8 micro-modules on related topic materials plus 2-3 micro-module e-cases on Blackboard. Additionally, another 1-3 clinical cases were further discussed in class for more student-teacher interactions to facilitate teaching and learning. We have an accumulated hit rates of over 18,000 for PHAR 3413 cardiology micro-modules with an average of 11.37 hours spent per student during the course on e-learning. The micro-module with the highest hit was hypertension while the lowest hit was the coronary artery disease. One of the possible reasons was because hypertension was the first topic that was introduced in class and coronary artery disease was introduced during the time when mid-term occurred that may affect the access rates of students. In addition, the pre-post test results showed that students found the micro-modules enhanced their understandings and positive attitude towards cardiology therapeutics. Seventy percent of students found the micro-modules were very helpful in their learning. From the teacher's perspective, I found that the case studies and micro-modules enhanced more teacher-student interaction in class and brought more real-life clinical scenarios in class.