# USING MICRO-CREDENTIAL COURSES AS PART OF ASYNCHRONOUS LEARNING IN UNDERGRADUATE PHARMACY COURSE

## Introduction

During the COVID-19 pandemic, adaptive adjustments towards teaching methods were made to better suit the viability of online education in higher education. Students faced limited accessibility due to internet instability and unavailability, which affects synchronous learning. One of the effective alternatives is the asynchronous learning method, through bite-size micro-credential (MC) modules.

## Objectives

Integration of three micro-credential modules as part of undergraduate teaching materials in course FAR352: Clinical Pharmacy Practice.

The learning outcomes covered are:
- **CLO1**: Explain the concept and philosophy of pharmaceutical care in delivering effective pharmaceutical care services to the patients.
- **CLO2**: Analyse patient-related information to perform pharmaceutical care in inpatient and outpatient settings.

## Description

- MC modules were developed in the OpenLearning platform.
- Components of each module include original videos by module developers, learning activities (e.g. quizzes, mix and match, case studies) and assessments.

## Usefulness

Based on the student's feedback (N=186), the majority of them were satisfied with the content quality (n=162, 87.1%), coverage (n=155, 83.3%), learning activities (n=155, 83.3%), interface (n=163, 87.6%) and feedback given (n=155, 83.3%).

### Total number of learners (2020-2023): 360



**Concept of Pharmaceutical Care**



**Pharmacotherapy in special populations**



**Extended pharmacy services**

## Added values

- **Self-paced**: Students are able to learn the topics at their own pace and convenience.
- **Flexibility**: Modules are concise, applicable, interactive, and allow for optimum participation.
- **Competency**: It serves the academic, professional, and personal development interests of learners.

## Commercialization potential

- The MC modules are ready-made pharmacy-related courses suitable for monetary benefits.
- The MC modules can be marketed to other pharmacy schools and pharmacists.

## Recognition

The use of MC for asynchronous learning has shown to be an effective tool in hybrid learning for this course and may enhance the students' learning experience.

Scan this QR code to view the modules:

openlearning

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