

Six interactive micro-modules were developed by the Department of Geography and Resource Management for students' understanding and self-learning about the basic principles of remotely-sensed image processing. The micro-modules covers six topics including (i) image histogram; (ii) image enhancement; (iii) geometric correction; (iv) radiometric correction; (v) image statistics; and (iv) matrix algebra. The first two micro-modules are fundamental for visual image interpretation while the other four focus on digital image processing and analysis. The designed modules provide animated and interactive learning materials supplemented with narration. Visual elements, including animated graphs, figures and video extracts, are used to enhance the learning experience of students. Each module last for 10 – 15 minutes. The modules are all animated graphics supplemented with images, videos and narrations to enhance students' learning experiences. The modules are hosted to department's server and students can access the materials online using desktop computer or mobile devices. Other than watching the materials passively, interactive activities are designed to allow student to learn by exploring. After a theory or a concept was explained in the modules, students are required to explore through these activities and to gain a deeper understanding.

The six micro-modules provide basic knowledges related to three lectures in GRMD3104 Satellite Image Analysis. Students were provided web links to gain access to the micro-modules and they were required to study the contents before a particular lecture. During lecture time, a flipped classroom pedagogy was adopted for half teaching period to allow discussion among students on related topics in order to gain better and thorough understanding of contents covered in the micro-modules.

In the end of the semester, an centralized questionnaire survey was conducted to collect feedbacks and comments from students in form of open- and closed-end questions. Apart from questionnaire, feedbacks were collected through personal talk with students in some lectures. One important feedback from students is to add subtitles to enhance learning experiences. Additional time and financial resources were applied to accomplish the task.