

# PROJECT / INITIATIVE IN TEACHING AND LEARNING

Award Recipients Semester 2 Session 2019/2020

## FACULTY OF MEDICINE AND HEALTH SCIENCES



**LEADER**  
Dr Cheah Whye Lian

### TEAM MEMBERS

**Dr Ayu Akida Abdul Rashid | Dr Helmy Hazmi |  
Dr Law Leh Shii**

The recent COVID-19 Movement Control Order has driven the need to have a more innovative way of conducting an assessment that exclude face-to-face interaction. Modification has been done using Alternative Assessment method in the assessment of MDP30609 Community Medicine and Public Health posting. Under Alternative Assessment, Authentic and Performance-based Assessment have been selected for comprehensive assessment with the objective to promote integration of written and performance measures, divergent thinking in solving problem and enhancement of meaning skills. Students were asked to produce a comic on how to prevent COVID-19 for primary school children in rural community, beside presenting a research proposal and draft manuscript for journal publication. The comic showcased the students' level of achievement, using medical graphic narratives (or comics) as a learning tool to foster empathy, promote observational skills, and cultivate awareness of social issues relevant to medical training. The main goal is to stimulate student self-reflection, nurture creativity, improve their communication skills through visual storytelling, and more importantly shape their professional identity as future medical doctor.

## FACULTY OF ENGINEERING



**LEADER**  
Dr Kuryati Kipli

### TEAM MEMBER

**Dr Kasumawati Lias**

Inquiry-based assessment is one approach to create transformative learning. As for Digital Signal Processing (DSP) assessment, the students are provided with the real-inquiry-based problems aligned to the targeted Learning Outcome. The assessment is initiated and adapted based on the structured inquiry formation. By Implementing this approach, educators are able to create active learning. Therefore, students or learners can thrive.

## CENTRE FOR PRE-UNIVERSITY STUDIES



**LEADER**  
Dr Melody Kimi

### TEAM MEMBERS

**Wan Roslina Wan Yusof | Dhana Jay Raja Gopal |  
Sharifah Mona Abd Aziz Abdullah | Abdul Al-Hafiz  
Ismail | Wan Sharifatun Handayani Wan Zulkiplee |  
Iswan Nur Ariff Ismail | Mardhiah Mohd Shahabuddin**

Group project for Chemistry was implemented with the aim for students to become self-directed learners by completing task and adjusting their learning approaches through integrating proper planning by proposal writing, acquiring laboratory skills, applying feedback from fellow team members and active supervision from facilitator through immersive face to face interaction.

## FACULTY OF APPLIED AND CREATIVE ARTS



**LEADER**  
Mohamad Faizuan Mat

This project was conducted to fulfill one of the course learning outcomes for Appreciation and Visual Art Criticism course (GKV3183). This is a group-based project with maximum number of five students in each group. Each group is required to write about art forum (Bicara Seni) as well as create and disseminate poster to the public through social media or through any means of communication. Students also have to think critically about certain topic in within the scope of appreciation and visual art criticism to fulfil the needs or to solve certain research problem or for knowledge transfer. The concept of this course should be similar with the actual art forum (Bicara Seni) which consists of a moderator and few panels. Students are free to choose their own setting, time and target audience. Apart from training students to learn how to do public speaking, this course also teaches on how to debate with facts, and share their feedback with the audience. This project benefits the viewers ranging from university students to community members which result in increasing the visibility of UNIMAS to the public. 2 projects that have been implemented with schools including SMK Simunjan No.1 and SMK AsaJaya. Each group were required to prepare a report and reflection as the outcome of the project.

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## FACULTY OF COGNITIVE SCIENCES AND HUMAN DEVELOPMENT



**LEADER**  
**Abdul Halim Hashim**

Attempts to increase student's engagement with the assessment material as a learning method was made by gamifying authentic assessments using role-playing game method involving elaborate narratives (mission, quests and levels), character and task customization (character choice and special abilities), character progression (unlocking levels) and competition (completion points and leader-board) in the field of Occupational Safety and Health.

## FACULTY OF RESOURCE SCIENCE AND TECHNOLOGY



**LEADER**  
**Dr Chung Hung Hui**

In STF2083 Scientific Communication, traditional written examinations were reduced to a minimal of 30% while various types of alternative assessment, which includes;

- (i) Forums writing and online quizzes,
- (ii) Mock research proposal presentation,
- (iii) Mock research proposal writing and
- (iv) Poster presentation were carried out.

Instructions as well as rubrics were given to students prior to commencement of the assessments. Referring to the theme 'Justify the basic principles in executing research' as stated in CLO2 and 'Display writing skills and presenting scientific reports' in CLO3, the assessment of this course highlighted four (4) main sections; (a) identification of major/important need to conduct research (Problem statement identification), (b) the means to understand/solve the arising problems (hypothesis deduction), (c) the measurable target within the scope of this intended research (objectives determination) and (d) steps involved in achieving the outlined objectives (experimental design). In this course, all four types of assessments (i.e. mock research proposal writing, mock research proposal presentation, poster presentation and online forums) are individual-based assessment. The reason for such course design is to ensure individual performance is aligned with the intended assessment (authentic assessment).

## FACULTY OF ENGINEERING



**LEADER**  
**Dr Norazlina Bateni**

### TEAM MEMBERS

**Rosmina Ahmad Bustami | Al Sidqi Hassan |  
Dygu Salma Awg Ismail | Md Abdul Mannan |  
Mohammad Sapian Mohamed Kasim | Mohd Zaidi  
Serah**

KNS 2601 is a laboratory course for Hydraulics and Geotechnical courses for the Second-year students. The course exposes students to the technical background of hydraulics and geotechnical standard tests. Students are expected to comprehend and apply the principles of analysis and the scope of works in the hydraulics and geotechnical field. It is aimed to enhance students understanding from hands-on experience through standardized procedure and equipment provided in the laboratory. The experiments are conducted through open-ended laboratory experimentations, where students need to come out with their own procedure and hypothesis. The course covers the psychomotor domain of P4 (Mechanism) and Critical Thinking (CT) skills. However, due to the COVID-19 pandemic, the instructors were quick to think of a practical solution that could satisfy the outlined learning outcomes and expected taxonomies. The pandemic hit us during the mid-semester break, when most students have completed half of the laboratory experiments (total of eight laboratory sessions) – leaving the course half-finished. Hence, a digital-based learning experience with the introduction of virtual laboratory practice was introduced. Demonstration videos were prepared for students to access and 'experience' the experiments whilst not being physically in the laboratory building.

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## CENTRE FOR PRE-UNIVERSITY STUDIES



**LEADER**  
Ahmad Alif Kamal

### TEAM MEMBERS

**Adruss Mohamad Tazuddin | Chong Chee Jiun |  
Tarmizi Mohammad Shukri**

Introducing Information Systems for foundation in science students is very challenging. Most students come from sciences background with limited ICT knowledge. Thus, experiential learning was implemented for students, empowering them to experience system analyst job, being expert with specialization towards Information Systems building and designing.

## FACULTY OF LANGUAGE AND COMMUNICATION



**LEADER**  
Dr Yvonne Michelle Campbell

The main aim of this e-SULAM (e- Service Learning Malaysia - University for Society) project is to preserve, sustain and disseminate knowledge of language and culture of the Bidayuh community. The idea of a website to showcase information about the Bidayuh language and culture came about after much discussion. Students were divided into two main groups and the into smaller groups of 5 to 6. Each small groups were assigned different element of language and culture. Students collected the data using ethnographic methods and the result of data analysis was put up in their website, which the students created. Two websites were created from the combination of data collected and analysed.

## FACULTY OF RESOURCE SCIENCE AND TECHNOLOGY



**LEADER**  
Prof Dr Zainab Ngaini

### TEAM MEMBER

**Dr Rafeah Wahi**

The Project-Oriented Problem-Based Learning (POPBL) involved transforming the typical class lecture into an interactive scientific communication. This initiative is used for STK2073 Scientific Communication and Research Ethics. Students were exposed to the real scientific communication via workshop-style delivery, project-oriented problem-based learning (PoPBL) on proposal writing projects and brainstorming/discussion activities during weekly meetings. The initiative is eliminating the traditional lecture and end-of-semester assignment practices.

## CENTRE FOR PRE-UNIVERSITY STUDIES



**LEADER**  
Nor Hayati Jaya

### TEAM MEMBERS

**Dzetty Soraya binti Abdul Aziz | Nur Rasfina Mahyan |  
Nor Amalina Ahmad | Norni Hidayawati Mat Daud**

Critical Thinking Session (CTS) in Physics course provides quantitative and analytic skills needed for analyzing data and solving problems in the sciences area. It involves crafting a learning environment where students are able to explore and understand how the physical world works, and to connect complex scientific concepts to their daily lives. It also includes building students' confidence in their ability to solve challenging problems and empowering them to build a better future for themselves and others. CTS is one of the better way of learning that will prepare our students towards focusing on being very collaborative, being self-motivated and self-directed all the time and staying true to the lifelong learning values, which are imperative to carve a better future for our students in their field of choice

## FACULTY OF BUILT ENVIRONMENT



**LEADER**  
A.P. Sr Ts. Dr Afzan Ahmad  
Zaini

Blended learning or hybrid is a self-directed, project-based and remote learning that combines both online and face-to-face interaction. Hybrid education uses online technology to not just supplement, but transform and improve the learning process. This course (BEQ 1073 Construction Economics for Quantity Surveyors I) adopted Blended Learning Substitution due to Movement Control Order (MCO) on the 18th March 2020. There are several platform to implement a Blended Learning Substitution method for this course such as eLEAP, live classroom, forum, and simulations based on the real construction project. A new course plan was developed using asynchronous mode for the remaining half of the semester to enable students with poor internet connection to get accessed. However, based on the feedback from the students, they still need face-to-face interaction through synchronous method, due to the fact that not all students were able to implement a self-directed learning. The students still need some element of supervision and one-to-one interaction for better understanding. On top of that, the lecturer has made an initiative to create a WhatsApp's group as a medium of communication to help the students to understand better. For those students who feel uncomfortable to communicate in a group, they can private message the lecturer to ask questions or discuss on the subject matter. Both synchronous and asynchronous learning caters to diverse type of students to create conducive learning environment.

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## FACULTY OF RESOURCE SCIENCE AND TECHNOLOGY



**LEADER**  
Dr Rafeah Wahi

### TEAM MEMBER

**AP Dr Showkat Ahmad Bhawani**

Environmental Chemistry 2 (STK2063) is offered in semester 2 for Year 2 students in BSc Resource Chemistry (Hons). In this course environmental issues relating to solid waste, wastewater and hazardous waste are viewed in context of their treatments. This course has been implementing service learning (SULAM) as a part of immersive learning approach since 2017. In previous years, the course assessment includes either final examination (40%), or mid-term examination (30%). Although SULAM implementation in this course since 2017 has generally improved CLO achievement, the pen and paper examination has resulted in some students did not achieve the intended CLOs. Instructors were not sure on the effectiveness of examination in creating a deep learning experience for students. Therefore, in 2019/2020, mid-term examination was replaced with case-study analysis to (1) encourage higher order thinking skills among students, (2) cultivate the sense of commitment and responsibility among students to find innovative solutions to waste management issues. In addition, students' e- SULAM projects including group discussion and engagement with target community were implemented on online platforms. Students' reflection on their e-SULAM projects was recorded on their e-portfolio. Implementation of immersive learning through blended learning in this course has resulted in improved CLO achievement compared to the past two years. Students' reflection on their learning experience in this course implied the effectiveness of immersive learning (blended learning) approach in this course.

## FACULTY OF RESOURCE SCIENCE AND TECHNOLOGY



**LEADER**  
Dr Nurashikin Suhaili

### TEAM MEMBERS

**Prof Dr Awang Ahmad Sallehin Awang Husaini |  
Dr Dayang Salwani Awang Adeni**

Social media and animation software offer several attractive features that can overcome the limitations of the existing educational portals. My team introduced the use of YouTube, Instagram and Doodly as supplementary platforms for teaching Environmental Biotechnology in Semester 2 2019/2020. YouTube was used as a platform for posting recorded presentations and animated videos, which were created using Doodly software. Meanwhile, Instagram was used to post bite-sized information and quizzes in order to foster the culture of learning during leisure time amongst the students. The initiatives had contributed to the excellent academic performance and positive feedbacks from the students.

## CENTRE FOR PRE-UNIVERSITY STUDIES



**LEADER**  
Norhunaini Mohd Shaipullah

### TEAM MEMBERS

**Liyana Truna | Farah Liyana Azizan | Nur Fazliana  
Rahim | Emmerline Shelda Siaw | George Tan Geok  
Shim | Chew Khui Tat | Ibrahim Bohari | Abang  
Mohammad Hudzaifah Abang Shakawi | Ahmad  
Deedat Ibrahim | Ahmad Alif Kamal**

MATHX Project was a new project-based learning instrument that allows digital students to work collaboratively, purposely implemented to develop teamwork and student's management skills. Students could translate acquired knowledge to applications and STEM projects. The integration of digital technology use in this project helps students have meaningful and enjoyable learning experiences in Mathematics.

## CENTRE FOR PRE-UNIVERSITY STUDIES



**LEADER**  
Rohaiza Daud

### TEAM MEMBERS

**Mohamad Fhaizal Mohamad Bukhori | Christharina  
Saurin Gintoron | Mohamad Razif Othman | Roberta  
Chaya Tawie Tingga | Mohd Aminudin Mustapha |  
Muhamad Ikhwan Idris | Maybelline Goh Boon Ling |  
Norfarahin Norwen**

Assessment drives learning. In order to improve learning via assessment conduct, therefore, assessment must be objective, significant and magnitude. Objective Structure Practical Examination (OSPE) has/have been adapted and implemented for Biology students in Centre for Pre-University Studies to assess know-what and know-how practical competencies following the objective and structured manner with direct observation of the students' performance. The assessment provides meaningful learning experience to the students as it can assess all three domains (cognitive, affective, and psychomotor).