



UTM
UNIVERSITI TEKNOLOGI MALAYSIA



CENTRE FOR
ENGINEERING EDUCATION
CEE
UNIVERSITI TEKNOLOGI MALAYSIA

CENTRE FOR ENGINEERING EDUCATION

Activities in 2019



Rigorous Research in STEM and Engineering Education Workshop Series

UTM Centre for Engineering Education (CEE) in collaboration with the Society of Engineering Education Malaysia (SEEM) has conducted 4 parts of Rigorous Research in STEM and Engineering Education Workshop Series, i.e:

- Part 1: Introduction to Engineering and STEM education research (14-16 February 2019)
- Part 2: Preparing research proposals in engineering and STEM education (11-13 April 2019)
- Part 3: Data analysis in engineering and STEM education research (24-26 August 2019)
- Part 4: Publication in engineering and STEM education (23 September 2019)

These workshops aim to support engineering and STEM educators in learning and applying rigorous educational research. At the end of the workshop series, participants have produced a research paper to be submitted for publication or at least have a specific research areas and guided planning that they want to contribute in. 15 participants have completed until part 4, of the 20 participants attended the part 1 workshop.



Rigorous Research in STEM and Engineering Education Workshop Series, Part 1

UTM CEE

Date: 14 - 16 February 2019
Venue: UTM Johor Bahru

Fee: RM 599 (RM 499 SEEM members)

Implementing innovations in STEM education at the college level? Looking for ways to study impact of innovations and publish them? This workshop is for you!

3-DAY WORKSHOP ON INTRODUCTION TO ENGINEERING & STEM EDUCATION RESEARCH

To support engineering and STEM educators learn and apply rigorous educational research, the UTM Centre for Engineering Education (CEE), in collaboration with the Society of Engineering Education Malaysia (SEEM), is conducting following series of 4 workshops in 2019:

- Part 1: Introduction to engineering and STEM education research
- Part 2: Preparing research proposals in engineering and STEM education
- Part 3: Data analysis in engineering and STEM education research
- Part 4: Publication in engineering and STEM education

This workshop will expose participants to various areas and examples of research in engineering and STEM education. Participants will be guided to formulate research problems, prepare research problem background and define individual research aims. At the end of this workshop, participants will be able to find relevant previous research to guide them in determining the potential specific research areas that they want to contribute in.

For more information visit: http://bit.ly/RR_EngineeringEducation

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RESEARCH METHODOLOGY
in Engineering Education

CEE CENTRE FOR ENGINEERING EDUCATION UTM

Training Module

Fatin Allah Phang
Khairiyah Mohd Yusoff
Syed Ahmad Helmi Syed Hassan



Iskandar Malaysia Eco Life Challenge (IMELC) 2019

Iskandar Malaysia Ecolife Challenge 2019 (IMELC), a programme to create awareness on sustainable development in environment comprising of Low Carbon Emission (LCC) and saving on resources (Water and Electrical usage). EcoLife Challenge is a model originated from Kyoto, Japan and adjusted to be localised, and Iskandar Malaysia is the first to have it implemented in the whole of Malaysia. The Ecolife Challenge requires student to calculate their daily carbon emissions, trash reduction, water and electrical expenses in both school and at home. Reports were sent by the schools to a band of different agencies to perform their evaluation before deciding the winner.

In total, 908,402 kilogramme of carbon dioxide was successfully saved from being emitted through this programme, while RM18,953 of water bill and RM97,139.69 in electrical bills were saved. Moreover, RM42,102 was generated in total through recycling activities and a grand number of 185 tonnes of recyclable items were collected through the 475 schools.

The programme is supported by strategic partners of IMELC including MBBJ, IRDA, UTM, TVET, JPNJ, SWM Environment, SEDA, JAS and AEON Mall Bandar Dato' Onn.



Related links:

- <https://www.theiskandarian.com/news/ecolife-challenge/>
- <https://people.utm.my/fatin/iskandar-malaysia-ecolife-challenge/>



Seminar Iskandar Puteri ke Arah Masyarakat Rendah Karbon (SIPLCS) 2019

Seminar Iskandar Puteri ke Arah Masyarakat Rendah Karbon (SIPLCS) 2019 was organized by the Centre for Engineering Education (CEE), UTM in collaboration with the Majlis Bandaraya Iskandar Puteri (MBIP), and Jabatan Pendidikan Negeri Johor (JPNJ) on 20th October 2019 at Sutera Mall, Johor Bahru.

Among the highlights of the seminar were the finale of 'Problem Based Learning for Low Carbon Society 2019' (PBLCS), Public Vehicle Use Promotion as well as talks and exhibitions related to the Low Carbon Society Initiative.

The PBLCS was attended by 315 Form 2 students and 64 teacher from 14 schools around Johor. All teachers had been trained by CEE lecturers and MBIP officers on the awareness on low carbon society.

Visitors were also entertained by 11 exhibitions hosted by MBIP, UTM, Tanah Sutera, Subway food chain, BACFREE Malaysia, Johor Public Transport Corporation (PAJ), The Iskandar Malaysia Bus Rapid Transit (IMBRT) and SWM Environment. An estimated of 1,000 visitors have attended the program.

Related story: <https://news.utm.my/ms/2019/10/siplcs-2019-wujudkan-komuniti-rendah-karbon-di-iskandar-puteri/>



RCE Iskandar Sustainable and Low Carbon School Exhibition 2019

RCE Iskandar Sustainable and Low Carbon School Exhibition 2019 was held to increase awareness on low carbon society and sustainable development goal (SDG) among students, teachers parents, and communities. This was the 5th being held and jointly organized by Majlis Bandaraya Iskandar Puteri (MBIP), CEE UTM, Jabatan Pendidikan Negeri Johor (JPNJ) in collaboration with AEON Mall Bukit Indah.

Knowledge sharing on SDG was also held by UTM lecturers and representatives from various departments who responded to the sustainability agenda. Topics covered include composting, low carbon society, biodiversity, SDGs, recycling and so on.

A total of 21 schools participated in the exhibition to show the public about green activities and projects being carried out to the public. All projects presented were evaluated by environmental education experts from UTM, MBIP, SWM Environment Sdn. Bhd., IRDA, JPNJ and IPG Temenggong Ibrahim.

Related story: <https://news.utm.my/ms/2019/07/pameran-rce-iskandar-sustainable-low-carbon-schools-exhibition-2019-cermin-usaha-utm-ke-arrah-sdg/>



Academic Research Writing and Publication Workshop 2019

Academic Research Writing and Publication Workshop 2019 was held on 5th September 2019 at Double Tree by Hilton Hotel, Johor Bahru. This workshop was attended by 15 CEE fellows and researchers, conducted and facilitated by Prof. Dr. Khairiyah Mohd Yusof, Assoc. Prof. Dr Fatin Aliah Phang, and Assoc. Prof. Dr. Yudariah Mohamad Yusof.

This workshop provides opportunities to fellows and researchers to gather and discuss on their niche areas in engineering education. As a result from the discussion, niches areas that were focused are Epistemology, Cooperative Problem Based Learning (CPBL), Team Working, Problem Solving, Industrie 4.0, and Sustainability.

Each participants shared their knowledge and ideas in their niche group and discussed on the title, scopes, methodology, as well as the output of research that they planned to work together.

