



### BACKGROUND

The Centre for Engineering Education Research was established in Mac 2009 and is headed by Prof. Dr. Azami Zaharim. The purpose of establishing the centre is to generate specialised knowledge and skilled human resource in the field of engineering education. Prior to the formation of the Centre, the Engineering Education Research Group (EERG) was initially established in January 2003. The idea of establishing EERG in the early 2003 came from the previous dean of the Faculty of Engineering and Built Environment (FKAB), Prof. Ir. Dr. Hassan Basri. The members of this research centre consist of academicians from various educational backgrounds including academic staff from the Faculty of Engineering and Built Environment, Faculty of Education and Faculty of Science and Technology.

### OBJECTIVES

The main objective of this centre is to lead research related teaching and learning method in engineering education and built environment to produce graduate with skilled, ethical and marketability. The emphasis is on quality assurance based on human resource skills which is currently the latest approach in national learning and teaching mechanism that is creative and innovative.

### MISION

To spearhead engineering education and built environment research towards teaching and learning with more innovative.

### VISION

To become a leader in realising engineering education and built environment holistically at national and international level.

### FURTHER INFORMATION

Head  
 Centre for Engineering Education Research (P3K)  
 Faculty of Engineering & Built Environment  
 Universiti Kebangsaan Malaysia  
 43600 UKM Bangi, Selangor, Malaysia  
 Tel : +603-8921 6453 Fax : +603-8921 6452 / +603-8925 2546  
<http://www.ukm.my/p3k>

### RESEARCH GROUP

#### Faculty of Engineering & Built Environment

- Prof. Dr. Azami Zaharim (azami.zaharim@gmail.com)
- Prof. Ir. Dr. Siti Rozaimah Sheikh Abdullah (rozaimah@eng.ukm.my)
- Prof. Dato' Ir. Dr. Hassan Basri (drhb@ukm.my)
- Prof. Ir. Dr. Riza Atiq O.K Rahmat (riza@vlsi.eng.ukm.my)
- Prof. Ir. Dr. Mohd Jailani Mohd Nor (jailani@eng.ukm.my)
- Prof. Ir. Dr. Wan Hamidon Wan Badaruzzaman (whamidon@vlsi.eng.ukm.my)
- Prof. Dato' Ir. Dr. Abdul Wahab Mohammad (wahabm@eng.ukm.my)
- Prof. Dr. Ing. Nik Abdullah Nik Mohamed (enikkei@eng.ukm.my)
- Prof. Ir. Dr. Mohd Sobri Takriff (sobri@eng.ukm.my)
- Prof. Dr. Mohd Zaidi Omar (zaidi@eng.ukm.my)
- Prof. Dr. Azah Mohamed (azah@eng.ukm.my)
- Prof. Dr. Mahamod Ismail (mahamod@eng.ukm.my)
- Prof. Ir. Dr. Shahrum Abdullah (shahrum@eng.ukm.my)
- Prof. Dr. Aini Hussain (aini@eng.ukm.my)
- Prof. Dr. Norhamidi Muhammad (hamidi@eng.ukm.my)
- Prof. Ir. Dr. Shahrir Abdullah (shahrir@eng.ukm.my)
- Prof. Dr. Andanastuti Muchtar (muchtar@eng.ukm.my)
- Prof. Dr. Norbahiah Misran (bahiah@eng.ukm.my)
- Assoc. Prof. Dr. Hafizah Hussain (hafizah@eng.ukm.my)
- Prof. Dr. Dzuraidah Abd Wahab (dzuraida@eng.ukm.my)
- Assoc. Prof. Dr. Zulkifli Mohd Nopiah (zmn@vlsi.eng.ukm.my)
- Assoc. Prof. Sr. Dr. Adi Irfan Che Ani (adiirfan@gmail.com)
- Assoc. Prof. Dr. Siti Aminah Osman (saminah@eng.ukm.my)
- Assoc. Prof. Dr. Roszilah Hamid (roszilah@eng.ukm.my)
- Assoc. Prof. Dr. Norngainy Mohd Tawil (anie@eng.ukm.my)
- Dr. Nizaroyani Saibani (nizar@eng.ukm.my)

#### Faculty of Education

- Prof. Dr. Lilia Halim (lilia@ukm.my) – **Dean of Faculty of Education**
- Prof. Datuk Dr. Tamby Subahan Mohd Meerah (subhan@ukm.my)
- Assoc. Prof. Dr. Kamisah Osman (kamisah@ukm.my)
- Assoc. Prof. Dr. Ruhizan Mohamad Yassin (ruhizan@ukm.my)
- Prof. Dr. Saemah Rahman (saemah@ukm.my)

#### Pusat Pengajian Umum

- Prof. Dr. Khairul Anuar Mastor (kam2000@ukm.my) – **Director**

### RESEARCH AREAS

- Outcome-based education (OBE)
- Education 3.0
- Continuous Improvement in Teaching and Learning
- Measurement and Evaluation of Learning Outcomes
- Credit Transfer and Student Mobility
- Implementation of Generic Skills in Engineering Education
- Employability of Engineering Graduates
- Student-Centred Learning
- Lifelong Learning
- Active Learning
- Quality Assurance in Education Process
- Problem-Based Learning (PBL)
- Quality Assurance of Higher Education Institutions
- Quality Benchmarking in Engineering Education
- Psychology Development of Student

### PROGRAMMES

- i. Master Of Science (Engineering Education)
- ii. Doctor Of Philosophy (Engineering Education)

#### Course Outline

This programme is by thesis only. During the duration of the study, candidates will be guided by the faculty members who act as a supervisor (or co-supervisor) or a member of the Graduate Committee. In order to be awarded the Master of Science and Doctor of Philosophy, each student must complete four (4) units of the faculty compulsory course KF6004 Research Methodology and another four out of six audit courses as offered in the Faculty of Education, UKM (Table 1). In addition, the international students are required to enrol in two Bahasa Melayu courses (two credit units each). Candidates starting in the academic session 2010-2011 onwards are required to pass the TOEFL with a minimum score of 550 or minimum 6.0 for IELTS.

Table 1. Selection of Audit Courses

Curriculum Components	
Courses Code	Courses
GGGA6213	Curriculum Theory and Practice
GGGB6213	Advanced Psychology Development
GGGB6413	Psychological Thinking Skills
GGGB6453	Practice in Measurement and Evaluation
GGGB6743	Program Evaluation
GGGB6283	Research in Teaching and Learning

Coordinator of Postgraduate Programme (Engineering Education) :  
 Dr. Nizaroyani Saibani (nizar@eng.ukm.my)

### ACTIVITIES

- i. Yearly Seminar organising on Engineering Education and built environment.
- ii. Publication on PeKA proceedings (Yearly starting from 2005).
- iii. Publication on Books.
  - *Amalan Pengajaran dan Pembelajaran Berkesan dalam Pendidikan Kejuruteraan dan Alam Bina.*
  - *Kebolehgajian Graduan Kejuruteraan.*
  - *Asas Model Pengukuran Rasch: Pembentukan Skala Struktur Pengukuran.*
  - *Pengukuran Rasch dalam Hasil Pembelajaran.*
  - *Penerapan Kemahiran Insaniah Dalam Pengajaran & Pembelajaran di Fakulti Kejuruteraan dan Alam Bina.*
  - *Pengajaran & pembelajaran Kejuruteraan: Penambahbaikan kualiti berterusan.*
- iv. Discourse on Teaching and learning sharing practice within engineering departments in Faculty of Engineering and Built Environment.

### NETWORKING

- Prof. Dr. Bill Williams
- Engineering & Technical Education Research Group (EnTER), UiTM
- Federation of Engineering Institutions of Islamic Countries
- IEEE Education Society (EDUCON)
- University of Sharjah
- Training Research Engineering Education (TREE), UTM
- World Scientific and Engineering Academy and Society (WSEAS)