UNIVERSITI KEBANGSAAN MALAYSIA

Edisi 2015: Bil. 4

BULETIN JKEES

Jabatan Kejuruteraan Elektrik, Elektronik & Sistem
Fakulti Kejuruteraan & Alam Bina

Edisi 2015: Bil. 4 Oktober—Dis 2015

Kandungan...

Bersambung dihalaman 4...

Sidang Editor, Jabatan Kejuruteraan Elektrik, Elektronik & Sistem, Fakulti Kejuruteraan dan Alam Bina,
Universiti Kebangsaan Malaysia, 43600 Bangi, Selangor Darul Ehsan.
Tel : 603-8911 8393 ; Faks : 603-8911 8359 ; E-mel : kjkees@vlsi.eng.ukm.my ; Laman sesawang : www.ukm.my/jkees

SUDUT BAHASA MELAYU

KAEDAH PEMBELAJARAN FIZIK SECARA INOVATIF

Pada 11 November 2015, satu seminar "Kaedah Pembelajaran Fizik secara Inovatif, Daerah Hulu Langat" telah diadakan di Dewan Kuliah 2, Fakulti Kejuruteraan dan Alam Bina, Universiti Kebangsaan Malaysia. Sesi seminar tersebut telah dianjurkan oleh Puan Hajah Adibah Ahmad, Ketua Panitia Fizik Daerah Hulu Langat dengan kerjasama Dr Kalaivani Chellappan, Pensyarah Kanan, Jabatan Elektrik Elektronik & Sistem, Fakulti Kejuruteraan dan Alam Bina UKM untuk berkongsi ilmu berkaitan perbelajaran dan peggunaan sumber laman web. Seminar tersebut telah disertai oleh 202 orang pelajar dari sekolah-sekolah menengah Daerah Hulu Langat. Diharapkan agar pelajar yang menyertai program ini dapat meningkatkan prestasi akademik dan mendapat gred cemerlang bagi matapelajar Fizik SPM 2015.

Seminar ini juga adalah usaha untuk meneruskan pengenalan teknik pembelajaran "Self-Learning Through Open Source" yang telah diperkenalkan dikalangan guru-guru fizik Hulu Langat pada tahun 2012 Puan Hajah Adibah Ahmad, Ketua Panitia Fizik Daerah Hulu Langat dengan kerjasama Dr Kalaivani Chellappan, yang pada masa itu adalah Felo Penyelidik Institut Sains ANGKASA. Dalam seminar tersebut kami telah memperkenalkan guru– guru fizik daerah Hulu Langat kepada sumber online yang dapat digunakan dalam meningkatkan kepelbagaian dalam pengajaran matapelajaran fizik.

PEMBENTANGAN PROJEK KURSUS KL 2152 (KURSUS MAKMAL ELEKTRIK & ELEKTRONIK II)

Pembentangan projek bagi kursus makmal ini adalah wajib bagi setiap pelajar yang mendaftar, dan markah pembentang projek ini juga turut menyumbangkan peratus yang besar bagi markah akhir kursus ini. Setiap pelajar yang mengambil kursus ini akan menjalani sesi makmal secara berkumpulan iaitu dua orang bagi setiap kumpulan seperti yang telah ditetapkan oleh pensyarah kursus, dan ketetapan kumpulan tersebut juga digunapakai untuk pembentangan projek makmal ini. Melalui pembentangan projek makmal ini, pensyarah dapat melihat sejauh mana keberkesanan input yang telah para pelajar perolehi sepanjang proses sesi makmal yang dijalankan sepanjang semester tersebut. Didalam projek ini, semua pelajar akan mempraktikkan hampir keseluruhan pengetahuan yang diperolehi sewaktu sesi pengajaran di dalam makmal.

Diawal pelaksanaan projek makmal ini, pelajar diberikan masa dua minggu untuk menyiapkan projek tersebut berdasarkan tajuk yang telah mereka pilih. Tajuk-tajuk projek yang mereka pilih akan diusulkan kepada pensyarah dan harus mendapat kelulusan pensyarah tersebut sebelum projek tersebut dijalankan. Setiap kumpulan pelajar akan memikirkan ujikaji atau projek yang bertepatan degan kehendak kursus makmal ini. Konsep yang telah dipilih bagi projek makmal adalah pelajar harus mencari parameter tertentu untuk mengira sesuatu yang tidak diketahui.

Setelah pembangunan projek selesai, sesi pembentangan projek dijalankan dan dinilai oleh pensyarah-pensyarah kursus ini, iaitu En Hilmi Sanusi, Dr Iskandar, Dr Saiful dan Encik Radin. Bagi memberikan sedikit kelainan dan suasana yang lebih kondusif serta lebih terbuka, setiap kumpulan diminta membentangkan projek masing-masing didalam bentuk nyanyian. Pembentangan juga dilakukan diluar makmal, iaitu dikawasan terbuka sekitar fakulti dimana semua warga fakulti dapat menyaksikan pembentangan unik yang dijalan oleh para pelajar ini. Setiap kumpulan diberikan masa selama tiga minit setengah untuk menerangkan setiap aspek projek mereka bermula dari pengenalan, objektif, penyataan masalah, metodologi, dan kesimpulan. Pembentangan secara terbuka ini juga mempu memberikan pengalaman yang baru kepada pelajar selain dapat meningkatkan keyakinan dirri mereka didalam aspek pengucapan umum.

SUDUT BAHASA MELAYU

MESYUARAT PERJUMPAAN BERSAMA PANEL PENASIHAT INDUSTRI (INDUSTRY ADVISORY PANELS - IAP)

Pada 27 November 2015 yang lalu, bertempat di Bilik Mesyuarat Utama Fakulti, telah berlangsung satu mesyuarat perjumpaan diantara Jabatan Kejuruteraan Elektrik, Elektronik dan SIstem (JKEES) dan Panel Penasihat Industri (*Industry Advisory Panels* – IAP. Selain daripada untuk memenuhi keperluan Malaysian Qualifications Framework – MQF), Malaysian Qualification Agency – MQA dan juga Engineering Accreditation Council – EAC, tujuan mesyuarat ini diadakan adalah untuk menerangkan kepada pihak industri tentang penambahbaikan di dalam bidang pengajaran dan pembelajaran yang telah dilakukan di Jabatan. Selain itu, Jabatan juga perlu mendapatkan maklumbalas dan juga cadangan daripada pihak IAP berkaitan aktiviti pengajaran dan pembelajaran yang dijalankan di Jabatan supaya seiring dengan keperluan di bidang industri pada masa kini.

Seramai 11 wakil daripada pihak industri telah menghadiri mesyuarat tersebut. Mereka adalah:

En. Abdul Rahman Mohd. Yusoff dari SMK Electronics (M) Sdn Bhd
Ir. Kenny Ang Teoh Ong dari Control Easy Technology Sdn Bhd
Ir. Shairul Wizmar bin Wahab dari Tenaga Nasional Bhd
Ir. Akmal Rahimi Abu Samah dari Malaysian Resources Cooperation Bhd
Cik Haslina Kamaruzzaman dari Tenaga Nasional Bhd
Ir. Abu Fatah Sanusi Mohd Ambia dari ARZ Consulting Engineers Sdn Bhd
Ir. Amran Hj. Naemat dari TM R&D
Tn. Hj. Jaafar Hj. Mohamad Abu Bakar dari Hanitek Sdn Bhd
Ir. Dr. Mohd. Fadzil Mohd. Siam TNB Research Sdn Bhd
En. Mohd Fadzril Faez Muhd Bakri dari Sony EMCS Malaysia Sdn Bhd (SOEM)
En. Sahrul Hilmi Ibrahim dari TM R&D

Mesyuarat telah dimulakan dengan ucapan kata-kata aluan dan taklimat ringkas daripada Ketua Jabatan, Prof. Dr. Norbahiah Misran, diikuti dengan taklimat berkaitan Program Educational Outcome (PEO), Program Outcome (PO) dan Pencapaian Pelajar yang dibentangkan oleh Penyeleras Program dan juga wakil dari Unit Penambahbaikan Pengajaran dan Pembelajaran (UP3). Mesyuarat kemudiannya diteruskan dengan sesi perbincangan berkaitan kurikulum pra-siswazah dan siswazah yang sedang dijalankan di Jabatan. Di dalam perbincangan tersebut, banyak respon dan cadangan yang telah diterima daripada pihak IAP terutamanya berkaitan kaedah pengajaran dan pembelajaran yang dipraktikkan. Antaranya, **Tuan Haji Jaafar Hj. Mohamad Abu Bakar** dari **Hanitek Sdn. Bhd**. telah mencadangakan pengajaran berkaitan programming yang berkait rapat dengan aplikasi '*interface*' seperti papan FPGA, penggunaan LabVIEW dan sebagainya juga perlu diberikan penekanan. Ini kerana elemen-elemen ini banyak diaplikasikan di dalam industri. Selain itu, **Ir. Kenny Ang Teoh Ong** dari **Control Easy Technology Sdn Bhd** berpendapat bahawa keterlihatan UKM, terutama nama Jabatan di dalam industri masih agak kurang dan memerlukan perhatian. Beliau mencadangkan agar pihak Jabatan sentiasa mendapatkan maklumbalas berterusan daripada pihak alumni dan industri berkaitan sebagai salah satu cara untuk meningkatkan keterlihatan Jabatan.

Mesyuarat tersebut telah berakhir pada jam 12.30 tengah hari dengan pelantikan rasmi IAP, penyampaian cenderamata dan sesi perkenalan dengan para IAP.

Disediakan oleh: Mohd Saiful Dzulkefly Bin Zan

Oct - Dec 2015
Sepintas Lalu

ENGLISH CORNER

HUAWEI SEEDS OF FUTURE

In the last two weeks of October 2015, I went to China namely in Beijing and Shenzhen under the Seeds For The Future program. The program was sponsored by Huawei and was done with collaboration with the Ministry of Higher Education. I was the only one from UKM together with 20 other students from different universities throughout Malaysia. As you can see from the pictures, there were two nationalities that were present too, Russian and Panamas. I was selected based on the interview that took place in early September. Two weeks before the travelling day, I got a message from my lecturer telling that I got selected. I attended the briefing and prepared for Saturday, 17th October 2015, the trip date.

As soon as I arrived in Beijing which took us 6 hours, it was chilling. The temperature was around 15 degree and we had to put our jacket on. The next day in Beijing, we went to the Forbidden City and visited the Great Wall of China. That visit really got the ice breaking. On Monday, we started our Chinese language and culture class. We were taught Chinese language and the cultures as well as Chinese calligraphy. Half of us were Chinese, so each of the non-Chinese got a private mentor. This really helped me in helping the Chinese language. The language was indeed hard but fun to learn as well. We were introduced to the alphabets and tones. We also learnt a handful of Chinese characters like 'Wo'(me) and 'Ni'(you).

Beijing is truly a gargantuan city and so full of people. However, it is well developed and planned. Beijing has a history of more than 5000 years and is so rich in culture and monuments. We got a lot of chances to stroll around the streets of Beijing and there is so much you can actually do. Be reminded though, in China, you can do a lot of things only if you know Mandarin. Me, devoid of the Mandarin language, had to rely a lot on my Chinese friends. I found myself bargaining, ordering food and asking for price using my friends as translators. It was very difficult as none seems to be able to converse in English. To be honest, you are much likely to encounter someone speaking Malay rather than English

On Friday, we flew to Shenzhen. Shenzhen is a heavily industrialized city. You can find all the biggest electronic companies in China in the city. Shenzhen is just 43 years old and as such is younger than Kuala Lumpur.

However, it has buildings far taller and numerous than found in Kuala Lumpur. Shenzhen, as the tour guide told us was previously an agriculture area. The communist party which rules China had seen that the communist approach in managing the economy seems incapable of sustaining it. In simple words, it is kind of, *the more years you work the more you earn but it does not matter how much you or others work, everyone gets the same share.* This, as you can see is exactly opposite of capitalism and through this approach, the economy cannot be sustained. Hence Shenzhen and three other cities are selected to actually practice capitalism in economy. Today this city is a sign of the proven way of sustaining economy. After the success of Shenzhen, more cities followed and China later adopted this approach for the whole country.

Shenzhen also is where Huawei's headquarter lies. The headquarter is so big that you need to cross the road to get to the restaurant, cross another road to get to the Huawei's own hotel and another road to go to the research center. In fact, to go to the research center by walking from the hotel, you need to be really fit. We took the bus of course.

The next day after we reached Shenzhen, we visited the Cultural Village and Show. The Cultural Village has exhibition of every important tribes and their traditions in China. Their shows were awesome and I would give a big applause for that. On Monday, the training class started. Basically the class aimed to teach us about the telecommunication technology. The teachers have some accents but their teachings are understandable. The ice-breaking session however occurred earlier on Friday and I got to know a lot of Russian and Panamas. The Friday session also includes brief lecture about Huawei's history. There were three theory classes and each class was handled by different teachers. On Monday, we were taught about artificial intelligent. We also learnt about GPON, the very important underlying protocol of communication networks. The next day, the pathway of networks and the underlying technologies became the subjects. The theories were actually hard to grasp but there was where the lab session on Wednesday and Thursday came in. The lab sessions had really helped me and the other friends to understand more about communication technology. For the first time, we had the chance to see real equipment usually deployed in towers above the hill and operate it. We even make calls using our mobile phones and use Huawei's own SIM card to demonstrate the technology.

On the lab days, after the labs, we went to Huawei's Exhibition hall. We were shown all the latest technologies and how Huawei is participating in the current trend in the first day. The exhibition was really a wonderful visit as not many people got to enter the place. The second day, we were shown all Huawei's products from servers, underground cables, sensors to mobile phones. We were also explained how Huawei products maintain its advantage over the competitors'. On Friday, we took the examination after another theory class. The class was just about the latest devices and the future of networking. All in all, I think that the short course taught was really well planned.

In Beijing and Shenzhen, every evening after class we went for dinner together in restaurants. Actually, as Malaysians, we got special privileges to dine in restaurants because the food offered in the hotel was non-halal. So thanks to Huawei and the ministry, we are able to consume halal and delicious food while in China every day. We ate meat twice every day which never happened to me in UKM. The meat was rarely chicken; it would be beef, mutton, ducks and lambs. Such a sumptuous meal. I would really like to stress that if you ever participate in the program; never worry about the food, not to mention how expensive the food was. However, you have to learn to use the chopstick as a lot of these restaurants do not provide spoons or fork.

In Shenzhen, during our leisure time, we had the chance to visit Dong Men, Electronic Market and Copy Market. All those markets offer great price for everything. Those are really heaven for shopping. On Saturday, we went to Hong Kong's Airport and depart to Kuala Lumpur. It was really and awesome journey and very sad to leave friends behind.

As an engineering student in UKM, I felt very fortunate to be selected to join the program. Although at first I was kind of skeptical, I gave it a go and never looked back. I would really recommend anyone to try out this program and go for the interview. This program is held annually so this is once in a lifetime opportunity. Those who like challenges and like travelling will be a good candidate for the program including those who want to see how companies in China are conquering the world. The benefit of this program is so much. Aside from the program itself, you actually have an advantage in carrier because Huawei and its partners would really know you. When you come back from China, you will never see her the same way. Thank you.