

**GARIS PANDUAN CADANGAN PROGRAM AKADEMIK
IPTA UNTUK PERTIMBANGAN JAWATANKUASA
PENDIDIKAN TINGGI (JKPT)
KEMENTERIAN PENDIDIKAN**

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Timbalan Naib Canselor Akademik dan Antarabangsa
Deputy Vice Chancellor Academic and International

Prof Dr Mohd Azib bin Salleh

P.KHIDMAT MAKLUMAT AKADEMIK
UNIMAS



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12 Mei 2008

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Y.Bhg. Dato',

- (a) **Permohonan Penggabungan Program Kejuruteraan Elektronik dan Telekomunikasi dan Program Kejuruteraan Elektronik dan Komputer kepada Program kejuruteraan Elektronik**
- (b) **Permohonan Pertukaran Nama Ijazah**
 - (i) **Ijazah Sarjana Muda Kejuruteraan Elektronik dan Telekomunikasi kepada Ijazah Sarjana Muda Kejuruteraan Elektronik (Telekomunikasi)**
 - (ii) **Ijazah Sarjana Muda Kejuruteraan Elektronik dan Komputer kepada Ijazah Sarjana Muda Kejuruteraan Elektronik (Komputer)**

Dengan segala hormatnya perkara di atas adalah dirujuk.

Dengan hormatnya dimaklumkan bahawa Fakulti Kejuruteraan Universiti Malaysia Sarawak, berdasarkan kepada saranan Engineering Accreditation Council (EAC) dan Pemeriksa-Pemeriksa Luar ingin memohon kelulusan untuk menggabungkan Program Kejuruteraan Elektronik dan Telekomunikasi dan Program Kejuruteraan Elektronik dan Komputer kepada Program Kejuruteraan Elektronik.

Susulan daripada itu juga, Fakulti Kejuruteraan juga memohon untuk menukar nama nama ijazah seperti berikut.

- (a) **Ijazah Sarjana Muda Kejuruteraan Elektronik dan Telekomunikasi kepada Ijazah Sarjana Muda Kejuruteraan Elektronik (Telekomunikasi)**
- (b) **Ijazah Sarjana Muda Kejuruteraan Elektronik dan Komputer kepada Ijazah Sarjana Muda Kejuruteraan Elektronik (Komputer)**



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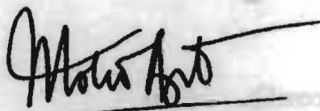


Cadangan ini telah dipertimbangkan dan diluluskan oleh Mesyuarat Senat Bil. 04/2007 Ke-85 Unimas yang telah diadakan pada 27 Jun 2007 dan Mesyuarat Lembaga Pengurusan Universiti (LPU) Bil. 02/2008 ke-40 yang telah diadakan pada 16 April 2008 .

Pihak Universiti Malaysia Sarawak berharap permohonan ini dapat diberi pertimbangan khas bagi membolehkan pertukaran ini dibuat sebelum sesi 2008/2009. Untuk makluman tuan, Pihak EAC akan mengadakan lawatan pengiktirafan program pada Ogos 2008.

Dilampirkan 25 salinan Kertas Cadangan Penggabungan Program Jabatan Kejuruteraan Elektronik mengikut cadangan perubahan pada mesyuarat itu.

Sekian, terima kasih.



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s.k: Dekan, FK, UNIMAS



**GARIS PANDUAN CADANGAN PROGRAM AKADEMIK IPTA UNTUK
PERTIMBANGAN JAWATANKUASA PENDIDIKAN TINGGI (JKPT)
KEMENTERIAN PENDIDIKAN**

1. UNIVERSITI/KOLEJ UNIVERSITI

UNIVERSITI MALAYSIA SARAWAK (UNIMAS)

2. TUJUAN

Penggabungan program Jabatan Kejuruteraan Elektronik, Fakulti Kejuruteraan

Program: a. Kejuruteraan Elektronik dan Telekomunikasi
b. Kejuruteraan Elektronik dan Komputer

Kepada:

Program: Kejuruteraan Elektronik

3. PROGRAM AKADEMIK YANG DIPOHON

i. Nyatakan nama program dan nama ijazah yang akan dianugerahkan.

a. Program: Kejuruteraan Elektronik
(Electronic Engineering)

Ijazah: Sarjana Muda Kejuruteraan (Dengan Kepujian)
Kejuruteraan Elektronik (Telekomunikasi)

b. Program: Kejuruteraan Elektronik
(Electronic Engineering)

Ijazah: Sarjana Muda Kejuruteraan (Dengan Kepujian)
Kejuruteraan Elektronik (Komputer)

Nama Asal Program Dan Ijazah

a. Program: Kejuruteraan Elektronik dan Telekomunikasi
(Electronic and Telecommunication Engineering)

Ijazah: Sarjana Muda Kejuruteraan (Dengan Kepujian)
(Kejuruteraan Elektronik dan Telekomunikasi)

Tahun Masuk	Program:
1995	Kejuruteraan Elektronik dan Komputer (Electronic and Computer Engineering)
1998	

Ijazah: Sarjana Muda Kejuruteraan (Dengan Kepujian)
(Kejuruteraan Elektronik dan Komputer)

- ii. Nyatakan sama ada ijazah perlu diiktiraf oleh mana-mana Badan Profesional.

Majlis Akreditasi Kejuruteraan, EAC (Engineering Accreditation Council) yang merangkumi pihak IEM (Institution of Engineers Malaysia), LAN (Lembaga Akreditasi Malaysia) dan JPA (Jabatan Perkhidmatan Awam).

4. FAKULTI/SEKOLAH/PUSAT/JABATAN YANG MEMOHON

- i. Nyatakan secara ringkas Institut/Fakulti/Sekolah/Pusat/Jabatan yang memohon program.

Jabatan Kejuruteraan Elektronik, Fakulti Kejuruteraan, Universiti Malaysia Sarawak (UNIMAS)

- ii. Nyatakan sejarah penubuhan dari segi tarikh penubuhan, bilangan program dan bilangan pelajar yang berdaftar.

Fakulti Kejuruteraan ditubuhkan pada tahun 1993. Sehingga kini Fakulti menawarkan empat (4) program.

- Program Kejuruteraan Elektronik dan Komunikasi (PKET)
- Program Kejuruteraan Elektronik dan Komputer (PKEK)
- Program Kejuruteraan Mekanikal dan Pembuatan
- Program Kejuruteraan Sipil

Program Kejuruteraan Elektronik dan Telekomunikasi bermula pada tahun 1995 dan Program Kejuruteraan Elektronik dan Komputer bermula pada tahun 2000.

5. PERINGKAT PENGAJIAN

Nyatakan sama ada ijazah pertama, sarjana atau kedoktoran.

Ijazah Pertama – Sarjana Muda Kejuruteraan dengan Kepujian
BEng (Hons)

Bilangan pelajar berdaftar adalah seperti berikut:

Tahun Masuk	Jumlah	
	PKET(WK19)	PKEK(WK20)
1995	26	-
1996	21	-
1997	47	-
1998	40	-
1999	53	-
2000	57	32
2001	52	17
2002	48	21
2003	20	11
2004	21	10
2005	19	18
2006	20	19
2007	42	25

Sejak dari itu, program Kejuruteraan Elektronik dan Telekomunikasi dan Program Kejuruteraan Elektronik dan Komputer telah melahirkan jumlah graduan dan pecahan mengikut tahun adalah seperti berikut:

Tahun Bergraduan	Jumlah	
	PKET	PKEK
1997	5	-
1998	26	-
1999	35	-
2000	47	-
2001	42	-
2002	42	-
2003	4	-
2004	40	19
2005	52	13
2006	44	19
2007	24	15

5. PERINGKAT PENGAJIAN

- Nyatakan sama ada ijazah pertama, sarjana atau kedoktoran.

Ijazah Pertama – Sarjana Muda Kejuruteraan dengan Kepujian
BEng (Hons)

6. TAHUN DIMULAKAN

- i. Nyatakan tahun dan sesi program akan dimulakan.

Program Kejuruteraan Elektronik dan Telekomunikasi telah diperkenalkan pada tahun 1995 dan Program Kejuruteraan Elektronik dan Komputer pula telah diperkenalkan pada tahun 2000.

Penggunaan nama baru Kejuruteraan Elektronik adalah untuk memasukkan bagi sesi 2008-2009 dan tahun-tahun seterusnya.

7. JANGKA MASA PENGAJIAN DAN KAEDAH

- i. Nyatakan jenis pengajian sama ada sepenuh masa atau separuh masa serta jangka masanya dalam semester dan tahun.

Pengajian dijalankan secara sepenuh masa dalam tempoh 4 tahun (8 semester).

- ii. Nyatakan kaedah kursus sama ada pengajaran, amali atau projek disertasi.

Kursus ini dijalankan dalam bentuk kuliah, tutorial, makmal, bengkel, projek dan projek tahun akhir.

NATLAMAT PROGRAM.

8. JUSTIFIKASI MENGADAKAN PROGRAM

- i. Nyatakan rasional dan tujuan program diwujudkan.
- i. Keperluan tenaga manusia negara. Peluang pekerjaan di sektor awam dan swasta mengikut permintaan dalam pasaran semasa dan prospek jangka panjang.

Program di Fakulti Kejuruteraan khasnya Kejuruteraan Elektronik adalah antara rancangan kerajaan untuk melahirkan jurutera tempatan yang dilahirkan di Malaysia. Umum mengetahui negara memerlukan sekitar 150,000 ribu jurutera khasnya bagi merealisasikan Wawasan 2020.

Bagi peluang pekerjaan pula, statistik menunjukkan hampir kesemua graduan sudah pun mendapat pekerjaan kecuali yang meneruskan pengajian ke peringkat yang lebih tinggi (tidak termasuk yang menjadi suri rumah tangga).

Dengan itu prospek jangka panjang bagi kursus baik dari segi peningkatan penambahbaikan kursus, pendaftaran pelajar serta mendapat pengiktirafan dari pihak berkenaan adalah amat cerah.

- ii. Rancangan lima (5) tahun semasa dan dokumen penting kerajaan seperti Pelan Induk Perindustrian (IMP) dan lain-lain.
- Tidak berkaitan kerana kertas kerja ini bertujuan untuk penukaran nama program -
- iii. Permintaan semasa terhadap program termasuk permohonan daripada agensi dan industri berkenaan.
- Tidak berkaitan kerana kertas kerja ini bertujuan untuk penukaran nama program -
- iv. Perkembangan dalam perubahan teknologi.
Program ini akan berkembang seantarnya dengan perkembangan pesat teknologi. Ini termasuk memperkenalkan kursus-kursus penting selaras dengan keperluan pasaran pekerjaan.
- v. Lain-lain justifikasi.
Penukaran nama ini juga dilakukan bagi memenuhi komen yang diberikan oleh pihak EAC dan Pemeriksa-pemeriksa Luar. Tujuan utama adalah disebabkan pertindihan kurikulum yang terdapat dalam kedua-dua program tersebut dari Tahun 1, Tahun 2 dan Tahun 3.

9. MATLAMAT PROGRAM.

- i. Nyatakan rasional dan tujuan program diwujudkan.

Tujuan pertukaran nama ini dilakukan adalah berdasarkan faktor-faktor tertentu seperti yang disenaraikan di bawah ini.

i. Berdasarkan lawatan Pemeriksa Luar Program Kejuruteraan Elektronik dan Telekomunikasi yang telah diadakan pada 6 dan 7 Februari 2007 yang lepas, Profesor Syed Idris Syed Hassan, Pemeriksa Luar Bagi Program Kejuruteraan Elektronik dan Telekomunikasi, menyatakan bahawa, 2 program yang ditawarkan iaitu Ijazah Kejuruteraan Elektronik dan Telekomunikasi dan Ijazah Kejuruteraan Elektronik dan Komputer adalah hampir sama iaitu 109 jam kredit adalah kursus sepunya dan 21 jam kredit kursus pengkhususan. Beliau mencadangkan agar ijazah tersebut diubahkan namanya kepada Ijazah Kejuruteraan Elektronik (pengkhususan) (**LAMPIRAN E-2**).

ii. Berdasarkan Laporan Pemeriksa Luar, Professor John M Senior bertarikh 17 Mac 2004, beliau menyatakan bahawa berlakunya pertindihan antara kedua-dua program yang mana program-program tersebut hendaklah digabungkan menjadi satu program dengan dua opsyen bagi pelajar tahun akhir (**LAMPIRAN E-2**).

iii. Berdasarkan Laporan Lembaga Penilai EAC 2003, kedua-dua program (Program Kejuruteraan Elektronik dan Komputer) dan (Program Kejuruteraan Elektronik dan Telekomunikasi) seharusnya digabungkan seperti yang dicadangkan oleh Pemeriksa Luar sebagai satu program dengan opsyen kepada pelajar pada tahun akhir (**LAMPIRAN E-1**). Berdasarkan keperluan Majlis Akreditasi Kejuruteraan (Engineering Accreditation Council, EAC), setiap satu program hendaklah mempunyai jumlah minima staf akademik yang terlibat dalam pengajaran seramai 8 orang. Dengan dua program yang ditawarkan dalam Jabatan Kejuruteraan Elektronik ini, tenaga pengajar seharusnya berjumlah minima 16 orang. Walau bagaimanapun, disebabkan faktor-faktor seperti staf bercuti belajar, maka jumlah tenaga pengajar yang sedia ada di Jabatan Kejuruteraan Elektronik adalah kurang seperti yang disyaratkan terutamanya pada tahun 2011. (**LAMPIRAN E-3**).

- ii. Nyatakan kesesuaian dengan visi, misi dan matlamat universiti serta aspirasi negara dan kepentingan global.

Visi, misi dan matlamat universiti adalah untuk menjadi universiti contoh dan menjadi pilihan bagi golongan pelajar dan akademik melalui pencapaian cemerlang dalam bidang pengajaran, dan penyelidikan.

Program ini pula adalah untuk melahirkan graduan tempatan yang cemerlang yang pada umumnya menepati visi dan misi universiti. Dengan cadangan dan kaedah penambahbaikan, program ini seperti 'curriculum review', pemeriksa dan penasihat luar, akreditasi dari pihak EAC, sudah tentunya akan membawa kecemerlangan kepada universiti dan tentunya membawa kepada aspirasi negara dan global amnya.

10. HASIL PEMBELAJARAN (OVERALL OUTCOME)

- i. Nyatakan keupayaan khusus (competencies) yang akan ditunjukkan oleh pelajar di akhir program, seperti penguasaan pengetahuan dalam pelbagai bidang termasuk ICT, daya intelek, dari segi menyelesaikan masalah, membuat keputusan secara kreatif, keterampilan, praktikal, kebolehan berkomunikasi, berfikir secara kritikal, sikap dan akhlak sebagai warganegara yang bertanggungjawab serta keupayaan meningkatkan kebolehan diri.

Pelajar-pelajar yang mengikuti kursus Kejuruteraan Elektronik didedahkan dengan kursus-kursus pelengkap dan generik yang akan menekankan aspek-aspek pengetahuan di dalam ICT, pembangunan manusia, pengurusan kewangan, keusahawanan dan juga pengenalan kepada tamadun Islam bagi tujuan menilai kesan, dan sumbangan kepada masyarakat. Ini selaras dengan konsep Islam Hadhari yang dipertengahan sekarang.

- ii. Tunjukkan kaitan antara keupayaan pada akhir program dengan keupayaan yang akan diperolehi dalam alam pekerjaan.

Graduan yang melangkah ke alam pekerjaan akan dapat menyesuaikan diri dengan cepat kerana aspek pengetahuan didalam bidang kejuruteraan yang telah ditekankan. 'Soft Skills' yang diperkenalkan berupaya untuk menolong graduan di alam pekerjaan kelak.

11. STRUKTUR KURIKULUM

- i. Lampirkan cadangan kursus yang disusun sehingga semester akhir mengikut klasifikasi (Kursus Wajib Universiti, Teras fakulti, Teras Program dan Elektif serta jam kredit dalam bentuk jadual seperti di **LAMPIRAN A-1**.

Kursus untuk Program Kejuruteraan Elektronik masih sama. Ini hanya melibatkan penukaran nama program dan nama ijazah bagi memenuhi kehendak semasa.

- ii. Nyatakan sinopsis kursus dan lampirkan senarai buku teks/rujukan.

*Ringkasan kursus dilampirkan pada **LAMPIRAN A-1**.*

- iii. Kandungan dan struktur program

- Huraikan bidang-bidang ilmu teras yang penting untuk memahami konsep, prinsip dan kaedah bagi pembelajaran program tersebut.

*Bidang-bidang teras untuk kursus ini meliputi Kursus TERAS Program. Sila lihat **LAMPIRAN A-1**.*

- Huraikan prinsip yang dijadikan panduan dalam mereka bentuk kurikulum program.

Dalam mereka bentuk kurikulum program ini, universiti mengambil kira kursus atau subjek yang wajib di dalam Kejuruteraan Elektronik. Ini termasuk elemen penting seperti Matematik, Telekomunikasi, Elektronik, Komputer dan lain-lain.

Selain dari itu, elemen elemen generik dan pelengkap seperti bahasa, pengetahuan ICT, aktiviti senggang yang melibatkan sukan dan kebudayaan turut di masukkan untuk memantapkan jati diri dan pengetahuan am pelajar.

Di dalam kursus profesional seperti ini juga elemen latihan industri juga dititik beratkan untuk memberi gambaran kepada pelajar tentang alam pekerjaan.

iv. Penilaian/pemarkahan program pengurusan peperiksaan.

- Huraikan kekerapan dan kaedah penilaian termasuk kriteria lulus/gagal dan penganugerahan ijazah.

Secara umumnya kaedah penilaian adalah berdasarkan Purata Nilai Gred (PNG) dan Purata Nilai Gred Kumulatif (PNGK)

Bagi penganugerahan Ijazah Sarjana Muda dengan Kepujian, seseorang pelajar mesti memenuhi semua syarat berikut:

- a) LULUS semua kursus yang disyaratkan bagi program ini dalam tempoh yang ditetapkan
 - b) Mencapai PNGK sekurang-kurangnya 2.00
 - c) Mengumpul sekurang-kurangnya 135 kredit atau sejumlah kredit lain yang ditetapkan oleh Senat
 - d) Memenuhi semua kehendak Peraturan Akademik Pengajian Ijazah Sarjana Muda.
 - e) Diperakui supaya dianugerahkan Ijazah berkenaan oleh Jawatankuasa Pemeriksa Fakulti, serta disahkan oleh Senat
 - f) Menjelaskan segala yuran dan hutang kepada universiti
 - g) Syarat-syarat lain yang ditetapkan oleh Senat
- Huraikan mekanisme dinamik untuk meningkatkan kualiti program dari struktur, fungsi, strategi dan aktiviti program.

1. Mekanisme yang dinamik yang dipraktikkan oleh pihak
2. Jabatan dan Fakulti amnya adalah dengan mengadakan
3. 'curriculum review' setiap Dua tahun. Pada masa ini juga pandangan, cadangan, kritikan membina akan dibincangkan bagi menyesuaikan program supaya berdaya saing, kompetatif dan memenuhi pasaran pekerjaan. Selain daripada itu, pihak Fakulti Kejuruteraan juga telah melantik pemeriksa-pemeriksa luar untuk memberi maklum balas berkenaan dengan program – program yang ditawarkan. Pihak jabatan juga telah mengadakan mesyuarat dengan 'Stakeholder' yang terdiri daripada pihak industri untuk memberi maklum-balas berkenaan dengan program-program akademik. Kualiti program juga akan dipantau oleh badan

profesional dan EAC untuk menilai program supaya memenuhi kehendak program kejuruteraan. Program ini juga mengadaptasikan sistem pembelajaran secara 'outcome based education' yang sedang diketengahkan oleh badan akreditasi kerajaan dan profesional.

- v. Sertakan pengiktirafan/ulasan badan profesional berkaitan (jika program berbentuk profesional).

- Seperti yang dilampirkan (**LAMPIRAN E-1**) -

12. KAJIAN PASARAN

- vi. Nyatakan hasil kajian pasaran guna tenaga yang dijalankan oleh universiti terhadap program yang dipohon. Laporan kajian pasaran seperti di **Lampiran A-3, A-4, A-5, A-6, A-7** dan **A-8** yang mana berkaitan hendaklah dilampirkan.

- Tidak Berkaitan -

- vii. Nyatakan ulasan oleh pakar-pakar di luar universiti/pihak industri terhadap kesesuaian program.

Secara ringkasan, program-program telah di kaji and di bincang dengan stakeholder pada bulan Disember 2006. Selain it, ia juga dikaji oleh 3 pakar di luar universiti, termasuk, Prof. John Senior, Prof. Ir. Abd Halim Bin Momamed Yatim, dan Prof Syed Idris Syed Hassan. Sila rujuk ke Lampiran E2 untuk ringkasan perbincangan dengan kajian pakar dan stake holder.

- viii. Nyatakan bidang-bidang perkhidmatan yang memerlukan graduan-graduan program ini.

Bidang bidang yang memerlukan perkhidmatan graduan meliputi kerajaan and swasta seperti berikut;

1. *Perkilangan dan Pembuatan*
2. *Penyelidikan*
3. *Perkhidmatan*

13. ETIKA DAN KEMANUSIAAN

- ix. Huraikan bagaimana aspek-aspek etika dan kemanusiaan dimasukkan ke dalam kurikulum untuk membantu membangunkan individu yang seimbang, peka masyarakat, mahir berkomunikasi dan mampu membuat keputusan.

Program Kejuruteraan secara amnya amat menitikberatkan aspek-aspek etika didalam kursus profesional seperti Kejuruteraan Elektronik. Untuk itu bagi kursus 'Etika Kejuruteraan' diperkenalkan untuk memberitahu pelajar peri pentingnya aspek etika di dalam kursus seperti ini dan diharapkan pelajar dapat mengamalkan nilai nilai murni ini selepas mereka menamatkan pengajian mereka. Ini juga amat penting untuk akreditasi kursus ini.

14. UNJURAN PELAJAR

- x. Nyatakan unjuran pelajar dari segi bilangan pengambilan, enrolmen dan keluaran (graduan) untuk tempoh lima (5) tahun.

Bilangan pelajar yang anggar akan diamabil untuk tempoh 5 tahun akan datang adalah seperti berikut.

Tahun	Bilangan pelajar yang dianggar untuk ambil masuk untuk 5 tahun akan datang
2007	80
2008	100
2009	120
2010	120
2011	120

Bilangan graduan untuk tempoh 5 tahun akan datang adalah seperti berikut.

Tahun	Bilangan graduan yang dianggar untuk 5 tahun akan datang
2008	30
2009	40
2010	40
2011	80
2012	100

15. SYARAT-SYARAT KEMASUKAN.

- xi. Nyatakan keperluan kelayakan asas.

Keperluan asas kelayakan – SYARAT AM KEMASUKAN UNIVERSITI adalah seperti berikut:

- LULUS BAIK di peringkat Sijil Pelajaran Malaysia (SPM);
- LULUS Bahasa Melayu di peringkat SPM atau yang setara;

c) Untuk Calon STPM

Lulus STPM dengan memperolehi sekurang-kurangnya Gred C dalam:

- Pengetahuan Am; dan
- 2 subjek lain

Untuk Calon Matrikulasi

Memperolehi sekurang-kurangnya Gred C (2.00) di dalam Program Matrikulasi

d) telah menduduki 'Malaysia University English Test (MUET)'.

- xii. Nyatakan pengetahuan dan kemahiran prasyarat serta syarat/kelayakan lain jika diperlukan.

- xiii. Nyatakan syarat khas fakulti/program.

SYARAT KHAS KEMASUKAN UNIVERSITI adalah seperti berikut:

a) Untuk Calon STPM

Lulus STPM dengan memperolehi sekurang-kurangnya Gred C dalam tiga (3) mata pelajaran berikut:

- Fizik
- Matematik T
- Biologi / Kimia / Matematik Lanjutan T

Untuk Calon Matrikulasi

Memperolehi sekurang-kurangnya Gred C (2.00) dalam mata pelajaran berikut:

- Matematik
- Fizik
- Kimia/Biologi

Untuk calon Diploma

Pemegang Diploma di dalam bidang yang berkaitan; atau kelayakan yang disahkan oleh Senat Universiti.

- b) Lulus dengan kepujian dalam mata pelajaran Matematik/ Matematik Tambahan dan Bahasa Inggeris / Bahasa Inggeris 1119 di peringkat SPM.

- xiv. Jelaskan sama ada terdapat kursus khas bagi mereka yang terpilih tetapi tidak memenuhi kriteria kemasukan.

-Tiada -

16. IMPLIKASI KAKITANGAN, FIZIKAL DAN KEWANGAN.

xv. Implikasi Kakitangan

- Organisasi Fakulti/Sekolah/Pusat/Jabatan

- *Tidak Berkaitan* -

- Senaraikan tenaga akademik yang terlibat dengan program pengajian.

- *Sila lihat Lampiran E3 untuk tenaga akademik yang aktif* -

- Nyatakan jumlah tenaga pengajar sedia ada untuk program akademik yang dipohon berserta kelayakan, kepakaran dan kemahiran serta kesepadanan kelayakan dan kepakaran dengan bidang pengajian (lampirkan nama). Nyatakan bilangan tambahan tenaga pengajar diperlukan bagi tempoh lima (5) tahun.

- *Sila lihat Lampiran E4 - program akademik:*
1. Program Kejuruteraan Elektronik dan Komputer (PKET)
2. Program Kejuruteraan Elektronik dan Komputer (PKEX)
- Nyatakan jumlah kakitangan sokongan sedia ada dan unjuran.

Secara keseluruhan, terdapat 3 pembantu teknik, 9 juruteknik dan 2 kakitangan sokongan untuk program ini. Sila rujuk ke E5 untuk informasi terperinci setiap kakitangan sokongan dan juruteknik.

xvi. Implikasi Fizikal:

- Kemudahan-kemudahan fizikal/makmal/peralatan dan lain-lain yang sedia ada dan tambahan yang diperlukan bagi tempoh lima (5) tahun

Tidak berkaitan kerana ini hanya melibatkan penggabungan program dan pertukaran nama program serta nama ijazah yang ditawarkan.

Lampiran E6 adalah ringkasan untuk belanjawan untuk peralatan di makmal untuk tahun 2008-2010.

xvii. Implikasi Kewangan:

- Keperluan peruntukan pembangunan (nyatakan perancangan universiti berdasarkan Rancangan Malaysia Lima Tahun).

- *Tiada kaitan* -

- Keperluan peruntukan mengurus (termasuk emolumen kakitangan) bagi tempoh lima (5) tahun.

- *Tiada kaitan* -

- Nyatakan sama ada terdapat kemudahan lain yang menyokong kepada keberkesanan program.

- *Tiada kaitan* -

17. PROGRAM AKADEMIK YANG SEDANG DITAWARKAN DI FAKULTI/SEKOLAH/PUSAT/JABATAN YANG MEMOHON.

- i. Nyatakan program-program akademik yang sedang ditawarkan.

Fakulti Kejuruteraan di UNIMAS menawarkan 4 program akademik:

v) Program Kejuruteraan Elektronik dan Komunikasi (PKET)

vi) Program Kejuruteraan Elektronik dan Komputer (PKEK)

vii) Program Kejuruteraan Mekanikal dan Pembuatan

viii) Program Kejuruteraan Sivill

27 Jun 2007

18. PERTINDIHAN PROGRAM YANG DIPOHON DENGAN IPTA LAIN.

- i. Nyatakan IPTA dan program akademik yang berkaitan.

-*Tiada* -

- ii. Nyatakan kelainan dan kekuatan program yang dipohon berbanding dengan IPTA lain.

Program-program yang dijalankan di UNIMAS menampilkan graduan yang serba boleh dari segi ICT, kemahiran dan pengetahuan. Untuk program Kejuruteraan Elektronik, bidang teras adalah telekomunikasi, komputer dan mikroelektronik.

19. **PERBANDINGAN DENGAN PROGRAM AKADEMIK DI UNIVERSITI LUAR NEGARA.**

- i. Berikan contoh program yang ditawarkan oleh universiti di luar negara.

-Tiada -

- ii. Nyatakan perbandingan dari segi persamaan/perbezaan dan kekuatannya.

-Tiada -

20. **KEAHLIAN DAN ULASAN LEMBAGA PENGAJIAN TERHADAP PROGRAM YANG DIPOHON.**

- i. Senaraikan keahlian Lembaga Pengajian dan sertakan ulasan dan minit Mesyuarat Lembaga Pengajian.

- Tiada kaitan -

21. **TARIKH PROGRAM DILULUSKAN.**

- i. Nyatakan tarikh program diluluskan oleh pihak-pihak berikut:-

- | | | |
|----|-----------------------------------|---------------|
| a. | JPPA | 19 Jun 2007 |
| b. | Senat | 27 Jun 2007 |
| c. | Lembaga Pengarah Universiti (LPU) | 16 April 2008 |

22. **KESIMPULAN/SYOR**

- i. Nyatakan kesimpulan/syor ke atas cadangan program untuk pertimbangan JKPT

-Tidak Berkenaan-

23. **RINGKASAN EKSEKUTIF**

- i. Sila sediakan Ringkasan Eksekutif seperti format di **LAMPIRAN A-2** dan kepilkan di permulaan kertas kerja cadangan program akademik baru.



STRUKTUR KURIKULUM (LAMPIRAN A-1)

KOMPONEN	SEMESTER 1		SEMESTER 2		JUMLAH JAM KREDIT
	Mata Pelajaran	Jam Kredit	Mata Pelajaran	Jam Kredit	
Kursus Wajib Universiti	Generik	6	Generik	8	23 kredit
	Pelengkap	6	Pelengkap	3	
Kursus Teras Fakulti	KNF1013 – Matematik Kejuruteraan 1	3	KNF1023 – Matematik Kejuruteraan 2	3	23 kredit
	KNF2033 – Matematik Kejuruteraan 3	3	KNF2053 – Kaedah Numerikal dan Statistik	3	
	KNF3102 – Etika Kejuruteraan	2	KNF3066 – Latihan Industri	6	
	KNF3113 – Optoelektronik	3	KNF4073 – Pengurusan Kejuruteraan	3	
Kursus Teras Program					
Tahun 1	KNL1023 - Teori Litar	3	KNL1053 - Elektronik Analog	3	26 kredit
	KNL1233 Teknologi Kejuruteraan Elektrik	3	KNL1073 - Isyarat dan Sistem	3	
	KNL1353 - Pemrograman Berstruktur	3	KNL1253 - Elektronik Digital	3	
	KNL1242 - Peralatan dan Pengukuran	2	KNL1262 - Aplikasi Elektronik Analog dan Digital	2	
			KNL1342 - Asas Rekabentuk Kejuruteraan	2	
			KNL1442 – Peralatan Elektrik	2	
Tahun 2	KNL2283 - Prinsip Kejuruteraan Telekomunikasi	3	KNL2163 - Mikropemproses	3	22 kredit
	KNL2363 - Kejuruteraan Perisian	3	KNL2373 - Operasi Sistem Komputer	3	
	KNL2383 - Litar Elektronik	3	KNL2393 - Teori Elektromagnet	3	
	KNL2272 - Aplikasi Sistem Digital	2	KNL2302 - Aplikasi Komunikasi Analog dan Digital	2	
Tahun 3	KNL3183 - Mikroelektronik	3			14 kredit
	KNL3313 - Pemprosesan Isyarat Digital	3			
	KNL3353 - Kejuruteraan Sistem Kawalan	3			

	KNL3333 - Rangkaian Komputer dan Data	3			
	KNL3362 - Aplikasi Sistem Elektronik Lanjutan	2			
Tahun 4	KNL4203 - Teori Maklumat dan Pengekodan	3			6 kredit
	KNL4343 - Rekabentuk VLSI	3			
Kursus Elektif Program Kejuruteraan Elektronik (Komputer)	KNK3113 – Pemprosesan Imej	3	KNK4083 –Rekabentuk Sistem Embedded	3	21 kredit
	KNK4063 - Pengantaramuka Mikrokomputer	3	KNK4153 – Rangkaian Neural Buatan	3	
	KNK4133 - Arkitektur Multiprocessor	3	KNK4094 – Projek Tahun Akhir 2	4	
	KNK4082 - Projek Tahun Akhir I	2			
Kursus Elektif Program Kejuruteraan Elektronik (Telekomunikasi)	KNT3113 - Optoelektronik	3	KNT4073 - Rangkaian dan Perkhidmatan Telekomunikasi	3	21 kredit
	KNT4053 – Gelombang Mikro dan Teknologi Antenna	3	KNT4153 - Komunikasi Mobile dan Wireless	3	
	KNT4133 – Komunikasi Gentian Optik	3	KNT4094 – Projek Tahun Akhir II	4	
	KNT4082 – Projek Tahun Akhir I	2			
Jumlah Jam Kredit		73		62	135 kredit

JAWATANKUASA PENDIDIKAN TINGGI (JKPT)

RINGKASAN EKSEKUTIF
CADANGAN PENUKARAN NAMA PROGRAM AKADEMIK DI FAKULTI
KEJURUTERAAN DI UNIMAS

1.	UNIVERSITI/ KOLEJ UNIVERSITI	UNIVERSITI MALAYSIA SARAWAK
2.	PROGRAM AKADEMIK YANG DIPOHON	NAMA BARU: PROGRAM KEJURUTERAAN ELEKTRONIK NAMA ASAL: PROGRAM KEJURUTERAAN ELEKTRONIK DAN TELEKOMUNIKASI PROGRAM KEJURUTERAAN ELEKTRONIK DAN KOMPUTER
3.	FAKULTI/ SEKOLAH/PUSAT YANG MEMOHON	FAKULTI KEJURUTERAAN
4.	PERINGKAT PENGAJIAN	IJAZAH SARJANA MUDA KEJURUTERAAN ELETRONIK (TELEKOMUNIKASI) IJAZAH SARJANA MUDA KEJURUTERAAN ELETRONIK (KOMPUTER)
5.	TAHUN DIMULAKAN	2008
6.	JANGKAMASA/ KAEDAH PENGAJIAN	4 TAHUN
7.	JUSTIFIKASI	PENGGABUNGAN DAN PERTUKARAN NAMA PROGRAM SERTA IJAZAH KELULUSAN

8.	MATLAMAT PROGRAM	SILA LIHAT LAMPIRAN A (ms 5 – 6)
9.	HASIL PEMBELAJARAN	SILA LIHAT LAMPIRAN A (ms 6 - 7)
10.	HASIL KAJIAN PASARAN	TIDAK KAITAN
11.	STRUKTUR KURIKULUM	SILA LIHAT LAMPIRAN A - 1
12.	ETIKA DAN KEMANUSIAAN	SILA LIHAT LAMPIRAN A (ms 9) TELAH DIPERSETUJUI DI MESYUARAT SENAT PADA 27 JUN 2007.
13.	UNJURAN PELAJAR	TIADA KAITAN TELAH DIPERSETUJUI DI MESYUARAT LPU PADA 16 APRIL 2008.
14.	SYARAT-SYARAT KEMASUKAN	SILA LIHAT LAMPIRAN A (ms 10)
15.	IMPLIKASI KAKITANGAN/ FIZIKAL/ KEWANGAN	2008 TIADA KAITAN
16.	PROGRAM AKADEMIK YANG SEDANG DITAWARKAN DI FAKULTI/ SEKOLAH/PUSAT YANG MEMOHON (DIPLOMA, IJAZAH PERTAMA, SARJANA DAN KEDOKTORAN)	Fakulti Kejuruteraan di UNIMAS menawarkan 4 program akademik: i) Program Kejuruteraan Mekanikal dan Pembuatan ii) Program Kejuruteraan Sivill iii) Program Kejuruteraan Elektronik dan Komunikasi iv) Program Kejuruteraan Elektronik dan Komputer
17.	PERTINDIHAN PROGRAM YANG DIPOHON DENGAN IPTA	TIADA KAITAN

	LAIN	
18.	PERBANDINGAN DENGAN PROGRAM AKADEMIK DI UNIVERSITI LUAR NEGERA	TIADA KAITAN
19.	KEAHLIAN DAN ULASAN LEMBAGA PENGAJIAN TERHADAP PROGRAM AKADEMIK YANG DIPOHON	TELAH DIPERSETUJUI DI MESYUARAT SENAT PADA 27 JUN 2007. TELAH DIPERSETUJUI DI MESYUARAT LPU PADA 16 APRIL 2008.
20.	TARIKH PROGRAM DILULUSKAN	2008

LAPORAN PEMERIKSA LUAR DAN CADANGAN PELAN TINDAKAN JABATAN/FAKULTI

Fakulti: Kejuruteraan
Jabatan: Elektronik

Nama Pemeriksa Luar : Summary of EAC Report
Dan Institusi

Bidang :
Tarikh Lawatan : 11 – 12 Feb 2004

Ringkasan Komen/Perkara Dari Laporan Pemeriksa	Cadangan Penambahbaikan/Komen Oleh Mesyuarat Fakulti yang ke --- dan telah diadakan pada --
A. Kurikulum - The two programs (Electronic and Computer, and Electronic and Telecommunication) should be combined as one program with options for major in the final year. - The curriculum is quite well balanced but the laboratory work is a bit low in term of contents. The students only do 5 subjects 14 weeks x 3 hours of lab per week (equivalent of 5 credit hour and not 10 as in curriculums). - The industrial training is satisfactory but the credit given is high. - The credit hour given to the FYP is 9 which is high and is not a norm. - After deducting the number of credits from the above the total number of credits for the core engineering courses is 81 which are still within the required number. - The subject Artificial Neural Networks should introduce AI topics and applications. - Complains from the students that the subject Engineering Management has no lecture and only assignments given and group discussion conducted. - The subject Telecommunication System – Television topics is outdated and tubes are not used anymore. - The subject Engineers and Society is not included in the curriculum. This is a	Recommendation: Combine the two programs into B. Eng. in Electronics (Major) Action: Has been approved by Senate and LPU and have submitted to Ministry of Higher Education (MOHE) for approval. Recommendation: The number of laboratory work should be increased to 10 credit hours. Action: Lab slot has been increased for 4 hours from 2 credit hours Recommendation: Should be only 6 credit Action: Approved by Senate Recommendation: Normally it is only given 6 credit hours Action: Approved by Senate Recommendation: - Action: Introduced in Year 4, Semester 2 (KNK4153 Artificial Neural Network) – 2005 introduced Recommendation: - Action: Refer to KNF 4073 Engineering Management Recommendation: - Action: Refer to KNL2283 Telecommunication Engineering Principles Recommendation: - Action: Refer to KNF3102 Engineering Ethics

very important subject for engineering students where many of the attributes of engineering graduates can be inculcated and normally offered in other local universities.

- The subject Electrical Engineering Technology needs more content in 3-phase system, electrical power and utilization, industrial electronics, and basic machine theory and applications.
- The industrial training report should also highlight the benefit and experience learnt, and feedback from the employer/supervisor at training places should also be documented.
- Final year projects carried out are relevant and up to the standard but it is also observed marks given are too generous.
- A few of the reports do not have much results presented only theory and literature surveys which are textbooks materials, with some experimental result.
- Tutorials session are carried out in smaller groups of 30 students. Apart from that there is no evidence to show there are group learning exercises and interaction with lecturers may be limited to classroom lecture hours only.
- Group of students are also assigned to a lecturer as Academic Advisor and are required to see the academic advisors for consultation and advice as well as collecting the semester result slip to ensure at least the students have a one-to-one meeting with the advisor.

B. Penilaian Peperiksaan Termasuk VivaVoce

- Examination regulation is well documented and implemented. System of assessment is well documented and as practices by other IPTA. Preparation procedure of examination paper is well documented. The level examination paper is satisfactory and comparable to any good university in the country.
- Assessment of student answer is satisfactory but a moderation system needs

Recommendation: -

Action: Refer to KNL1233 Electrical Engineering Technology

Recommendation: Need consistency in marking. Should develop project skills by ensuring students experiencing engineering design when carrying out the final year projects. For example, engineering software development or hardware and software development project.

Action:

Recommendation: Supervisors or faculty have to put up a clear guideline and standard expected of the students to ensure the quality of work and output.

Action:

Recommendation: Moderation system need to be introduced

Action: Vetting exam Coordinator and Committee

to be considered.

- Assessment procedures of final year project and industrial training should be more stringent and a good feedback system is necessary to the students so that they may learn from their experience. The level of language used (English) need to be improved especially the weaker students.

**C. Kemudahan Fizikal Untuk Menyokong Pembelajaran dan Penyelidikan
Lecture Rooms & Laboratories:**

- Lecture rooms are good and can be improved with OHP and LCD projectors installed in every lecture room. Air-condition system may be need proper and regular maintenance.
- Number of students per work station is good
- Facilities not up to date which reflect what is being used in the industry especially on VLSI design technology and PCB fabrication facilities.
- Optic set need improvement. Equipment needs proper maintenance. Electro-Technology equipment is not satisfactory but it is noted that new equipment has been procured.
- Need to increase number of computer in computer lab for departmental use and network need to be improved.
- Software is satisfactory with MATLAB, Electronic Workbench, Cadence and etc

Library:

- Good, especially with online electronic library ELS (IEEE – Explorer) and sitting space is adequate. The number of books is satisfactory can be increase in the future for student references.

D. Penerbitan, Penyelidikan dan lain-lain Aktiviti berkaitan Pengajaran dan Penilaian.

- External examiner from a local university was appointed and the report is satisfactory.

Recommendation: A proper guideline on what is expected from the students should be documented

Action: Log book system introduced

Recommendation: Teaching facilities need improvement

Action: New teaching facilities had been installed in every lecture room

Recommendation: -

Action: Have proposed to purchase the equipments under RMK9

Recommendation: Equipment need improvement.

Action: Have been improved under permanent campus equipment

Recommendation: Number of computer in computer lab need to be improved.

Action: Have proposed to purchase

Action: Encouraged staff for staff attachment to obtain it.

Recommendation: Encouraged staff to be registered with BEM

Action: All staff have been registered with BEM

Recommendation: More support staff with experience is required and the post should be used for training

Action: Increase from 5 to 12 including 3 technical assistants.

Recommendation: More laboratories for department

Action: Number of lab increased to 24 laboratories.

- More number of laboratories in the department.

usaha memperluaskan aktiviti penyelidikan:

- Some research is going on and most of them are short term research and publications are limited to conference proceedings.
- More contract professors and associate professors should be appointed to give more impact and lead research and publication.
- Staff members are tied down or busy with teaching and development of programs, laboratories, and infrastructure and thus not many are involved in research, publication and consultancy. The student-staff ratio is very high and this adds to the constraint on the academic staff to do other activities besides teaching.
- Involvement with industry is very limited to only irregular invited seminars by people from the industry. And adjunct lecturer is also being utilized for teaching related subjects in the senior year and this is encourage so that a broader experience may be shared.
- Being a university and with younger staff members they are highly motivated and full of enthusiasm and they should be encourage to develop new skills such as teaching techniques, research methodology and management.

pembangunan program akademik pada masa hadapan:

Tiada ulasan

F. **Hal-hal lain**

- Generally the students are found to be satisfactory in term of entry qualification but it is relatively low compared to the other public university. The level of English language needs to be improved
- For former polytechnic students, a guideline for entrance qualification and exemptions of courses should be documented. Probably there is a need to raise the entry requirement for Polytechnic students

Recommendation: There should be an increase in research and publications from the department.

Action: Staff members are encouraged to attend conferences

Recommendation: More contract professors and associate professors need to be appointed.

Action: Recruitment process on going

Recommendation: Need to improve English proficiency among students

Action: Selected students are required to attend special English Class

Recommendation: Guidelines for transfer credit are needed

Action: Transfer Credit procedures have been documented.

- The students have an expose to the industry with a minimum 10 weeks industrial placement, which is compulsory part of the curriculum.
- Motivation and enthusiasm of students are satisfactory with the weak students needing extra help.
- Recreation facilities are satisfactory and can be improve in the campus
- Flying lecturers not conducive for student learning sometime the subject content is cramp within short period – commented by students
- The staff-student ration recommended is 15. Current staff-student ratio is high on average of 20. UNIMAS needs to look into seriously by either increasing the number of staff drastically or cutting the number of students.

Recommendation: No more flying lecturer

Action: Employed full time lecturer

Dikemaskini pada 14 April 2008

Recommendation: The two programs should be

Action: Has been approved by Senate and Ministry of Higher Education (MOHE)

LAPORAN PEMERIKSA LUAR DAN CADANGAN PELAN TINDAKAN JABATAN/FAKULTI

Fakulti: Kejuruteraan

Jabatan: Elektronik

Nama Pemeriksa Luar : Prof John M. Senior

Dan Institusi :

Ringkasan Komen/Perkara Dari Laporan Pemeriksa

A. Kurikulum

- skop dan struktur program

Comment: Overlap in the curriculum content for the two programs in that they could be regarded as a single degree programme with two pathways (i.e. named routes).

- kursus-kursus yang ditawarkan

- cadangan untuk ubahsuaian

Tiada ulasan

B. Penilaian Peperiksaan Termasuk VivaVoce

- skim pemarkahan

Comment: Overall, the project reports were well structured, indexed and referenced, and they were written in a satisfactory technical style.

The new mark scheme for final year projects including the viva presentation element, is a good innovation and should be retained and enhanced.

This scheme should improve the consistency of marking and also reduced the sometimes generous marks given to what appears to be more average project achievements.

- bilangan calon/skrip yang diperiksa

Tiada ulasan

- 'standard' kertas soalan

Comment: The procedures for the preparation of examination papers,

The moderation process should be formalised so that the most experienced staff feed back (on a periodic) to the examiner and the marking of the examination. At least a Volting exam Committee had been set-up to address this issue.

Recommendation: Design oriented questions papers are required in the third and fourth year, like the one in KNE 4153 Artificial Neural Networks, rather than the one in KNE 4063 Microprocessor Interfacing. KNE 4153 has been approved and is now being implemented.

Bidang :

Tarikh Lawatan : 11-12 March 2004

Cadangan Penambahbaikan/Komen Oleh Mesyuarat Fakulti yang ke --
- dan telah diadakan pada --

Action: Volting exam Committee had been set-up to address this issue.

Recommendation: The two programs should be recombined.

Action: Has been approved by Senate and LPU and have submitted to Ministry of Higher Education (MOHE) for approval.

the format of examination papers in order for them all to contain a mixture of student choice. The marking schemes need to better reflect the work required from the students, as there was occasionally difficulty between the answer required and the marks could be obtained from different questions in the same paper (eg. KNE 4063 Embedded System Design - assignment 4) with Q5, both for 20 marks).

Action: Volting exam Committee had been set-up to address this issue.

Recommendation: The Faculty staffs need to implement a process of confirming that everything has been looked at on a page by drawing a line down the right-hand margin on all pages of scripts within the marking process.

Allow a checking procedure to be implemented for examination scripts to ensure that all material had been marked and that marks had been accurately accumulated and recorded in the front of each script.

This checking procedure should be carried out by another member of staff and not the original marker.

Action: Volting exam Committee had been set-up to address this issue.

including the element of internal moderation is satisfactory.

Examination questions are very frequently separated in multiple parts where each part is short one-sentence question requiring a relatively short answer for a few marks. This approach has a tendency towards knowledge-based (i.e. book work) answers rather than answers that test student understanding.

Comment: The balance and mix questions reflecting the course content in the examination papers for all years of the degrees are satisfactory.

Comment: Some notable exceptions (eg. Analog Electronics, Digital Electronics) which contained analytical and challenging problem-solving questions. Although this approach could be improved, it is not inappropriate for the first and second year of the degrees as to develop their project skills.

Comment: A similar format was implemented in a number of the examination papers in the third and fourth year of the degrees which tended to provide an inappropriate challenge at these later stages.

Comment: Little choice is provided within the examination papers, even in the third and fourth years, and this should be addressed. It is not good practice to give no choice to students when they are sitting formal examinations.

- 'standard' dan keseragaman pemeriksaan kertas soalan

Comment: The marking of examination scripts appeared thorough and accurate.

Recommendation: The moderation process should be formalized so that the more experienced staff feed back (on a perform) to the examiner and necessary changes are implemented prior to the sitting of the examination.

Action: Vetting exam Committee had been set-up to address this issue

Recommendation: Design oriented questions papers are required in the third and fourth year, like those provided in KNK 4153 Artificial Neural Networks, rather than the shorter knowledge based questions asked in KNK 4063 Microprocessor Interfacing, KNL 4193 Data Communications and Computer Networking and Section B of KNT 4073 Telecommunication Networks and Services.

Action: Vetting exam Committee had been set-up to address this issue

Recommendation: The Faculty should agree a more standard approach to the format of examination papers in order for them all to contain an element of student choice. The marking schemes need to better reflect the work required from the students, as there was occasionally disparity between the answer required and the marks could be obtained from different questions in the same paper (eg. KNK 4083 Embedded System Design – compare Q1 with Q5, both for 20 marks).

Action: Vetting exam Committee had been set-up to address this issue

Recommendation: - The Faculty staffs need to implement a process of confirming that everything has been looked at on a page by drawing a line down the right-hand margin on all pages of scripts within the marking process.

Allow a checking procedure to be implemented for examination scripts to ensure that all material had been marked and that marks had been accurately accumulated and recorded in the front of each script.

This checking procedure should be carried out by another member of staff and not the original marker.

Action: Vetting exam Committee had been set-up to address this issue.

Comment: The scrutiny of a sample of in-course assessment examples within the course files indicated that they were of a satisfactory design and standard for the level required.

Comment: The UNIMAS examination Regulations booklet is not in English.

C. Rekomendasi Pihak Untuk Menyokong Pembelajaran dan Penyelidikan

- prestasi pelajar *in semester number lain yang diberikan*

Comment: A small number of the projects also had limited challenge and were not best designed to enable the students to develop their project skills. *deliver the practical requirements of the programme.*

D. Penributan, Penyelidikan dan lain-lain Aktiviti berkaitan Pengajaran dan Penilaian

Tiada ulasan

E. Pencerbunan/cadangan lain

- *tiada cadangan*

Comment: Within the project reports, as with students at many universities, the abstract often did not adequately cover the material contained in the report and the conclusions section provided a summary but did not draw conclusions on the work undertaken.

Comment: Very limited industrial experience, with the exception of the

- perbandingan dari segi taraf antarabangsa *Tiada ulasan*

- hal-hal lain *in higher degrees (and indeed a number of staff are presently*

Comment: The course files for the degrees which contain useful documentation including course plans, in-course assessment material and tests, final examination papers and examples of student work. *The University has a continuous process of development of its*

in relation to higher degrees (and indeed a number of staff are presently maintaining PhD research programmes elsewhere but the current research experience of the current staff group is also generally limited as the majority

Recommendation: Requested that a translated version be made available for the next visit.

Action: Translated version available now

Recommendation: - The Faculty should implements a more thorough project specification process which includes not only identification of the project idea but also moderation of it by another member of staff (or a group of other staff) to ensure that it presents an appropriate challenge (or is not too challenging) for a final year student.

This procedure would assist the more junior staff members to appreciate the necessary standard requirements for the final year project.

Action: -

Recommendation: Already assist the staff to improve in the future.

Action: Refer to Final Year project handbook/guidebook

Recommendation: Need more industrial experience

Action: Lecturer encouraged to go for staff attachment to gain industrial experience

Recommendation: Further appointments of experienced staff would substantially assist the balance of the experience of the staff delivering the

Recommendation: Should be continued and all filed should be checked to ensure that all the required materials are present *further experienced staff to complement the existing*

Action: All the required materials must be included in course files

Recommendation: It would be useful to see marked class sets of such in-course assessments on the next visit.

Action: Made available during visit

Comment: The scrutiny of a sample of in-course assessment examples within the course files indicated that they were of a satisfactory design and standard for the level required.

Comment: The UNIMAS examination Regulations booklet is not in English.

C. Kemudahan Fizikal Untuk Menyokong Pembelajaran dan Penyelidikan

- makmal/peralatan/sumber-sumber lain yang diperlukan

Comment: Although the Faculty is still functioning in temporary accommodation, albeit limited, the laboratory provision was satisfactory to deliver the practical requirements of the programmes.

D. Penerbitan, Penyelidikan dan lain-lain Aktiviti berkaitan Pengajaran dan Penilaian.

Tiada ulasan

E. Pemerhatian/cadangan lain

- tenaga akademik

Comment: The staff meet the minimum qualification requirement to deliver the two degrees in that the majority hold Masters degrees, mainly obtained from UK or USA universities

Comment: Very limited industrial experience, with the exception of the Visiting Professor and three part-time lecturers.

Comment: The University has a continuous process of development of its staff in relation to higher degrees (and indeed a number of staff are presently undertaking PhD research programmes elsewhere but the combined research experience of the current staff group s also presently limited as the majority have not yet had the opportunity to undertake a PhD research programme

Comment: The University has a continuous process of development of its staff in relation to higher degrees (and indeed a number of staff are presently undertaking PhD research programmes elsewhere but the combined research experience of the current staff group s also presently limited as the majority

Recommendation: Requested that a translated version be made available for the next visit.

Action: Translated version available now

Recommendation: But, enhancements in this provision are expected when the Faculty moves on to the new campus.

Action: New campus equipped with more facilities and adequate equipments

Recommendation: Need more industrial experience

Action: Lecturer encouraged to go for staff attachment to gain industrial experience

Recommendation: Further appointments of experienced staff would substantially assist the balance of the experience of the staff delivering the degrees and thus enhance the student experience and overall standards obtained.

Action: Recruit some further experienced staff to complement the Visiting Professor and the three part-time Lecturer appointments.

have not yet had the opportunity to undertake a PhD research programme

Comment: Contributions from the part-time Lecturer and a recently appointed Tutor, the projected combined staff/student ratio for 2004 is around 1:14 and therefore at an acceptable level to deliver the student learning experience for the degrees

Comment: The overall workload of individual staff is at an acceptable level.

- usaha memperluaskan aktiviti penyelidikan
Tiada ulasan

- pembangunan program akademik pada masa hadapan
Tiada ulasan

F. Hal-hal lain

Recommendation: Further appointments of experienced staff would substantially assist the balance of the experience of the staff delivering the degrees and thus enhance the student experience and overall standards obtained.

Action: Recruit more experienced staff

Exiang

Teknik Larian : 5-7 Feb 2007

Cadangan Pembangunan/Komen Oleh Masyarakat Vokasi yang telah dan telah diadakan pada --

Recommendation: It is suggested that the two programs should be merged with a new name, eg. Bachelor Degree in Electronic Engineering (Specification)

Action: Has been approved by Senate and LPP and forwarded to the Council of Higher Education (MAMU) for approval

Recommendation: It is suggested that the tutorial class should be conducted in formal outside the lecture hours.

Action: Action has been taken starting Semester 1. *Sending document*

Recommendation: These Credit Hours will increase to 10 credit hours after Control System Application is change to 1 credit hour.

Action: Introduced ENL 3362 Advanced Electronic System Application

Recommendation: Suggested that this course should be embedded with theoretical analysis on measurement and instrumentation.

Action: Introduced new course: KNL 1442 Electrical Instrumentation

Recommendation: It is recommended that this course (KNL 3361 Control System Application) should have 2 credit hour with more advance learning embedded.

Action: Introduced ENL 3362 Advanced Electronic System Application

Recommendation:

It is suggested that for each student, the allocation is increased to RM200-RM300 and provide them on bank of equipments (for ease of finding the

Dikemaskini pada 14 April 2008

Comment: All the engineering courses (core and elective) have tutorials class for one hour per week. Due to less number of lecture rooms in previous years (old campus), tutorials was conducted during the class.

• kefahaman aspek keselamatan

Comment: There are 5 laboratories with 9 credit hours. 1 credit hour is equal a hour lab per week. The total hours for lab is 2 x 14 x 2=56 hours

KNL 1242 Measurement and Instrumentation is a practical course. It is suggested that this course should be embedded with theoretical analysis on measurement and instrumentation and the credit hours should be change from 2 to 3.

KNL 3361 Control System Application is having 1 credit hour. Some of the course for advance learning is not done in practical.

Most of the final year project is terms of simulation and hardware

the cost budget is

provided for each students (RM 50) and the available components is limited, this problem leads to the less number of project involving hardware.

components)

Action: Proposed to faculty management

B. Penilaian Peperiksaan Termasuk VivaVoce

- skim pemarkahan
- bilangan calon/skrip yang diperiksa

- 'standard' kertas soalan

The University is having procedure and management system following the ISO standard. Examination management system in handling exams papers and marking schemes is considerable. The standard of questions in the exams is suitable and has the same standard compare to other universities with good marking allocations. But, most of the questions don't have choices.

- 'standard' dan keseragaman pemeriksaan kertas soalan
- prestasi pelajar
- perbandingan dari segi taraf antarabangsa

This department has enough equipments and academic staffs, good curriculum, good accommodation and facilities for student. The quality of examination papers and students qualifications is in the same level as other universities inside and outside country. The students are excellent. Teaching and learning system applied, can help to produce excellent students which has skills in managements, analysis, design and information system. Beside the core course is fulfill the criteria given by EAC Manual 2006.

C. Kemudahan Fizikal Untuk Menyokong Pembelajaran dan Penyelidikan

- makmal/peralatan/sumber-sumber lain yang diperlukan

The laboratory facilities, lecture rooms, computer laboratory facilities and library's sources are enough for the students. The laboratories and equipments are better. It is suggested that the software should be increase for example CADENCE (renew license), FPGA and etc.

D. Penerbitan, Penyelidikan dan lain-lain Aktiviti berkaitan Pengajaran dan Penilaian.

Final year project is based on the report, flow of project and presentation. Marking is based on supervisors and examiners. Majority of marks is between A and B. This is a normal procedure.

Recommendation:

The final exams should have more choices especially for 3rd and 4th students; the questions must be in types of analysis and design. Since, this department has new lecturers, it is suggested that this questions should be submit for moderation outside University to improve the quality of question.

Action: Vetting exam Coordinator and Committee had been set-up to address this issue

Recommendation: Renew the software license

Action: Have been proposed under RMK-9.

Industrial Training is based on report and log book by faculty's supervisor and industrial's supervisors. The grade is either passed or failed

E. **Pemerhatian/cadangan lain**

- tenaga akademik

Lecturer and student ratio is 1:9.9. Every lecturer is assigned with teaching workload at about 6 hours per week. The rest of the time is used for management, consultancy and research.

- usaha memperluaskan aktiviti penyelidikan

It is also suggested that all the new lecturers should cooperate with senior lecturers or lecturers in other universities for research activities.

- pembangunan program akademik pada masa hadapan

It is suggested that more lecturers need to further their studies in PhD and has professional qualifications for example, Ir and etc.

F. **Hal-hal lain**

Recommendation: It is recommended to do a presentation by students so that they can have feedbacks from the faculty's supervisor.

Action: Starting next semester

Recommendation: More collaboration

Action: Collaboration with industries and private university.

Recommendation: More PhD staff

Action: More staff will pursue for PhD and do staff attachment

Dikemaskini pada 14 April 2008

Senarai Tenaga Akademik Yang Terlibat Dengan Program Pengajian

Bil	Nama	Jawatan
1.	Dr. Awangku Abdul Rahman Pengiran Hj. Yusof	Pensyarah
2	Dr. Al-Khalid Othman	Pensyarah
3	Dr Mohd Saufee Muhammad	Pensyarah
4	Dr Wan Azlan Wan Zainal Abidin	Pensyarah
5	Norhuzaimin Julai	Pensyarah (Ketua Jabatan)
6	Sakena Abdul Jabar	Pensyarah
7	Rohana binti Sapawi	Pensyarah
8	Siti Kudnie Sahari	Pensyarah
9	David Bong Boon Liang	Pensyarah
10	Ngu Sze Song	Pensyarah
11	Kho Lee Chin	Pensyarah
12	Shamsiah Binti Suhaili	Pensyarah
13	Tay Kai Meng	Pensyarah
14	Annie Joseph	Pensyarah
15	Shafrida Sahrani	Pensyarah
16	Dayang Azra bt Awang Mat	Pensyarah
17	Sharifah Masniah Wan Masra	Pensyarah
18	Tengku Mohd Afendi Zulcaffle	Pensyarah
19	Kuryati Kipli	Pensyarah
20	Mohamad Faizrizwan Bin Mohd Sabri	Pensyarah
21	*Nordiana Rajae	Pensyarah
22	*Ng Liang Yew	Pensyarah
23	*Thelaha Masri	Pensyarah
24	*Martin Anyi	Pensyarah

25	* Hushairi Zen	Pensyarah
26	* Kismet Hong Ping	Pensyarah
27	*Ade Syaheda Wani binti Marzuki	Tutor
28	*Kasumawati bt Lias	Tutor
29	*Maimun binti Huja Husin	Tutor
30	*Nurdiani Binti Zamhari	Tutor

*cuti belajar

4	Yusufizen b Hanin @ Bunian	Juruteknik
5	Amirul Mohamad Amirul Bin Awangku Omar	Juruteknik
6	Mahathir Bin Begang	Juruteknik
7	Ikhlasiah Sli Minggu	Juruteknik
8	Lawrence Maxwell anak Siam	Juruteknik
9	Ikhsari Bli Abdul Karim	Juruteknik
10	Faridah Binti Ibrahim	Juruteknik
11	Shah Tajuddin B unis	Juruteknik
12	Ramli Mohamed	Juruteknik
13	Arizan Segri	Juruteknik
14	Ikhsan Binti Mohamad	Pembantu Tadbir (Perkeranian/Operasi)
15	Faridah binti Haji Taib	Pembantu Tadbir

Makmal Program Kejuruteraan Elektronik

1	Telecommunication
2	Technology / Satellite

Jumlah Kakitangan Sokongan sedia ada

Bil	Nama	Jawatan
1.	Wan Mohd Hamizah b Wan Rosli	Pembantu Teknik
2	Nawawi bin Muhamad	Pembantu Teknik
3	Awangku Mohamad Azmirul Bin Awangku Omar	Pembantu Teknik
4	Yusmizan b Hanin @ Bunian	Juruteknik
5	Awangku Mohamad Azmirul Bin Awangku Omar	Juruteknik
6	Mahathir Bin Bujang	Juruteknik
7	Iskendasah Bin Minggu	Juruteknik
8	Lawrence Macwell anak Sinin	Juruteknik
9	Johari Bin Abdul Karim	Juruteknik
10	Zuraidah Binti Ibrahim	Juruteknik
11	Mohd Tajuddin B unus	Juruteknik
12	Kamri Mohamad	Juruteknik
13	Azizan Segri	Juruteknik
14	Rohaida Binti Mohamad	Pembantu Tadbir (Perkeranian/Operasi)
2.	Siti Rogayah binti Haji Taibi	Pembantu Tadbir

Senarai Makmal Program Kejuruteraan Elektronik

1.	Mobile/Cellular Telecommunication
2.	Antenna Technology / Satellite

3.	Postgraduate Room
4.	Signal Processing (Image) (Graphics)
5.	Microprocessor (PLC) (Microcontroller)
6.	Data and Computer Networking
7.	Control System
8.	Power and Industrial Electronics
9.	ISDN/ATM/SDH/SONET/PDH
10.	Microwave Engineering
11.	Optoelectronic
12.	Optical Engineering
13.	Acoustics/Ultrasonics
14.	Audio Visual
15.	Computer Aided Engineering (Computer Lab)
16.	Projects Laboratory
17.	Electrical Engineering Technology
18.	Analog Electronics
19.	Digital Electronics
20.	Digital Communication
21.	Analog Communication
22.	Microelectronics/VLSI
23.	Printed Circuit Board
24.	Electrical and Electronic Workshop