



## HUBUNGAN INDUSTRI INDUSTRIAL COLLABORATION



# HUBUNGAN INDUSTRI

## INDUSTRIAL COLLABORATION

### Pengenalan

Pusat Kerjasama Industri ditubuhkan secara rasmi pada Februari 2004. Penubuhan Pusat ini ditubuhkan untuk menjalankan program dan juga aktiviti yang berorientasikan dunia pengeluaran dan aplikasi kejuruteraan sebenar. Pusat ini juga melambangkan kepelbagaiannya penawaran program dan aktiviti akademik yang berteraskan penyertaan dan komitmen daripada pihak industri. Semua program dan aktiviti Pusat ini bakal menjadi sebahagian kursus dan aktiviti teras kejuruteraan yang mampu mempertingkatkan daya saing dalam bidang rekabentuk, pemprosesan dan pengeluaran pelbagai produk yang berteraskan kejuruteraan.

### Objektif

1. Memperkenalkan UniMAP kepada Industri.
2. Merangka, melaksana dan membantu pelaksanaan pelbagai aktiviti dengan penyertaan industri bagi kakitangan dan pelajar yang melibatkan industri.
3. Mempertingkatkan pandangan umum dan industri terhadap program akademik dan mutu UniMAP dengan penyertaan rapat oleh industri dalam program pengajiannya.
4. Menyokong pelaksanaan konsep 'intensif praktikal' yang diamalkan UniMAP.
5. Menggalak dan menyelaraskan aktiviti kerjasama seperti perundingan, latihan, khidmat teknikal dan penyelidikan.

### Fungsi

Antara fungsi-fungsi Pusat Kerjasama Industri adalah:

1. Aktiviti-aktiviti pembelajaran yang berkaitan dengan atau melibatkan industri secara langsung maupun tidak langsung yang memerlukan penyelarasannya yang sistematis.
2. Kerjasama UniMAP dengan pihak industri dan badan-badan swasta lain yang memerlukan pemantauan dan perlaksanaan yang sempurna.
3. Kefahaman pihak industri dan swasta terhadap penubuhan UniMAP perlu sentiasa wujud dan dikendali oleh sesuatu badan khas.
4. Aktiviti yang berkaitan dengan latihan staf di industri memerlukan pemantauan yang sempurna.
5. Menjelaskan secara terperinci sebarang aktiviti yang berkaitan dengan kurikulum kepada industri.
6. Bertanggung jawab ke atas aktiviti pengkomersilan produk dan penyelidikan yang dibuat di UniMAP yang berkaitan dengan bidang industri.
7. Menjalankan aktiviti/program Pendidikan Berterusan yang berkaitan dengan pihak industri.
8. Mengadakan aktiviti promosi dan perhubungan dengan pihak industri.
9. Pemantauan dan penyeliaan program perundingan.

### Introduction

The Centre for Industrial Collaboration (CIC) was officially established in February 2004. The Centre's aims are primarily to organise programmes and activities which are manufacturing-oriented and have real engineering applications. Through the Centre's activities, the diversity of related programmes and academic activities, and the industry's participation and commitment can be seen. All of the Centre's programmes and activities constitute a part of the courses and activities offered in this University. Cumulatively, the programmes should help boost students' capability in the fields of design, process, application, and manufacturing of diverse engineering-based products.

### Objectives

1. To introduce UniMAP to the industry.
2. To plan, implement and assist the execution of activities that have industrial participation for both staff and students.
3. To increase public and industry awareness and understanding of UniMAP's academic programmes and quality by having close participation with the industry.
4. To facilitate UniMAP's "lab-intensive" approach to education delivery.
5. To encourage and coordinate collaboration between UniMAP and the industry in consultancy, training, technical service, and research.

### Functions

The functions of the Centre for Industrial Collaboration are:

1. To plan, implement, coordinate, supervise, and monitor activities that directly or indirectly involve the industry.
2. To act as a platform upon which the industry, private bodies, and the University meet to discuss issues of mutual interest.
3. Industry and private bodies understanding toward the creation of UniMAP should always exist and this is handled by a special body.
4. To plan activities that are related to staff on-job-training in the industry.
5. To explain the University's curriculum-related activities to the industry.
6. To coordinate activities related to product commercialisation and research conducted at UniMAP, which are related to the industry.
7. To carry out continuous education programmes and activities which are related to the industry.
8. To organise promotion and communication activities with the industry.
9. To monitor and supervise the University's consultation programmes.

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### Program dan Aktiviti Pusat Kerjasama Industri

Program-program dan aktiviti-aktiviti yang dijalankan oleh Pusat Kerjasama Industri, Universiti Malaysia Perlis ialah yang berikut:

#### 1. Pendedahan Industri (IndEx)

Program IndEx merupakan program singkat yang memberikan pendedahan industri kepada pelajar tahun 1 UniMAP. Aktiviti-aktiviti yang dijalankan dalam program ini berbentuk taklimat, dialog dan demonstrasi. Pusat Kerjasama Industri mengadakan aktiviti dengan kerjasama sektor-sektor industri kecil, firma R&D, badan-badan profesional dan badan-badan kerajaan. Program ini akan dijadikan penanda aras dalam menentukan sama ada pelajar layak untuk mengikuti program IndEnt pada tahun 2 kelak.

Objektif program ini ialah memberikan kefahaman yang lebih mendalam tentang bentuk pekerjaan yang bakal diceburi, membuka minda pelajar-pelajar dengan membina keyakinan diri untuk berjaya dalam bidang yang diceburi, mempertingkatkan pandangan dan menjelaskan peluang-peluang yang disediakan di dalam bidang industri, membantu UniMAP melahirkan jurutera profesional yang terdidik, terlatih dan berkemampuan untuk memenuhi kehendak industri dan memberikan pendedahan kepada pelajar tentang aspek keusahawanan kejuruteraan.

Program ini telah diadakan pada :

#### (a) 8 - 10 Mei 2006 (IndEx 2006)

- Telah diadakan di Dewan Capitol UniMAP, Kangar.
- Melibatkan sebanyak 692 orang pelajar Tahun 1
- Syarikat-syarikat yang terlibat ialah:

1. Intel Technology Sdn. Bhd.
2. Avago Technologies (Malaysia) Sdn. Bhd.
3. Altera Corporation (M) Sdn. Bhd.
4. Sony Technology Malaysia Sdn. Bhd.
5. National Semiconductor
6. RMR Engineering Services Sdn. Bhd.
7. Dream Cather Consulty
8. Silterra Malaysia Sdn. Bhd.
9. Ramusa Engineering
10. Jabil Circuit Sdn. Bhd.
11. AIC Semiconductor
12. Information Technology Centre
13. Pentamaster Technology (M) Sdn. Bhd.
14. Cement Industries of Malaysia Bhd.
15. Malaysia Smelting Corporation Berhad
16. Asian Composites Manufacturing Sdn. Bhd.
17. PPSB Power Plant
18. Hicom Honda Manufacturing (Malaysia)
19. Better Scope Sdn. Bhd.
20. Global E-Technic Sdn. Bhd.
21. Kilang Gula Felda Perlis Sdn Bhd

### Programmes And Activities Conducted By The Centre For Industrial Collaboration

The following are programmes and activities conducted by the Centre for Industrial Collaboration:

#### 1. Industrial Exposure (IndEx)

The IndEx Programme is a short programme that gives industrial exposure to UniMAP first year students. Activities conducted in this programme are in the forms of briefing, dialogue and demonstration, all done in collaboration with small and medium industry sectors, R&D firms, professional bodies as well as government bodies. This programme determines whether or not students qualify for the IndEnt programme when they are in the following year of their studies in the University.

The objectives of this programme are to give students a deeper understanding about the variety of jobs to pursue in the industry, to enhance students' self confidence, to increase their understanding and appreciation of the opportunities available in the industry, to mould them to become well-groomed, well-trained and capable of fulfilling the industry's needs, and to give exposure to them on engineering entrepreneurship.

Details of the programme are given below:

#### (a) 8<sup>th</sup> - 10<sup>th</sup>, May 2006 (IndEx 2006)

- Conducted at UniMAP's Dewan Kapitol, Kangar.
- Participation of 692 first (1<sup>st</sup>) year students
- The companies involved were:

1. Intel Technology Sdn. Bhd.
2. Avago Technologies (Malaysia) Sdn. Bhd.
3. Altera Corporation (M) Sdn. Bhd.
4. Sony Technology Malaysia Sdn. Bhd.
5. National Semiconductor
6. RMR Engineering Services Sdn. Bhd.
7. Dream Cather Consulty
8. Silterra Malaysia Sdn. Bhd.
9. Ramusa Engineering
10. Jabil Circuit Sdn. Bhd.
11. AIC Semiconductor
12. Information Technology Centre
13. Pentamaster Technology (M) Sdn. Bhd.
14. Cement Industries of Malaysia Bhd.
15. Malaysia Smelting Corporation Berhad
16. Asian Composites Manufacturing Sdn. Bhd.
17. PPSB Power Plant
18. Hicom Honda Manufacturing (Malaysia)
19. Better Scope Sdn. Bhd.
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### 2. Skim InTelect Melibatkan Syarahan Akademik Pakar Dari Industri

Kumpulan sasaran program ini adalah kepada mahasiswa UniMAP mengikut Pusat-pusat Pengajian dan kakitangan akademik yang berkaitan. Pensyarah dan tajuk syarahan yang dipilih hendaklah mempunyai hubungkait dengan maklumat yang telah dipelajari di dalam kelas bagi subjek tersebut. Tujuan ceramah ini diadakan untuk memberikan pendedahan kepada pelajar-pelajar UniMAP untuk mengenali, berasaljawab dan berkongsi pengalaman dengan pihak industri tentang suasana dan persekitaran alam pekerjaan dalam sektor industri sebelum mereka dapat merasainya dalam program IndEx dan InTra kelak.

### 2. InTelect Scheme -- Talks from Industrial Experts

The target audiences for this programme are students and academic staff. Guest Lecturers are invited, whereby the topics that the Guest Lecturers deliver directly relate to the topics covered in class. The purpose is to provide opportunities for students to get to know, interact and share experiences with industry members about the working environment in the industry before experiencing it in the IndEx and InTra programmes later.

**Program InTelect telah dijalankan sepanjang tahun 2006 adalah seperti berikut:**

**InTelect Programmes conducted through out 2006 were as follows:**

Bil.	Topik / Topic	Penceramah / Lecturer	Industri / Industry	Tarikh / Date
1.	Material Planning	Mrs.Fatimah Ismail	TWP Sdn Bhd, Johor Bahru	06 <sup>th</sup> March 2006
2.	ISO 9000	Mr. Azman Yahya	Permintex Industries Sdn Bhd	2 <sup>nd</sup> - 9 <sup>th</sup> August 2006
3.	Control Charts	Dr. Zaharah Wahid	SIRIM	23 <sup>rd</sup> August 2006
4.	ISO 9000	Mr. Azman Yahya	Permintex Industries Sdn Bhd	19 <sup>th</sup> September 2006
5.	Acceptance Sampling	Dr Ir Chuah Khar Yee	SOLECTRON Technology Sdn Bhd	27 <sup>th</sup> & 28 <sup>th</sup> September 2006

### 3. Lawatan Industri

Pusat Kerjasama Industri telah menyelaraskan beberapa siri lawatan ke industri.

### 3. Industrial Visits

The Centre for Industrial Collaboration coordinated a series of visits to the industry, as follows:

Bil	Nama Syarikat / Company Name	Bilangan / Total	PPK Terlibat / School Involved	Tarikh / Date
1.	Avago Technologies Sdn Bhd	40 pelajar / students	PPK Komputer & Perhubungan School of Computer & Comm. Engineering	12/07/2006
2.	AIC Semiconductor Sdn Bhd	40 pelajar / students	PPK Mikroelektronik School of Microelectronic Engineering	12/07/2006
3.	Silterra Malaysia Sdn Bhd	40 pelajar / students	PPK Mikroelektronik School of Microelectronic Engineering	12/07/2006
4.	Techno Centre -KHTP	80 pelajar / students	PPK Mekatronik School of Mechatronic Engineering	12/07/2006
5.	Cement Industries of Malaysia Bhd (CIMA)	40 pelajar / students	PPK Bahan School of Materials Engineering	12/07/2006
6.	Malaysia Smelting Corporation Berhad	40 pelajar / students	PPK Bahan School of Materials Engineering	12/07/2006
7.	Asiam Composite Manufacturing (ACM)	40 pelajar / students	PPK Bahan School of Materials Engineering	12/07/2006
8.	PPSB Power Plant, Prai	40 pelajar / students	PPK Sistem Elektrik School of Electrical System Engineering	12/07/2006
9.	Hicom Honda Manufacturing (M) Sdn Bhd	40 pelajar / students	PPK Pembuatan School of Manufacturing Engineering	12/07/2006
10.	Better Scope Sdn Bhd	40 pelajar / students	PPK Pembuatan School of Manufacturing Engineering	12/07/2006
11.	Jabil Circuit Sdn Bhd	40 pelajar / students	PPK Mikroelektronik School of Microelectronic Engineering	13/07/2006

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### 4. Program Latihan Industri (InTra)

Latihan Industri (InTra) di UniMAP merupakan kursus yang wajib diduduki oleh semua pelajar Tahun 3 UniMAP untuk memenuhi syarat yang telah ditentukan oleh "Board of Engineers Malaysia". Dalam program Latihan Industri (InTra) ini terdapat prosedur-prosedur tertentu yang perlu diikuti seperti yang terkandung dalam klausula 6.1.2 : "Requirements for Degree Programme". Di dalam klausula ini dinyatakan bahawa :

*"Industrial training shall be for a minimum of a two month duration to qualify for consideration under the related subjects. Credit hours allowed are 2 credit hours for the first two months and 2 credit hours per month for the following months, subject to a maximum of 6 credit hours. The training shall be adequately structured, supervised and recorded in logbooks/reports."*

Tempoh latihan yang ditetapkan berbeza di antara satu sama lain dan tertakluk pada persetujuan oleh pihak industri dengan pelajar. Pelajar ditempatkan di industri mengikut kesesuaian bidang dalam tempoh selama 4 hingga 6 bulan (*Lampiran 2*). Program ini menyumbangkan unit kredit kepada bagi kursus EIT300.

Senarai penempatan pelajar dan maklumat Latihan Industri yang dijalankan di Universiti Malaysia Perlis bagi sesi 2005/2006. Sila rujuk halaman 112-115.

### 5. Program Malam Bersama Industri

Program Malam Bersama Industri ini dicadangkan oleh Y. Bhg. Dato' Naib Canselor untuk meraikan pihak industri dan pelajar yang terlibat dengan Program Latihan Industri (InTra) bagi tahun 2005/2006. Majlis ini telah dilaksanakan oleh Pusat Kerjasama Industri dengan kerjasama Pasukan INTEAM - UniMAP di Eastern & Oriental Hotel, Pulau Pinang pada 19 Mei 2006 dan di Putra World Trade Centre (PWTC), Kuala Lumpur pada 27 Mei 2006. Tempat-tempat ini dipilih adalah berdasarkan tempat pelajar menjalani Latihan Industri dan juga di kawasan industri yang dikenalpasti mempunyai prospek kerjasama pada masa depan.

Selain daripada itu objektif majlis ini adalah untuk :

- 1) Mempromosikan UniMAP kepada pihak industri di Malaysia.
- 2) Memberikan penghargaan kepada pihak industri yang banyak memberikan sumbangan dan kerjasama untuk mempertingkat program akademik dan pembangunan UniMAP.
- 3) Menjalankan hubungan rapat antara UniMAP dengan pihak industri bagi memudahkan pelaksanaan aktiviti bersama seperti penempatan pelajar untuk latihan industri, lawatan akademik pelajar, latihan kepada staf akademik dan sebagainya pada masa depan.
- 4) Sebagai suatu platform perjumpaan antara pelajar yang sedang menjalani Latihan Industri di industri dengan kakitangan akademik.
- 5) Membantu menyediakan peluang-peluang pekerjaan kepada bakal siswazah UniMAP selepas tamat pengajian kelak.

### 4. Industrial Training Programme (InTra)

Industrial Training (InTra) at Universiti Malaysia Perlis is a compulsory course (course coded EIT 300) to be taken by all UniMAP 3rd year students in fulfilling the condition set by the Board of Engineers Malaysia, as stated in clause 6.1.2 ("Requirements for Degree Programme") of the Manual:

*"Industrial training shall be for a minimum of a two month duration to qualify for consideration under the related subjects. Credit hours allowed are 2 credit hours for the first two months and 2 credit hours per month for the following months, subject to a maximum of 6 credit hours. The training shall be adequately structured, supervised and recorded in logbooks/reports."*

Students are sent to suitable organisations, according to their specific study areas for the duration of 4 - 6 months (Appendix 2). The exact training duration is upon the agreement of the student and the organisation she/he is attached to.

Below is a list of organisations that took in UniMAP students for the Industrial Training programme during the 2005/2006 session. Please refer page 112-115.

### 5. 'Night with the Industry' Programme

The 'Night with the Industry' programme was proposed by the Vice-Chancellor to welcome the industry and students who were involved in the Industrial Training Programme (InTra) for the year 2005/2006. It was organised by the Centre for Industrial Collaboration together with the UniMAP INTEAM team at the Eastern & Oriental Hotel, Pulau Pinang on May 19th 2006 and at the Putra World Trade Centre (PWTC), KL on May 27th 2006. The choice of places were based on the locations where most students were undergoing Industrial Training, as well as that of the locations having high prospects for future University-industry collaboration.

In addition, the objectives of the occasion were :

- 1) To promote UniMAP to the industry throughout Malaysia.
- 2) To honour the organisations that have made much contribution and collaboration to improve the academic programmes and development of UniMAP.
- 3) To forge a close relationship between UniMAP and the industry so as to ease future collaboration programmes between both parties.
- 4) To set a meeting place where students undergoing Industrial Training meet with the academic staff.
- 5) To start the process of providing job opportunities to graduates of UniMAP after they have completed their studies later.

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**Memorandum Persefahaman (MoU) / Memorandum Perjanjian (MoA) Antara UniMAP Dengan Pihak Industri / Pusat Pengajian Tinggi Tempatan Dan Antara Bangsa.**

Terdapat sebanyak 17 Memorandum Persefahaman (MoU) dan 4 Memorandum Perjanjian (MoA) ditandatangani oleh UniMAP dengan industri dan juga Pusat Pengajian Tinggi didalam dan luar negara pada tahun 2006.

## Objektif

- a. Memperluas hubungan dengan industri dalam negara
- b. Memperluas hubungan kerjasama dengan pusat pengajian tinggi dalam negara dan juga luar negara
- c. Mempertingkatkan aktiviti UniMAP dengan industri
- d. Memperkuuh kerjasama dengan industri
- e. Membantu memperkembangkan SMI di Malaysia

Antara Industri dan Pusat Pengajian Tinggi Dalam Negara dan Luar Negara yang menandatangani MoU / MoA dengan Universiti Malaysia Perlis ialah:

### 1) INSTITUT PERTANIAN BOGOR

**Penglibatan :** Pejabat Timbalan Naib Canselor (Akademik & Antarabangsa)

**Tarikh:** 19 Januari 2006 (Tempoh 5 Tahun)

**Status Kerjasama Yang Telah Dijalankan :**

- 1) Masih dalam proses perbincangan bidang kerjasama yang akan dijalankan

### 2) TRISAKTI UNIVERSITY

**Penglibatan :** Pejabat Timbalan Naib Canselor (Akademik & Antarabangsa)

**Tarikh:** 19 Januari 2006 (Tempoh 5 Tahun)

**Status Kerjasama Yang Telah Dijalankan :**

- 1) Program pertukaran pelajar antara UniMAP dengan TRISAKTI telah dilaksana. Seramai 5 orang pelajar dari UniMAP telah dihantar ke Trisakti dan UniMAP telah menerima 4 orang pelajar dari Trisakti.

### 3) TECHNICAL UNIVERSITY COLLEGES NETWORK OF MALAYSIA (TUCN MALAYSIA)

**Penglibatan :** Pejabat Naib Canselor

**Tarikh:** 3 Mac 2006 (Tempoh 5 Tahun)

### 4) UNIVERSIDAD POLITECNICA DE MADRID

**Penglibatan :** Pejabat Timbalan Naib Canselor (Akademik & Antarabangsa)

**Tarikh:** 4 April 2006 (Tempoh 5 Tahun)

**Status Kerjasama Yang Telah Dijalankan :**

- 1) Masih dalam proses perbincangan bidang kerjasama yang akan dijalankan

**Memorandum of Understanding (MoU) / Memorandum of Agreement (MoA) between UniMAP and Its Industrial Counterparts, and National & International Higher Learning Institutions.**

There are 17 Memorandum of Understanding (MoUs) and 4 Memorandum of Agreement (MoAs) conducted by UniMAP and its industrial counterparts as well as national and international higher learning institutions in 2006.

## Objectives

- a. To forge and widen links and collaborations with members of the industry
- b. To forge and widen links and collaborations with national and international higher learning institutions
- c. To help Small & Medium Scale Industries (SMIs) in Malaysia

Below is a list of organisations that have signed MoUs and MoAs with UniMAP:

### 1) INSTITUT PERTANIAN BOGOR

**Involved :** Deputy Vice-Chancellor's Office (Academic & International)

**Date Signed :** 19<sup>th</sup> January 2006 (Duration 5 years)

**Status of Collaboration Conducted :**

- 1) Organisation of seminar

### 2) TRISAKTI UNIVERSITY

**Involved :** Deputy Vice-Chancellor's Office (Academic & International)

**Date Signed :** 19<sup>th</sup> January 2006 (Duration 5 Years)

**Status of Collaboration Conducted :**

- 1) Students exchange programme between UniMAP and TRISAKTI. A total of 5 students from UniMAP were sent to Trisakti and UniMAP received 4 students from TRISAKTI.

### 3) TECHNICAL UNIVERSITY COLLEGES NETWORK OF MALAYSIA (TUCN MALAYSIA)

**Involved :** Vice-Chancellor's Office

**Date Signed :** 3<sup>rd</sup> March 2006 (Duration 5 Years)

**Status of Collaboration Conducted :**

- 1) Series of discussions on issues of mutual interest

### 4) UNIVERSIDAD POLITECNICA DE MADRID

**Involved :** Deputy Vice-Chancellor Office (Academic & International)

**Date Signed :** 4<sup>th</sup> April 2006 (Duration 5 Years)

**Status of Collaboration Conducted :**

- 1) Still under discussion

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- 5) **TECHNOLOGICAL EDUCATION INSTITUTE OF ATHENS**  
**Penglibatan :** Pejabat Timbalan Naib Canselor (Akademik & Antarabangsa)  
**Tarikh:** 6 April 2006 (Tempoh 5 Tahun)  
**Status Kerjasama Yang Telah Dijalankan :**  
1) Masih dalam proses perbincangan bidang kerjasama yang akan dijalankan
- 6) **TECHNOLOGICAL EDUCATION INSTITUTE OF PIRAEUS**  
**Penglibatan :** Pejabat Timbalan Naib Canselor (Akademik & Antarabangsa)  
**Tarikh:** 6 April 2006 (Tempoh 5 Tahun)  
**Status Kerjasama Yang Telah Dijalankan :**  
1) Masih dalam proses perbincangan bidang kerjasama yang akan dijalankan
- 7) **UNIVERSITI UTARA MALAYSIA (UUM) - (MoA)**  
**Penglibatan :** Pejabat Timbalan Naib Canselor (Akademik & Antarabangsa)  
**Tarikh:** 5 Jun 2006 (Tempoh 5 Tahun)  
**Status Kerjasama Yang Telah Dijalankan :**  
1) Menjalankan kerjasama melalui menyediakan tenaga pengajar untuk pelajar MSc. dalam bidang Pengurusan Teknologi
- 8) **AGILENT TECHNOLOGIES SDN BHD**  
**Penglibatan :** Pejabat Timbalan Naib Canselor (Akademik & Antarabangsa)  
**Tarikh:** 21 Julai 2006 (Tempoh 5 Tahun)  
**Status Kerjasama Yang Telah Dijalankan :**  
1) Mengadakan MoA untuk Agilent – UniMAP Development Program. Program ini merupakan program yang menjadi Pensyarah dan PLV UniMAP mengajar para juruteknik Agilent dalam beberapa Subjek.  
2) Program AKDP 1 sudah tamat dan disambungkan dengan AKDP 2.  
3) Memberikan 50 lesen untuk VEE
- 9) **INSTITUT KAJIAN PEMBANGUNAN (SABAH) (IDS)**  
**Penglibatan :** PPK Bioproses  
**Tarikh:** 21 Julai 2006 (Tempoh 5 Tahun)  
**Status Kerjasama Yang Telah Dijalankan :**  
1) Menunggu permohonan kelulusan geran RM1.6 Juta untuk kerjasama penyelidikan
- 10) **ACMS RESOURCES SDN.BHD**  
**Penglibatan :** PPK Mekatronik  
**Tarikh:** 21 Julai 2006 (Tempoh 5 Tahun)  
**Status Kerjasama Yang Telah Dijalankan :**  
1) Masih dalam proses perbincangan bidang kerjasama yang akan dijalankan
- 11) **UNIVERSITY OF NEW SOUTH WALES (UNSW)**  
**Penglibatan :** PPK Bahan  
**Tarikh:** 21 Julai 2006 (Tempoh 5 Tahun)  
**Status Kerjasama Yang Telah Dijalankan :**  
1) Prof. Dr. Veena Sahajwalla (Director of Sustainable Materials Processing Research, UNSW) telah dilantik menjadi Penasihat Luar bagi Penyelidikan dan Inovasi untuk PPK Bahan.

- 5) **TECHNOLOGICAL EDUCATION INSTITUTE OF ATHENS**  
**Involved :** Deputy Vice-Chancellor Office (Academic & International)  
**Date Signed :** 6th April 2006 (Duration 5 Years)  
**Status of Collaboration Conducted :**  
1) Still under discussion
- 6) **TECHNOLOGICAL EDUCATION INSTITUTE OF PIRAEUS**  
**Involved :** Deputy Vice-Chancellor Office (Academic & International)  
**Date Signed :** 6<sup>th</sup> April 2006 (Duration 5 Years)  
**Status of Collaboration Conducted :**  
1) Still under discussion
- 7) **UNIVERSITI UTARA MALAYSIA (UUM) - (MoA)**  
**Involved :** Deputy Vice-Chancellor Office (Academic & International)  
**Date Signed :** 5<sup>th</sup> June 2006 (Duration 5 Years)  
**Status of Collaboration Conducted :**  
1) UniMAP's Master of Science students to study Technology Management in UUM
- 8) **AGILENT TECHNOLOGIES SDN BHD**  
**Involved :** Deputy Vice-Chancellor Office (Academic & International)  
**Date Signed :** 21<sup>st</sup> July 2006 (Duration 5 Years)  
**Status of Collaboration Conducted :**  
1) MoA between Agilent – UniMAP on Development Programme (a programme whereby UniMAP lecturers and vocational training officers teach Agilent's technicians in several subject areas)  
2) The AKDP 1 programme was completed and now continued with the AKDP 2.  
3) Giving out 50 licenses for VEE
- 9) **INSTITUT KAJIAN PEMBANGUNAN (SABAH) (IDS)**  
**Involved :** School of Bioprocess Engineering  
**Date Signed :** 21<sup>st</sup> July 2006 (Duration 5 Years)  
**Status of Collaboration Conducted :**  
1) Awaiting RM1.6 million grant approval for research collaboration.
- 10) **ACMS RESOURCES SDN. BHD**  
**Involved :** School of Mechatronic Engineering  
**Date Signed :** 21<sup>st</sup> July 2006 (Duration 5 Years)  
**Status of Collaboration Conducted :**  
1) Still under discussion
- 11) **UNIVERSITY OF NEW SOUTH WALES (UNSW)**  
**Involved :** School of Materials Engineering  
**Date Signed :** 21<sup>st</sup> July 2006 (Duration 5 Years)  
**Status of Collaboration Conducted :**  
1) Prof. Dr. Veena Sahajwalla (Director of Sustainable Materials Processing Research, UNSW) was appointed as Research Advisor for Sustainable Engineering Cluster.

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- 2) Seorang calon SLAB PPK Bahan telah dihantar ke UNSW untuk menyambung pengajian pada peringkat doktor falsafah.
- 3) Program pertukaran pelajar antara UniMAP dengan UNSW akan dilaksanakan.
- 4) Beberapa orang kakitangan akademik PPK Bahan akan dihantar menyambung pengajian ke UNSW.

## 12) ADVANCED MICRO DEVICES EXPORT SDN. BHD (AMD)

**Penglibatan :** PPK Komputer & Perhubungan

**Tarikh:** 21 Julai 2006 (Tempoh 5 Tahun)

**Status Kerjasama Yang Telah Dijalankan :**

- 1) Banyak terlibat dalam program yang dijalankan oleh UniMAP seperti Karnival Kerjaya 2006
- 2) Menjadi seorang daripada Ahli Lembaga Pengarah Universiti

## 13) INSTITUT PENYELIDIKAN PERHUTANAN MALAYSIA (FRIM)

**Penglibatan :** PPK Bioproses

**Tarikh:** 24 Julai 2006 (Tempoh 5 Tahun)

**Status Kerjasama Yang Telah Dijalankan :**

- 1) Kerjasama dua hala dalam bidang penyelidikan herba, bertukar idea tentang penyelidikan, mewujudkan penempatan latihan industri dan staf
- 2) Cadangan mengadakan Program 'Bioprospecting' dengan kerjasama antara UniMAP dengan FRIM bertempat di Wang Kelian, Perlis pada Mac 2007. Beberapa universiti seperti UKM, UPM, USM dijangka akan terlibat (Perbincangan awal dengan universiti berkenaan telah diadakan)
- 3) Cadangan mengadakan seminar antarabangsa 'Malaysian International Conference On Essential Oil and Fragrance (MICEOFF)' kali kelima dengan kerjasama FRIM dengan UniMAP pada pertengahan tahun 2007 di Kuala Lumpur.
- 4) Pada masa kini penyelidikan secara kerjasama antara UniMAP dengan FRIM sedang dijalankan iaitu berkaitan dengan pengawalan mutu beberapa herba menggunakan teknologi sensor.

## 14) HTW AALEN UNIVERSITY

**Penglibatan :** Pejabat Timbalan Naib Canselor (Akademik & Antarabangsa)

**Tarikh:** 5 September 2006 (Tempoh 5 Tahun)

**Status Kerjasama Yang Telah Dijalankan :**

- 1) Berkerjasama membangunkan hubungan akademik antara kedua-dua pihak
- 2) Program pertukaran pelajar antara UniMAP dengan HTW AALEN dilaksanakan.

## 15) PRINCE OF SONGKHLA UNIVERSITY

**Penglibatan :** Pejabat Timbalan Naib Canselor (Akademik & Aantarabangsa)

**Tarikh:** 13 September 2006 (Tempoh 5 Tahun)

**Status Kerjasama Yang Telah Dijalankan :**

- 1) Kerjasama dalam membangunkan hubungan akademik antara dua pihak
- 2) Program pertukaran pelajar antara UniMAP dan PSU akan dilaksanakan.

- 2) A SLAB candidate from the School of Materials Engineering was sent to UNSW for PhD.

- 3) Students Exchange Programme between UniMAP and UNSW will be conducted.

- 4) Several academic staff from the School of Materials Engineering will be sent for further studies at UNSW.

## 12) ADVANCED MICRO DEVICES EXPORT SDN. BHD (AMD)

**Involved :** School of Computer & Communication Engineering

**Date Signed :** 21<sup>st</sup> July 2006 (Duration 5 Years)

**Status of Collaboration Conducted :**

- 1) 2006 Career Carnival.
- 2) A member of AMD appointed a member of the University Board of Directors.

## 13) INSTITUT PENYELIDIKAN PERHUTANAN MALAYSIA (FRIM)

**Involved :** School of Bioprocess Engineering

**Date Signed :** 24<sup>th</sup> July 2006 (Duration 5 Years)

**Status of Collaboration Conducted :**

- 1) Two way collaboration in the field of herbal research, exchange of ideas regarding research, industrial training of staff.
- 2) Proposal to conduct 'Bioprospecting' programme in collaboration between UniMAP and FRIM at Wang Kelian, Perlis on March 2007. Several universities such as UKM, UPM, USM are expected to take part. (Earlier discussion with the universities concerned already held)
- 3) Proposal to conduct an international seminar 'Malaysian International Conference On Essential Oil and Fragrance (MICEOFF)' collaboration between FRIM and UniMAP in 2007.
- 4) Research collaboration between UniMAP and FRIM on quality control of several herbs using sensor technology.

## 14) HTW AALEN UNIVERSITY

**Involved :** Deputy Vice-Chancellor Office (Academic & International)

**Date Signed :** 5<sup>th</sup> September 2006 (Duration 5 Years)

**Status of Collaboration Conducted :**

- 1) Students Exchange Programme between UniMAP and HTW AALEN

## 15) PRINCE OF SONGKHLA UNIVERSITY

**Involved :** Deputy Vice Chancellor Office (Academic & Internationalisation)

**Date Signed :** 13<sup>th</sup> September 2006 (Duration 5 Years)

**Status of Collaboration Conducted :**

- 1) Collaboration in building academic relationship on both sides.
- 2) Students Exchange Programme between UniMAP and PSU

# HUBUNGAN INDUSTRI INDUSTRIAL COLLABORATION

## 16) QUANTUM MATRIX SDN. BHD - (MoA)

Penglibatan : PPK Mikroelektronik

Tarikh: 15 September 2006 (Tempoh 5 Tahun)

Status Kerjasama Yang Telah Dijalankan :

- 1) Kerjasama dua hala untuk menghasilkan produk yang dapat dikomersilkan. Kerjasama yang diketuai oleh PPK Mikroelektronik dengan bantuan PPK Bahan, Pembuatan, Mekatronik, Kilang Mengajar akan menjalankan projek berdasarkan Microelectromechanical System (MEMS)

## 17) TECHNICAL UNIVERSITY OF CATALUNYA, BARCELONA

Penglibatan : Pejabat Timbalan Naib Canselor (Akademik & Antarabangsa)

Tarikh: 7 November 2006 (Tempoh 5 Tahun)

Status Kerjasama Yang Telah Dijalankan :

- 1) Memulakan projek "Life Long Learning" dengan kerjasama Prince of Songkhla University, Thailand.

## 18) UNIVERSITY OF YAMANASHI

(FACULTY OF ENGINEERING), JEPUN

Penglibatan : PPK Mekatronik

Tarikh: 11 Disember 2006 (Tempoh 5 Tahun)

Status Kerjasama Yang Telah Dijalankan :

- 1) Menjalankan kerjasama penyelidikan IP telephone antara PPK Komputer dengan Yamanashi Universiti
- 2) Penyediaan program MSc dalam bidang Embedded System
- 3) Penghantaran staf UniMAP melanjutkan pengajian peringkat MSc/PhD

## 19) SELANGOR HUMANCES RESOURCES DEVELOPMENT CENTRE (SHRDC) - (MoA)

Penglibatan : PPK Mikroelektronik/CIC

Tarikh: 20 Disember 2006

Status Kerjasama Yang Telah Dijalankan :

- 1) Merupakan kerjasama yang dijalankan antara UniMAP-SHRDC-INFINEON Industrial Skills Enhancement Program (INSEP) 2006. Seramai 18 Peserta mengikuti program yang diadakan. Program ini diadakan mulai 4 Disember 2006 hingga 22 Disember 2006 dan melibatkan kos sebanyak RM 142,840.00

## 20) PENANG SKILLS DEVELOPMENT CENTRE (PSDC) - (MoA)

Penglibatan : PPK Mikroelektronik/CIC

Tarikh: 20 Disember 2006

Status Kerjasama Yang Telah Dijalankan :

- 1) Merupakan kerjasama yang dijalankan antara UniMAP-PSDC-SILTERA Industrial Skills Enhancement Program (INSEP) 2006. Seramai 20 Peserta akan mengikuti program yang diadakan. Program ini diadakan mulai 2 April 2007 dan ianya melibatkan kos sebanyak RM 171,560.00

## 16) QUANTUM MATRIX SDN. BHD - (MoA)

Involved : School of Microelectronic Engineering

Date Signed : 15<sup>th</sup> September 2006 (Duration 5 Years)

Status of Collaboration Conducted :

- 1) Two way collaboration in yielding products for commercialisation. This collaboration is headed by School of Microelectronic Engineering and supported by Schools of Materials Engineering, Manufacturing Engineering, Mechatronic Engineering. The Teaching Factory will conduct the project based on Microelectromechanical System (MEMS)

## 17) TECHNICAL UNIVERSITY OF CATALUNYA, BARCELONA

Involved : Deputy Vice Chancellor Office (Academic & International)

Date Signed : 7<sup>th</sup> November 2006 (Duration 5 Years)

Status of Collaboration Conducted :

1. "Life Long Learning" with collaboration also with Prince of Songkhla University, Thailand.

## 18) UNIVERSITY OF YAMANASHI

(FACULTY OF ENGINEERING) JAPAN

Involved : School of Mechatronic Engineering

Date Signed : 11<sup>th</sup> December 2006 (Duration 5 Years)

Status of Collaboration Conducted :

- 1) Research collaboration on IP telephone between School of Computer Engineering and Yamanashi University
- 2) MSc programme preparation in the field of Embedded System
- 3) Sending of UniMAP staff to further MSc/PhD study.

## 19) SELANGOR HUMANCES RESOURCES DEVELOPMENT CENTRE (SHRDC) - (MoA)

Involved : School of Microelectronic Engineering/CIC

Date Signed : 20<sup>th</sup> December 2006

Status of Collaboration Conducted :

- 1) Collaboration between UniMAP-SHRDC-INFINEON Industrial Skills Enhancement Program (INSEP) 2006. A total of 18 participants participated in this programme. The programme started on December 4<sup>th</sup> 2006 until December 22<sup>nd</sup> 2006 and incurred a cost of RM 142,840.00

## 20) PENANG SKILLS DEVELOPMENT CENTRE (PSDC) - (MoA)

Involved : School of Microelectronic Engineering/CIC

Date Signed : 20<sup>th</sup> December 2006

Status of Collaboration Conducted :

- 1) Collaboration between UniMAP-PSDC-SILTERA Industrial Skills Enhancement Programme (INSEP) 2006. Twenty participants. The programme will start on April 2<sup>nd</sup> 2007 and incurring a cost of RM171,560.00

# HUBUNGAN INDUSTRI INDUSTRIAL COLLABORATION



IndEx 2006



Techno Centre KHTP



Global E-Technic Sdn Bhd



Starton Industrial

## LAWATAN INDUSTRI / INDUSTRIAL VISIT



Majlis Malam Bersama Industri (2005/2006) Eastern & Oriental Hotel, Pulau Pinang  
A Night With Industry Occassion (2005/2006) Eastern & Oriental Hotel, Pulau Pinang



Majlis Malam Bersama Industri (2005/2006) PWTC Kuala Lumpur  
A Night With Industry Occassion (2005/2006) PWTC Kuala Lumpur

# HUBUNGAN INDUSTRI

## INDUSTRIAL COLLABORATION



Majlis Menandatangani Memorandum Persefahaman (MoU) Antara UniMAP Dan University Of Yamanashi (Faculty of Engineering) Pada 11 Disember 2006  
The Signing of Memorandum of Understanding (MoU) Ceremony Between UniMAP and University of Yamanashi (Faculty of Engineering) on December 11<sup>th</sup> 2006



Majlis Menandatangani Memorandum Persefahaman (MoU) Antara UniMAP Dan HTW Aalen University Pada 5 September 2006  
The Signing of Memorandum of Understanding (MoU) Ceremony Between UniMAP and HTW Aalen University on September 5<sup>th</sup> 2006



Majlis Menandatangani Memorandum Persefahaman (MoU) Antara UniMAP Dan FRIM Pada 24 Julai 2006  
The Signing of Memorandum of Understanding (MoU) Ceremony Between UniMAP and FRIM on July 24<sup>th</sup> 2006



Majlis Menandatangani Memorandum Persefahaman (MoU) Sempena Majlis Santapan Sempena Istiadat Konvokesyen Pertama UniMAP  
The Signing of Memorandum of Understanding (MoU) Ceremony In Conjunction with the First UniMAP Convocation Dinner

# HUBUNGAN INDUSTRI

## INDUSTRIAL COLLABORATION

No.	Bilangan Pelajar / Total of Students	
	Nama Syarikat / Company Name	
1	SONY EMCS (MALAYSIA) SDN BHD	05
2	PLEXUS MANUFACTURING SDN BHD	15
3	AJV ELECTRONIC DEVICES (M) SDN BHD	09
4	INTEL TECHNOLOGY (M) SDN BHD	06
5	SOLECTRON TECHNOLOGY SDN BHD	04
6	ROBERT BOSCH (M) SDN BHD	03
7	SIRIM BERHAD PENANG BRANCH PERMATANG PAUH	02
8	SIEMENS VDO INSTRUMENTS MY SDN BHD	02
9	VENTURE SDN. BHD.	04
10	ASE MALAYSIA (M) SDN BHD	02
11	MAGNIBRIDGE SDN BHD	07
12	G-TEK ELECTRONICS SDN BHD	04
13	SPANSION (PENANG) SDN. BHD	04
14	QUANTUM STORAGE SOLUTIONS (M) SDN BHD	01
15	ER MEKATRON SDN BHD	01
16	NORTH MALAYA ENGINEERS TRADING CO. SDN BHD	01
17	ALTERA CORPORATION (M) SDN BHD	02
18	SLESTRONIK SDN BHD	02
19	PRECICO ELECTRONICS SDN BHD	01
20	BENQ TECHNOLOGIES SDN BHD	01
21	SST INTEGRATED TECHNOLOGIES SDN BHD	02
22	B. BRAUN MEDICAL INDUSTRIES SDN BHD	01
23	DAXON TECHNOLOGY SDN BHD	01
24	ELNA PCB (M) SDN BHD	01
25	UC TECHNOLOGY SDN BHD	04
26	ARCPLEX TRADING SDN BHD	01
27	EMERALD SYSTEM SDN BHD	02
28	PENANG PORT COMMISION	01
29	CELCOM NETWORK SERVICES	01
30	FLEX-P INDUSTRIES SDN. BHD	01
31	KNOWLES ELECTRONICS (M) SDN BHD	01
32	FAIRCHILD SEMICONDUCTOR (M) SDN BHD	01
33	KOBE PRECISION (M) SDN BHD	01
34	AVAGO TECHNOLOGIES (M) SDN BHD	03
35	MALAYSIA SMELTING CORPORATION BERHAD	02
36	SOUTHERN STEEL BERHAD	01
37	MAJLIS PERBANDARAN SBRG.PERAI (MPSP)	02
38	UDA LAND (PERUDA) SDN BHD	01
39	DYNACRAFT INDUSTRIES SDN BHD	02
40	UNIVERSITI SAINS MALAYSIA	01
41	RENESAS SEMICONDUCTOR (M) SDN BHD	03
42	UNISEM (M) BERHAD	06
43	CARSEM (M) SDN BHD	03
44	TM NET PERAK	03
45	TRONOMATIC ELECTRONIC SYSTEMS DESIGNER SB	02
46	SANSU ELECTRONICS (M) SDN BHD, KEMUNTING	06
47	FELCRA HOSE & HOSE SDN BHD	04
48	SIRIM BERHAD IPOH	02
49	TEKNIK JANAKUASA SDN BHD	03
50	TENAGA NASIONAL BERHAD, TELUK INTAN	02
51	RUSCH MANUFACTURING SDN BHD	01
52	MARIWASA KRAFTANGAN SDN BHD	02
53	PUSAT ICT UPSI	01
54	IDS PARK, SERI ISKANDAR	02
55	MULTIMEDIA COLLEGE NORTHERN, PERAK	01
56	LETROMOTIVE (M) SDN BHD	01
57	MMC METAL INDUSTRIES SDN BHD	01
58	NORDENIA-THONG FOOK (MALAYSIA) SDN BHD	01

No.	Bilangan Pelajar / Total of Students	
	Nama Syarikat / Company Name	
59	JABATAN KERJA RAYA, PERAK	02
60	EPSILON TECHNOLOGY (M) SDN BHD	01
61	SILVER POINT TECHNOLOGY	01
62	BOUSTEAD ESTATES AGENCY SDN BHD	01
63	GEMILANG MAINTENANCE SERVICES SDN BHD	01
64	CHUN KHONG ENGINEERING TRADE SDN BHD	01
65	M.C. ELECTRIC SDN BHD	01
66	MY ROBOTIC & MACHINE TOOL	01
67	TM CO, O&M, PERAK	03
68	ACCESS TAIPING O&M PERAK	01
69	TNB TAIPING	01
70	BALDA-THONG FOOK SOLUTIONS SDN BHD	01
71	Q-FLEX INDUSTRIES (M) SDN BHD	01
72	HENKEL (MALAYSIA) SDN BHD	01
73	ACME FERRITE PRODUCTS SDN BHD	01
74	JABATAN MINERAL GEOSAINS MALAYSIA	02
75	TMCO PERAK	02
76	TENAGA NASIONAL BERHAD	02
77	JABATAN KERJA RAYA KELANTAN	01
78	LEMBAGA KEMAJUAN PERTANIAN KEMUBU (KADA)	01
79	TM CO NEGERI KOTA BHARU KELANTAN	01
80	PEJABAT TELEKOM MALAYSIA BERHAD	01
81	TM NET SDN BHD (TM NET REG. OFFICE KELANTAN)	01
82	IZZCO TECHNOLOGY	01
83	HOSPITAL UNIVERSITI SAINS MALAYSIA KELANTAN	01
84	POLITEKNIK KOTA BHARU	02
85	PRIMADATA S&C (M) SDN BHD	01
86	JABATAN KERJA RAYA (CAW. ELEKTRIK), KELANTAN	01
87	TENAGA NASIONAL BERHAD, KOTA BHARU KELANTAN	07
88	MALAYSIA AIRPORTS SDN BHD KELANTAN	02
89	MIDACO (M) SDN BHD	02
90	PASIR PUTEH AIR CONDITION & TRADING	01
91	USM KAMPUS KUBANG KERIAN	01
92	MSET SHIP BUILDING CORPORATION SDN BHD	04
93	PERWAJA STEEL SDN BHD TERENGGANU	05
94	SIRIM BERHAD TERENGGANU	02
95	DELPHI PACKARD ELECTRIC (M) SDN BHD	06
96	TELEKOM MALAYSIA BERHAD NEGERI TERENGGANU	01
97	KNS CONSULTANT MECHANICAL & ELECTRICAL ENG.	03
98	NORSHAM INDUSTRIES SDN BHD	02
99	ALLIED CALIBRATION ENG. SERV. SDN BHD	01
100	PROMAT ESM SDN BHD	01
101	JKR CAWANGAN ELEKTRIK, K.TERENGGANU	01
102	PETRONAS PENAPISAN TERENGGANU SDN BHD	02
103	AUTOMOTIVE MANUFACTURING SDN BHD	04
104	TM NET PAHANG	02
105	AEROSPACE TECHNOLOGY SYSTEMS CORP. SDN BHD	01
106	MALAYSIA AIRPORT HOLDING BERHAD, PAHANG	01
107	BI TECHNOLOGIES CORPORATION SDN BHD	02
108	PASCORP PAPER INDUSTRIES SDN BHD	01
109	VACUUMSCHMELZE (M) SDN. BHD	01
110	SPECIFIC RESOURCES SDN BHD	04
111	BRIDGESTONE COMPOSITE	01
112	MTD PRIME SDN BHD	01
113	PENJOM GOLD MINES KUALA LIPIS	04
114	PANASONIC AVC NETWORKS (J) MALAYSIA SDN BHD	03
115	FLAIRIS SDN BHD	02
116	STMICROELECTRONICS SDN BHD	01

# HUBUNGAN INDUSTRI

## INDUSTRIAL COLLABORATION

No.	Bilangan Pelajar / Total of Students
No.	Nama Syarikat / Company Name
117	INTAN, KAMPUS WILAYAH SELATAN, JOHOR
118	TM CO JOHOR
119	PEJABAT PENGARAH KERJARAYA JOHOR
120	JK WIRE HARNESS SDN BHD
121	SPARKLE PRECISION SDN BHD
122	POSSEHL ELECTRONIC (M) SDN BHD
123	SB SERVICES SDN BHD
124	EXQUISITE PRODUCTS MANUFACTURING (M) SB
125	VENTURE TECHNOLOGY SDN BHD
126	PANASONIC COMMUNICATION (M) SDN BHD
127	TM KLUANG
128	PERUSAHAAN SADUR TIMAH (PERSTIMA) BHD
129	PETRONAS GAS BERHAD, JOHOR
130	TECHNOCOM SYSTEM SDN BHD
131	ON SEMICONDUCTOR (SCG INDUSTRIES M SDN BHD)
132	SAMSUNG CORNING (M) SDN BHD
133	ALPS ELECTRIC (M) SDN BHD
134	TOYODEMPA (M) SDN. BHD
135	XYRATEX (M) SDN BHD
136	TELEKOM SEREMBAN
137	JOHAN CERAMICS BERHAD
138	JKR CWGN MEKANIKAL, NEGERI SEMBILAN
139	TEXAS INSTRUMENTS INCORPORATED
140	TELEKOM, SABAH
141	SABAH FOREST INDUSTRIES SDN BHD
142	JABATAN PERKHIDMATAN KOMPUTER NEGERI SABAH
143	IRAMAHIR SDN BHD
144	SABAH ELECTRICITY SDN BHD
145	GUOCERA TILE INDUSTRIES SDN BHD.
146	JKR KOTA KINABALU
147	PEMBINAAN SOUTHERN JADI SDN BHD
148	TELEKOM MALAYSIA BERHAD, O&M, TAWAU
149	SIRIM BERHAD, SARAWAK
150	1ST SILICON (MALAYSIA) SDN. BHD.
151	CMS CEMENT SDN BHD
152	SANMINA-SCI CORPORATION (M) SDN. BHD
153	CYBERTECH INFORMATION SYSTEMS, SARAWAK
154	JKR KUCHING
155	KKB ENGINEERING BERHAD
156	CELCOM TIMUR (SARAWAK) SDN BHD, KUCHING
157	CELCOM TIMUR (SARAWAK) SDN BHD, MIRI
158	MMC OIL & GAS ENGINEERING SDN. BHD
159	PLUS EXPRESSWAYS BERHAD
160	ABL SECURITY SDN BHD [MALAYSIA]
161	STATS CHIPPAC MALAYSIA SDN BHD
162	APEX COMMUNICATIONS GROUP
163	VANGUARD ELECTRONICS SDN BHD
164	MALAYSIAN CENTRE FOR REMOTE SENSING
165	PETRONAS CARIGALI SDN BHD
166	KUALA LUMPUR RAPID TRANSIT SYSTEM (RAPIDLK)
167	TM NET SDN BHD, KL
168	LGD HITECH CORPORATION SDN BHD
169	SAPURA DEFENCE SDN BHD
170	FELDA ENGINEERING SERVICES SDN BHD
171	UEM CONSTRUCTION SDN BHD
172	GHD PERUNDING (M) SDN BHD
173	TNB, KUALA LUMPUR
174	PROJEK PENYELENGGARAAN LEBUHRAYA BERHAD

No.	Bilangan Pelajar / Total of Students
No.	Nama Syarikat / Company Name
175	GOLDEN HOPE PLANTATIONS BERHAD (PENINSULAR)
176	JABATAN KERJA RAYA WILAYAH PERSEKUTUAN, KL
177	RENTAK JITU PROJECT MANAGEMENT SDN BHD
178	ANTARA ELEKTRIK SDN BHD
179	EDICT ELECTRONIC SDN BHD
180	TECHNIP GEOPRODUCTION (M) SDN BHD
181	JALINAN RAKYAT SDN BHD
182	CAIRO, UTM JALAN SEMARAK
183	AMPANG PRESS SDN BHD
184	MIMOS SEMICON. MAINTEN.
185	TRANS- DIST ENGINEERING SDN BHD
186	SYMMID CORPORATION SDN BHD
187	PERUNDING PADUREKA SDN BHD
188	NUVO DINAMIK SDN BHD
189	MIMOS BERHAD
190	SONY EMC (MALAYSIA) SDN. BHD
191	FREESCALE SEMICONDUCTOR (M) SDN BHD
192	PERNEC CORPORATION BERHAD
193	TELEKOM RESEARCH & DEV. SDN BHD, SELANGOR
194	SIRIM BERHAD SHAH ALAM
195	UCHIDA MK SDN BHD
196	MPOB
197	UTUSAN PRINTCORP SDN BHD
198	AUTOVISOR PLASTICS SDN BHD
199	PRESS METAL BERHAD
200	T & K AUTOPARTS SDN BHD
201	POLYMATECH (M) SDN BHD
202	DELLOYD INDUSTRIES (M) SDN BHD
203	AUTOJACK SDN BHD
204	ALUMAC INDUSTRIES SDN BHD
205	CONTINENTAL SIME TYRE PJ SDN BHD
206	NEO DEPARTMENT, MAXIS MOBILE
207	PANASONIC AVC NETWORKS KL MALAYSIA SDN. BHD
208	AXIOMATIC SOLUTIONS SDN BHD
209	AKN MESSAGING TECHNOLOGIES BHD
210	HEITECH PADU BHD
211	COFRETH (M) SDN BHD
212	SATANG JAYA SDN BHD
213	INTEGRATED WAREHOUSE SDN BHD
214	TELEKOM MALAYSIA, O&M SELANGOR
215	MAMPU, PUTRAJAYA
216	INSTITUT PENYELIDIKAN PERHUTANAN MALAYSIA
217	SOLUTION ENGINEERING SDN BHD
218	MAHKOTA TECHNOLOGIES SDN BHD
219	SME ORDNANCE SDN BHD
220	BQE ENGINEERING SDN BHD
221	ZANWA SDN BHD
222	MAHIR BIDARA SDN BHD
223	TERACHI ELECTRICAL SERVICES SDN BHD
224	TURBINS TECHNIQUE (M) SDN BHD
225	RAMUSA ENGINEERING SDN BHD
226	DENSO (M) SDN BHD
227	HITACHI ELECTRONICS PRODUCTS (M) SDN BHD
228	HITACHI AIR CONDITIONING PRODUCTS (M) SDN BHD
229	DIGISTAR HOLDINGS SDN BHD
230	CONTROLLER AREA NETWORK SOLUTION
231	VEPRO GROUP SDN BHD
232	PRO-E AUTOMATION SDN BHD

# HUBUNGAN INDUSTRI

## INDUSTRIAL COLLABORATION

No.	Bilangan Pelajar / Total of Students
No.	Nama Syarikat / Company Name
233	ORIENTAL METAL INDUSTRIES
234	ORIENTAL SUMMIT INDUSTRIES SDN BHD
235	ASTRONAUTIC TECHNOLOGY (M) SDN BHD
236	AJW SWIFT AUTOPARTS
237	ISITO TECHNOLOGY SDN BHD
238	TOSHIBA ELECTRONICS (M) SDN BHD
239	TRANSMILE AIR SERVICES
240	AIRGATE (M) SDN BHD
241	JAQUES (INTERNATIONAL) SDN BHD
242	ADVANCE TECHNOLAB ENGINEERING SDN BHD
243	ZYNIX ORIGINAL SDN BHD
244	PERODUA ENGINE MANUFACTURING SDN BHD
245	INGRESS TECHNOLOGIES SDN BHD
246	SME AEROSPACE SDN BHD
247	LEMBAGA GETAH MALAYSIA (RRIM)
248	POWERCOOL M&E ENGINEERING SDN BHD
249	SIRIM BERHAD RAWANG
250	TOP GLOVE SDN BHD
251	HICOM ENGINEERING SDN BHD
252	MYCRON STEEL CRC SDN BHD
253	ALUMINIUM COMPANY OF MALAYSIA BERHAD
254	MOEM HOLDINGS SDN BHD
255	BESTARI AIRCOND
256	PETRONAS R&D SDN BHD
257	MALAYSIAN INSTITUTE FOR NUCLEAR TECHNOLOGY
258	GOODYEAR MALAYSIA BERHAD
259	SEKSYEN ICT, UNIT PERANCANG EKONOMI, JPM
260	SAFF CONSULTANT
261	UT GENERATION SDN BHD
262	AMPSTON ELECTRIC CORPORATION SDN BHD
263	CEMENT INDUSTRIES OF MALAYSIA BHD (CIMA)
264	TELEKOM PERLIS
265	KILANG GULA FELDA PERLIS SDN BHD
266	JABATAN KERJA RAYA PERLIS (JKR)
267	MEDIQUIP SDN BHD (59184K)
268	HPA INDUSTRIES SDN BHD
269	MERANTI SOFTWARE ENGINEERING
270	NADI ARA MECHANICAL & ELECTRICAL
271	GLOBAL E-TECHNIC SDN BHD
272	SHORUBBER (MALAYSIA) SDN BHD
273	PENS INDUSTRIAL SDN BHD
274	KULIM TECHNOLOGY MANAGEMENT SDN BHD
275	PROPERTIME SDN BHD
276	CONTINENTAL SIME TYRE

No.	Bilangan Pelajar / Total of Students
No.	Nama Syarikat / Company Name
277	SIRIM AMREC
278	ASIAN COMPOSITE MANUFACTURING (ACM)
279	AIC SEMICONDUCTOR SDN BHD
280	SILTERRA MALAYSIA SDN BHD
281	ONKYO ELECTRIC (M) SDN BHD
282	HOE HENG ENGINEERING SDN BHD
283	INOKOM CORPORATION SDN BHD
284	BARD SDN BHD
285	TELEKOM MALAYSIA KEDAH/PERLIS (ALOR STAR)
286	PAN NORTHERN AIR SERVICES SDN BHD
287	PUSAT ICT, PEJABAT SUK NEGERI KEDAH
288	MARCONI (M) SDN BHD
289	MAGNA INSTRUMENTS SDN BHD
290	REBAK SENARI ELECTRICAL & ENGINEERING
291	WARNA RS SDN BHD, SUNGAI PETANI
292	MALAYSIA NPK FERTILIZER SDN BHD
293	PERUNDING IZA'D BHD
294	BARISAN JURUTERA PERUNDING SDN BHD
295	TENAGA NASIONAL BERHAD, ALOR STAR
296	JABATAN KERJA RAYA (ELEKTRIK) KEDAH
297	SHARP-ROXY CORPORATION (M) SDN BHD
298	M.I.T.C RESOURCES SDN BHD
299	PERTABINA FUTURE SC&INNOVATIVE SDN BHD
300	HICOM-HONDA MANUFACTURING
301	DXN MARKETING (M) SDN BHD
302	SR TECHNOLOGY SDN BHD
303	TT MEGASTAR TRADING
304	LD TECHNOLOGIES SDN BHD
305	MALAYSIA AIRPORT SDN BHD
306	FOREMOST AUDIO SDN. BHD
307	LAFARGE MALAYAN CEMENT BERHAD
308	MARDI
309	JABATAN KERJA RAYA (DAERAH BALING)
310	PERWAJA STEEL SDN BHD, GURUN
311	MAJOR INTEREST SDN BHD
312	LEMBAGA KEMAJUAN PERTANIAN MUDA (MADA)
313	INTEL TECHNOLOGY (M) SDN BHD
314	PPK TECHNOLOGY SDN BHD
315	JABATAN KERJA RAYA (ELEKTRIK), MELAKA
316	CENTRAL CABLES BERHAD
317	PANASONIC MATSUSHITA PRECISION
318	KOA DENKO (M) SDN BHD
319	RUBBER LEISURE PRODUCTS SDN.BHD